



SRI SAI RAM INSTITUTE OF TECHNOLOGY

An Autonomous Institution | Affiliated to Anna University & Approved by AICTE, New Delhi
Accredited by NBA and NAAC 'A+' | An ISO 9001:2015 Certified and MHRD NIRF ranked institution
Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairamit.edu.in



Ref: T.O.No.111 /S4/SSIT,Ch-44 / 733/ 2022

Date: 11.03.2022

Submitted to the Chairman

Sir,

Sub : SSIT,Ch-44- AICTE Grant-in-Aid under the Mentor-Mentee Scheme for the Year 2021-2022 – Approval – Requested – Reg.

Ref : 1. AICTE Lr.No. Innovation/Mentor-Mentee Scheme/596/2020-21 dated 09.12.2021 received from Assistant Director, MIC, AICTE, New Delhi.

2. Letter dated 10.03.2022 received from Dr.G.Shanmugasundar, Associate Professor, Dept. of Mech & Convenor/IIC.

The references cited above are submitted herewith for kind perusal.

It is submitted that the AICTE has granted a sum of Rs.2,25,000/- (Rupees two lakhs twenty five thousand only) under Mentor-Mentee scheme for IIC Institutions and the amount released and credited into our account. (copy of Advice enclosed).

Accordingly, Dr.G.Shanmugasundar, Convenor, IIC has requested necessary permission may be granted to implement the above scheme with the following Mentee Institutions for utilization of the amount .

1. Prince Dr.K.Vasudevan College of Engineering
2. G.K.M. College of Engineering & Technology
3. Sri Kanyaka Parameswari Arts and Science College for Women
4. S.A.Engineering College
5. St. Peter's College of Engineering and Technology

Submitted to the Chairman for kind perusal and approval.



Encl : as above


PRINCIPAL

PRINCIPAL

SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



From

10.03.2022

Dr.G.Shanmugasundar
AP/ Mech & Convenor /IIC
Sri Sai Ram Institute of Technology,
West Tambaram, Chennai.

To

The Principal,
Sri Sai Ram Institute of Technology,
West Tambaram, Chennai .



Respected Sir,

Sub: Requisition of approval for mentoring support under IIC- Mentor- Mentee scheme with financial aids sanctioned by AICTE- MOE's Innovation -Reg.

We are glad to inform you AICTE- MOE's has approved and funded our Institute IIC providing the mentoring orientation programs for 05 mentee institutions under AICTE- IIC Mentor –Mentee scheme with the funding amount of **Rs 2,25,000/-** for the year 2021-2022 , so we request you to grant permission to implement the above mentioned support to our mentee institutes . Kindly permit us to utilise the received fund for the same as per AICTE- IIC norms.

Name of the scheme : “ **AICTE- MOE's – IIC Mentor- Mentee Scheme**”

Mentor Institute: Sri Sai Ram Institute of Technology

Name of the Allotted Mentee Institutes by AICTE:

1. Prince Dr.K.Vasudevan college of Engineering
2. G.K.M College of Engineering & Technology
3. Sri Kanyaka Parameswari Arts and Science College for Women
4. S.A Engineering College
5. St.Peter's College of Engineering and Technology

IIC President :Dr.K.Palanikumar , Professor & Principal

IIC Convenor : Dr.G.Shanmugasundar

Thanking You,

Yours Sincerely,

(Dr.G.Shanmugasundar)



Jagap
09/03/2022



All India Council for Technical Education
(A Statutory body under Ministry of Education, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



MoE's Innovation Cell
Mentor-Mentee Program for IIC Institutions - Sanction Letter



To,

The Drawing and Disbursing Officer,
All India Council for Technical Education,
Nelson Mandela Marg, Vasant Kunj,
New Delhi - 110070

Sub: Sanction of Rs. 2,25,000/- (Rupees Two Lakh Twenty Five Thousand only) being the **Grant-in-Aid** under the **Mentor- Mentee Program for IIC institutions 2021-22, MIC** payable during the current financial year 2021-22- reg.

Sir,

With reference to the proposal submitted by the **Sri Sai Ram Institute of Technology**, this is to convey that the sanction of the Council for payment of **Rs. 2,25,000/- (Rupees Two Lakh Twenty Five Thousand only)** as **Grant-in-Aid** under the **Mentor- Mentee Scheme for IIC institutions 2021-22, MIC** as per details given below:

1.	Name and address of the Beneficiary Institution:	Sri Sai Ram Institute of Technology Sri Sai Ram Institute of Technology , Sai Leo Nagar , West tambaram , Chennai Chennai Tamil Nadu ,600044
2.	Duration of the scheme:	Academic Year 2021-22
3.	Name of the Program Coordinator:	Dr.G.Shanmugasundar
4.	Total Grant-in-aid Sanctioned:	Rs. 2,25,000/- (Rupees Two Lakh Twenty Five Thousand only)
5.	Amount to be released during the year 2021-22:	Rs. 2,25,000/- (Rupees Two Lakh Twenty Five Thousand only)
6.	Sanctioned grant-in-aid is debitable to:	INNOVATION CELL ACCOUNT

- The amount of the Grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education on the Grant-in-Aid bill and shall be disbursed to and credited to the account of Director/Principal/ Registrar of the Institute through RTGS/PFMS.
- This Grant-in-Aid is being released in conformity with the terms & conditions as well as norms of the scheme as already communicated, and also being communicated in this letter.

The instructions/guidelines to be followed by University/Institution

- Release of funds (Reimbursement as per actual basis)

- ✓ The Principal/ Director/Head of the institute are hereby requested to verify the correctness of the under mentioned bank account/ RTGS details submitted by them, in which the grant is being released:

Institute PAN No.	Bank Name	Bank Branch Name	Bank Branch Address	Account Holder Name	Account Type	Account Number	IFSC Code
AABTS7101F	Citi Union Bank	Poonthandalam	City Union Bank ,Poonthandalam, Sairam College Campus Tamil Nadu Chennai	SRI SAI RAM INSTITUTE OF TECHNOLOGY	Savings	500101012388680	CIUB0000634

In case of any omission the same should be reported to AICTE immediately.

- ✓ The sanction is issued in exercise of the powers delegated to the council and other terms & conditions laid down in the guidelines of the scheme. 100% of the sanctioned amount will be released as grant in aid to the account of the beneficiary institute (Mentor IIC Institute).

II. Maintenance of accounts

- ✓ The Institute shall strictly follow the provisions laid down in the scheme document and sanction order No. *F.No. Innovation/Mentor Mentee Scheme/596/2020-21 Dated: 9th Dec. 2021* issued by this office. All correspondences related to the scheme must contain this number along with year of sanction of the scheme; failing which correspondence will not be entertained.
- ✓ The mentor IIC institute shall maintain proper accounts of the expenditure out of the grants, which shall be utilized only on the scheme.
- ✓ Institute needs to maintain the record of all original bills/honorarium receipts/transaction proof/voucher and invoice etc., AICTE/MIC or its nominee shall have the right to check/verify the account to satisfy that the fund has been utilized for the purpose for it was sanctioned.
- ✓ The Principal / Director / Registrar shall intimate about the receipt of the grant to AICTE/MIC.

III. Instructions for implementation of Project Funds

Sr. No	Activity	No of activities	Budget in Rupees	Expenses Covered
1	Conduct an orientation cum mentoring sessions for all the key functionaries of IIC members at mentee institutions. It may be conducted online mode.	At least 2 nos/Year {@Rs.3000 /mentor expert, 2 mentor experts. per session}	12,000/-	honorarium

2	Mentor Institute Representative to take part in the quarterly progress meetings of mentee IIC institutions and provide guidance on planning, action plan preparation and improvisation of I&E activities to be conducted in the mentee institutions. Sessions may be conducted in online mode.	Minimum 15 nos. @Rs.1000/ meeting. (at least 3 meetings /mentee institute for 5 mentee institutions). A senior and competent IIC member of the mentor to take part in quarterly planning and review meetings conducted during the IIC calendar year in mentee institutions	15,000/-	honarium
3	Mentor Institute to handhold all mentee institution in conducting at least two activities listed in the IIC calendar activity plan and support in identifying competent external experts and arranging sessions and honorarium to external experts. Sessions may be conducted in online mode.	At least 2 nos. {@Rs.3000 /external expert, 2 external experts per session}	12,000/-	Expert's fee/honarium
4	Mentor institute to organize a 2-day exposure visit cum training program focusing on long Innovation, IP, Entrepreneurship, pre-incubation and Incubation facility creation, IPR filing & management and start-up services and policy mechanisms (NISP, ARIIA and others) support for student and faculty etc. for mentee institute representatives. This is ideally a physical mode activity.	1 Number (Refer Table-2 for budget breakup)	1,25,000/-	Expert's fee/honarium, food, site visits, accommodation and training and communication material cost for the participants.
5	Mentor institute to conduct progress monitoring cum feedback & Impact evaluation study visit to each mentee institute especially towards the end of IIC calendar year or in	Total 5 nos of visits. (One-day visit by an expert/IIC member from the Mentor institute to the mentee institute. It covers local travel ad train or Air Travel cost	50,000/-	Mentors TA, honorarium cost.

	the 4 th Quarter. Ideally this should be a physical visit.	with upper cap of Rs.10000 per visit (includes local travel cost). Stay arrangement to be made by the respective mentee institute		
6	Miscellaneous/contingency fund		11000/-	
	Total		2,25,000/-	

Table:2
Budge Breakup for Activity 4

S.No	Particulars	Maximum Amount/Person/Day In Rupees	Maximum Amount/Particular In Rupees
1	Accommodation for Participants (up to 10 members @2 members per mentee institute for 2 days)	Rs. 1500/-per person for 3 days	45000/-
2	Food	Rs. 800/- per person per day for 3 days	24000/-
3	Honorarium to invited external experts only (up to 4 numbers)	Rs. 5000/ expert	20000/-
4	Travel Reimbursement for Participants	Actual travel cost (Road or train or flight) with upper cap Rs. 5000/ mentee institute (with maximum 2 participants) and from 5 mentee institutions	25,000/-
5	Stationary, Printing (Design and printing of Brochure, registration kit and banner) etc.		11000/-
Total			125000/-

I. Utilization & Refund of Grant

- The Principal / Director / Registrar shall intimate about the receipt of the grant to AICTE/MIC.
- The fund, so released shall be utilized to conduct the prescribed activities for handholding, mentoring, and supporting mentee institutions in building/streamlining/strengthening the innovation and entrepreneurship eco-system and shall not be used for purchase of equipment like computer, laptop or fixed assets etc.
- The released/sanctioned fund for Mentor-Mentee program cannot be utilized for any other program/ sessions or activities.
 - ✓ In case the Mentor-Mentee program is cancelled, the funds must be returned back to AICTE/MIC immediately with interest accrued thereon.

- ✓ In any case, if the institute is required to refund the grant or interest accrued thereon or balance amount, the amount will be refunded to AICTE/MIC. (by way of a demand draft in favor of INNOVATION CELL ACCOUNT payable at New Delhi or through NEFT/RTGS at INNOVATION CELL ACCOUNT, Account No:37903899633, IFSC: SBIN0050203, SBI, SHASTRI BHAWAN, RAJENDRA PRASAD ROAD, NEW DELHI 11000).
- ✓ As MIC needs adequate time for depositing the Demand Draft in the bank, the same be immediately dispatched to avoid any lapse of the validity period. Meanwhile, institute can plan and start the activities as prescribed from the date of issuance of sanction order.
- The Institute shall strictly follow the provisions laid down in the scheme document and sanction order No. *F.No. Innovation/Mentor Mentee Scheme/596/2020-21 Dated: 9th Dec. 2021* issued by this office. All correspondences related to the scheme must contain this number along with year of sanction of the scheme; failing which correspondence will not be entertained.

II. Progress Monitoring and Reporting

IIC institution needs to upload the quarterly or semester wise progress reports periodically in the Mentor-mentee portal and final report submission along with following supporting documents within prescribed period of the completion of Mentor- Mentee program activities.

✓ Usage of Fund:

Original Statement of actual expenditure in the prescribed proforma duly signed by the Head of the institution, president of IIC Institute and countersigned by Registrar/Finance Officer/Govt. Auditor

or

In case of self-financing/private institutions, Statement of actual Expenditure & Utilization Certificate are required to be audited & signed by a Chartered Accountant (with membership no., full address & stamp). Photocopies of formats are enclosed.

- ✓ The **Utilization Certificate (UC)** supported by Audited Statement of Expenditure to the effect that the grant has been utilized for the purpose for which it has been sanctioned shall be furnished to the AICTE/MIC immediately after completion of the scheme to the following **Address: MoE's Innovation Cell(MIC), Room No. 316, 3rd Floor, AICTE HQ, Nelson Mandela Road, New Delhi-110070**
 - It should contain the head-wise break up of expenditure made from the grant-in-aid provided by the Council. Audited Statement of Expenditure indicating expenditure incurred in the total duration of the scheme in the prescribed format and GFR-19 shall be submitted to the Council.

III. Prescribed Activities for IIC Institutions

Under the Mentor-Mentee program, the mentor IIC institution will do the following suggestive activities for their mentee institutions;

1. The key functionaries of IIC at the mentor institute will conduct orientation sessions for all the key functionaries of IIC members of mentee institutions.

2. The mentor institute shall nominate its key functionaries of IIC to join the IICs of mentee institutions as an external expert member.
3. The mentor institute is required to handhold all mentee institutions in conducting at least two activities listed in the IIC calendar activity plan and support in identifying competent external experts and arranging sessions and honorarium to external experts
4. Mentor institute shall organize a 2-day exposure visit cum training program focusing on pre-incubation and Incubation facility creation, IPR filing & management and start-up services and policy mechanisms (NISP, ARIIA and others) support for student and faculty etc. for mentee institute participants. This is ideally a physical activity.
5. The mentor institute needs to conduct progress monitoring cum feedback & impact evaluation study visit to each mentee institute especially towards the end of IIC calendar year or in the 4th Quarter. Ideally this should be a physical visit.
6. The mentor institution is expected to encourage, guide and handhold mentee institutions in participating various innovation and entrepreneurship initiatives of MoE such as adoption of NISP, formulation of I&E policy at the institute level, Participation in ARIIA, Training of Innovation Ambassadors, Mentoring support to students and establishment of pre-incubation and incubation facilities etc.
7. Inviting participation form mentee institutions for the innovation and entrepreneurship activities are being organised by mentor institute as part of IIC calendar, Self-Driven activities etc.

**The activities 1, 2, and 3 may be organised either on online mode or physical mode as per the convenient to both mentor and mentee institutions.*

VII. Guideline for Conducting and delivering of the activities:

1. **To conduct orientation sessions for all the key functionaries of IIC members of mentee institutions.**
 - ✓ At least two orientations cum mentoring sessions for all mentee institutions or separate session for each mentee institution may be planned and conducted.
 - ✓ One orientation session should be organised at the beginning of the Semester/IIC Calendar year and one at the mid of IIC calendar year.
 - ✓ Orientation session shall be conducted on online mode using video conferencing platforms.
 - ✓ Key functionaries of mentor IIC institution shall join as mentor expert and will take the session and explain the best practices, cases of their institute on how they are driving the I&E ecosystem highlighting resource mobilization strategies.
 - ✓ A competent and experienced Key functionary from the mentor IIC institute will deliver the session on above objectives, and a maximum honorarium amount of Rs. 3000/- per expert per orientation session can be provided for this purpose.
 - ✓ A total budget of maximum Rs. 12000/- for two orientation sessions is provisioned.
2. **Take part in the quarterly progress meetings of mentee institutions and provide guidance and support in planning, action plan preparation, and improvisation of I&E activities to be conducted**

in the mentee institutions.

- ✓ At least one-member representation from the mentor institution in each mentee institution is required.
- ✓ The president of mentor IIC institute will nominate the member and he/she will take part in quarterly IIC meetings of IIC mentee institute.
- ✓ Once the member nominated for the mentee institute, same member is required to continue till the end of the IIC calendar year.
- ✓ Each nominated member need to take part in at least 3 such quarterly/semester meetings during the IIC calendar year.
- ✓ Quarterly meetings shall be conducted on online mode using video conferencing platforms.
- ✓ Role of member in mentee IIC institute is to actively participate in quarterly progress meeting of mentee IIC institutions and provide guidance on planning, action plan preparation, progress assessment and improvisation of I&E activities to be conducted in the mentee institutions.
- ✓ Mentor IIC institute may provide an honorarium of Rs. 1000/- to the nominated members upon completion of the such meeting and submission of verified report along with meeting outcomes to the president of IIC institute.
- ✓ A senior and competent IIC member of the mentor to take part in quarterly planning and review meetings conducted during the IIC calendar year in mentee institutions
- ✓ A total budget of maximum Rs. 15000/- for participation in 15 numbers of meetings in 5 mentee institutions during the IIC calendar year.

3. Planning and delivering of two IIC calendar activities for mentee IIC institutions

- ✓ Mentor institute in coordination with mentee institutions will identify two IIC calendar activities to be conducted for the mentee IIC institutions.
- ✓ Mentor institute will prepare the session plan and identify the external resource persons to deliver the session.
- ✓ Repute and experienced experts drawn from national and regional ecosystem should deliver the session.
- ✓ All mentee institute should ensure minimum participation of 250 nos includes IIC members, students and faculty members and staff.
- ✓ Activities shall be conducted on online mode using video conferencing platforms.
- ✓ Each session/activity should accommodate at least two external experts. A maximum honorarium amount of Rs. 3000/- per expert per session can be provided for this purpose.
- ✓ A total budget of maximum Rs. 12000/- for orientation sessions is provisioned.

4. Organize a 2 days long I&E exposure visit cum training program on I&E related theme such as pre-incubation and Incubation facility creation, IPR filing & management etc. for mentee institute representatives.

- ✓ Mentor institute will plan, host and organize a 2-day long exposure cum training program for the participants from mentee IIC institutions.
- ✓ Mentor institute shall get participant nominations from mentee IIC institutions.

- Mentee institutions can nominate up to two key functionaries of their IICs.
- ✓ A total 10 participants from the 5 mentee institutions shall comprise the one cohort of training to be conducted on physical mode.
 - ✓ The mentor institute shall take care the venue related expenses and delivering the training program. Expenses may include expert's fee/honorarium, food, site visits, accommodation and training and communication material cost for the participants etc. A detail breakup is provided in Table 2.
 - ✓ The mentor institute shall reimburse the travel cost of nominee/representatives from the mentee institutions. Actual travel cost (road or train or flight) or the upper cap Rs. 5000/ mentee institute (with maximum 2 participants) can be accommodated.
 - ✓ A total budget of maximum Rs. 125000/- for a batch size of 10 participants from 5 mentee institutions is provisioned.
5. **To conduct visits to each mentee institution for progress monitoring & impact evaluation study especially towards the end of IIC calendar year or in the 4th Quarter.**
- ✓ The Key functionaries or nominated members of mentor IIC institution to mentee institutions shall make a one-day visit to the campus of mentee institute to observe the progress, facility and function of IICs and discuss with the IIC members.
 - ✓ Mentor expert will check the progress and provide feedback and on spot mentoring support to the mentee institute on improvisation of I&E ecosystem, strategies and how to improve the score and star of mentee institute.
 - ✓ An impact evaluation study shall be planned and conducted and represented. A well designed communication brochure and annual report of IIC institute with achievement and impact should be incorporated. Mentor institute will guide mentee institutions in preparing and finalizing the IIC annual reports.
 - ✓ The local and travel (road, train and air) expense of members shall be drawn from the budget provisioned.
 - ✓ A total budget of maximum Rs. 25000/- covers visits to 5 mentee institutions (Rs.10000 per member per visit covers TA and honorarium) is provisioned.
 - ✓ Mentee institute will provide local stay and organizing progress monitoring cum feedback/mentoring meeting should be planned in advance.
6. **The mentor institution is expected to encourage, guide and handhold mentee institutions in participating various innovation and entrepreneurship initiatives of MoE such as adoption of NISP, formulation of I&E policy at the institute level, Participation in ARIIA, Training of Innovation Ambassadors, Mentoring support to students and establishment of pre-incubation and incubation facilities etc.**
7. **Inviting participation form mentee institutions for the innovation and entrepreneurship activities are being organised by mentor institute as part of IIC calendar, Self-Driven activities etc.**
8. **Delivering activities of Mentor-Mentee Scheme**
- ✓ The President and concern program coordinator of the mentor institute shall be primarily responsible for the implementation of the project.

- ✓ All mentee institutions are also required to nominate coordinators (one from each mentee institutions) as the co-coordinators of the project at mentee institution level.
- ✓ Quarterly presentation on the planned activities and implementation progress should be submitted in the Mentor-Mentee section of the IIC Portal.
- ✓ If it is found that the grant-in-aid released is not being utilized for the purposes for which it was intended for and the progress of the programme is not satisfactory, action may be taken or funding support may be withdrawn.
- ✓ Further extension of financial support from AICTE, MIC shall be based on the progress of the scheme and effective utilization of the earlier grant-in-aid provided.
- ✓ If the Mentor institute coordinator leaves the institution, retires, or goes on long leave, the institute will appoint another Mentor Institute Coordinator to the programme, and immediate intimation to the MIC in this regard.

VIII. Use of Logos

- ✓ In case of activities organized in online mode, the logos of MIC, AICTE and IIC should be used properly labelled and prominently displayed.
- ✓ In case of physical activities, logos of MIC, AICTE and IIC must be prominently placed in the banners/stage backdrop/podium/venue, and displayed.
- ✓ All publicity materials/ advertisements/ brochures/ invitation cards/ any other collaterals/ event backdrop etc. related to Mentor-Mentee Program must carry the MIC, AICTE and IIC logo.

IX. Activity Report

Both mentor and mentee institutions are required upload activity reports related to mentor-mentee program in the IIC portal. Following documents and reports are required to upload by end of every quarter/semester or periodically by the mentor and mentee institutions;

- ✓ Brief plan and calendar for the Activities to be conducted
- ✓ A time activity chart indicating schedule along with deliverables for each participating institution.
- ✓ Reports for the activities completed.
- ✓ Sessions details, experts' details and feedback from participants.
- ✓ Details of financial layout and expenses incurred for the activities.
- ✓ Copies of letters of intents/MOU are signed with mentee institutions.
- ✓ The Mentor Institute Coordinator must submit progress report every quarter indicating
 - a. The progress of the activities under Mentor-Mentee Scheme and the status of the grant-in-aid utilized.
 - b. Geotagged photographs (maximum 15) of all the activities under Mentor-Mentee Scheme.
 - c. A video of 2-minute duration (per mentee institute) having: (i) Introduction by Coordinator mentioning the name and state of Mentee IIC and Mentor IIC institute. (ii) Activities conducted under Mentor-Mentee scheme (iii) How the Mentor-Mentee Scheme was beneficial to students, faculty and institute? (iv) Acknowledgement of AICTE/MIC support.

X. Monitoring

- ✓ AICTE/MIC may depute an Officer/Observer to oversee the quality of the conference and collect feedback from the venue

XI. Expected Outcomes

- ✓ Active participation and involvement of IIC members; students, faculty members and staff from both mentor and mentee institutions.
- ✓ A streamlined and strengthened innovation and entrepreneurship ecosystem with functional IICs in mentee institutions.
- ✓ Increase in awareness level among students, faculties and staff on recent developments and approaches in for innovation, entrepreneurship and intellectual property and their importance in wealth creation at individual level and national level.
- ✓ Nurturing leadership potential of student innovators, and entrepreneurs by providing them coordination role to achieve the program objective.
- ✓ Program will set foundation for institute's participation in MoE's Innovation and Entrepreneurship initiatives such as IIC, ARIIA, Hackathons, NISP, National Innovation Contest, and YUKTI and related programs at MIC and AICTE.

XII. General instructions

- ✓ The grantee Institution shall observe all financial norms and guidelines as prescribed by the AICTE/ Government of India from time to time. GOI GFR rules (@<https://doe.gov.in/order-circular/general-financial-rules2017-0>) should be followed during utilization of grant.
- ✓ This Sanction Order may be treated as Offer Letter for all purposes.

XIII. Duration of the Project: Duration of project shall be of one IIC calendar year.

For more information, please write your query to Ms. Selvarani, Innovation Officer.

Email: selva.rani@aicte-india.org, mm.iic.mic@aicte-india.org, Phone no: 011 2958 1513

Yours sincerely,



Dipan Sahu
Asst. Director, MIC

Copy forwarded for information and necessary action to:

- ✓ Principal/Hol
- ✓ IIC President
- ✓ Guard File



CITY UNION BANK
BRANCH : Poonthandalam
Sri Sairam Engineering College
Campus Sai Leo Nagar
POONTHANDALAM 600
044
Chennai Kancheepuram
District

ACCOUNT NO :SB-12388680
ACCOUNT NO(15 DIGIT):500101012388680
IFSC :CIUB0000634
ACCOUNT TYPE :CUB SAVINGS A/C OTHERS
CUSTOMER DETAILS :SRI SAIRAM INSTITUTE OF TECHNOLOGY
NO 31 SAI BHAVAN
MADLEY ROAD
BEHIND LEO COMPLEX T NAGAR
CHENNAI
600017
Statement Date :Mar 2, 2022, at 11:26 AM
STATEMENT OF ACCOUNT from 01/01/2022 to 31/01/2022

DATE	DESCRIPTION	CHEQUE NO	DEBIT	CREDIT	BALANCE
17/01/2022	BY NEFT TRF:ICT ACADEMY OF T IDIBH22017372559:			49,000.00	4,30,264.00
19/01/2022	BY NEFT TRF:AICTE SBIN372019688235:			2,25,000.00	6,55,264.00
TOTAL			0.00	2,74,000.00	6,55,264.00

* Statement Downloaded By SRI SAIRAM INSTITUTE OF TECHNOLOGY on Mar 2, 2022, at 11:26
If any discrepancy in the statement, should be informed to branch immediately.
END OF STATEMENT - from Internet Banking

Sri Sai Ram Institute of Technology, Chennai, Tamil Nadu

IC201811089

Statement of Expenditure-Mentor-Mentee Scheme (2021-22)

Sr. No	Activity	No of activities	Expenses Covered	Sanctioned Amount (In Rs.)	Actual Expenditure (In Rs.)	Balance Amount In Rs. (If unspent)
1	Conduct an orientation cum mentoring sessions for all the key functionaries of IIC members at mentee institutions. It may be conducted online mode.	At least 2 nos/Year. {@Rs.3000 /mentor expert, 2 mentor experts per session}	honorarium	12,000/-	12,000/-	Nil
2	Mentor institute Representative to take part in the quarterly progress meetings of mentee IIC institutions and provide guidance on planning, action plan preparation and improvisation of I&E activities to be conducted in the mentee institutions. Sessions may be conducted in online mode.	Minimum 15 nos. @Rs.1000/ meeting. (at least 3 meetings /mentee institute for 5 mentee institutions). A senior and competent IIC member of the mentor to take part in quarterly planning and review meetings conducted during the IIC calendar year in mentee institutions.	honorarium	15,000/-	15,000/-	Nil
3	Mentor Institute to handhold all mentee institution in conducting at least two activities listed in the IIC calendar activity plan and support in identifying competent external experts and arranging sessions and honorarium to external experts. Sessions may be conducted in online mode.	At least 2 nos {@Rs.3000 /external expert, 2 external experts per session}	Expert's fee/honorarium	12,000/-	12,000/-	Nil
4*	Mentor institute to organize a 2-day exposure visit cum training program focusing on long Innovation, IP, Entrepreneurship, pre-incubation and Incubation facility creation, IPR filing & management and start-up services and policy mechanisms (NISP, ARIIA and	1 Number (Refer Table-2 for budget breakup)	Expert's fee/honorarium, food, site visits, accommodation and training and communication material cost for the participants	1,25,000/-	80,000/-	45,000/-

	others) support for student and faculty etc. for mentee institute representatives. This is ideally a physical mode activity.					
5	Mentor institute to conduct progress monitoring cum feedback & Impact evaluation study visit to each mentee institute especially towards the end of IIC calendar year or in the 4 th Quarter. Ideally this should be a physical visit.	Total 5 nos of visits. (One-day visit by an expert/IIC member from the Mentor institute to the mentee institute. It covers local travel ad train or Air Travel cost with upper cap of Rs.10000 per visit includes local travel cost). Stay arrangement to be made by the respective mentee institute	Mentors TA, honorarium cost.	50,000/-	50,000/-	Nil
6	Miscellaneous/contingency fund.			11,000/-	11,000/-	Nil
7	Interest earned, if any			-	-	Nil
	Total			2,25,000/-	1,80,000/-	45,000/-

Certified that I have satisfied myself that the conditions on which the grant-in-aid was approved have been duly fulfilled and that I have exercised the following checks:

Kinds of checks exercised:

1. Expenditure is as per the guideline of Mentor-Mentee Scheme document
2. Reports and copy of Honorarium Receipts, transaction proof, bills and vouchers etc., Institute's PAN Card as per mandate form is also submitted online (IIC Portal) and have to be submitted by post

(X) Y2
 [Signature of Chartered Accountant**/Finance Officer /Registrar/Govt. Auditor] [Signature of Head of the Institute]
 Name of CA: _____
 Membership No.: _____
 Full Address: _____
 [with seal]

P.T. PONNAIAH & CO.
Chartered Accountants
 72-B/36,
 L-Block, 21st Street
 Anna Nagar East
 Chennai - 102.
 Ph: 25202221
 10.10.2022
(P.T. PONNAIAH)
Partner, M. No. 019873)

[Signature of Head of the Institute]
 Name of: **DR.K.PALANIKUMAR**
 Designation: **PRINCIPAL**
 Full Address: **Sri Sai Ram Institute of Technology,
 Sai Leo Nagar, West Tambaram, Chennai-44**
 [with seal]



**In case of private institutions/self-financing institutions

UDIN: 22019873BAJXAB7577

Annexure-A
Budge Breakup for Activity 4*

S.No	Particulars	Maximum Amount/Person/Day In Rupees	Sanctioned Amount (in Rs.)	Balance Amount In Rs. (If unspent)
1	Accommodation for Participants (up to 10 members @2 members per mentee institute)	Rs. 1500/-per person for 3 days	45000/-	45,000/-
2	Food	Rs. 800/- per person per day for 3 days	24000/-	Nil
3	Honorarium to invited external experts only (up to 4 numbers)	Rs. 5000/ expert	20000/-	Nil
4	Travel Reimbursement for Participants	Actual travel cost (Road or train or flight) with upper cap Rs. 5000/ mentee institute (with maximum 2 participants) and from 5 mentee Institutions	25,000/-	Nil
5	Stationary, Printing (Design and printing of Brochure, registration kit and banner) etc.		11000/-	Nil
Total*			1,25,000/-	45,000/-

2/2

[Signature of Chartered Accountant**/Finance Officer /Registrar/Govt. Auditor] (Signature of Head of the Institute)
 Name of CA: _____
 Membership No.: _____
 Full Address: _____
 [with seal]

P.T. PONNAIAH & CO.
 Chartered Accountants
 72-B/36,
 L-Block, 21st Street
 Anna Nagar East
 Chennai - 102
 Ph : 26202221
 10.10.2022
(P.T. PONNAIAH)
 Partner. M. No. 019873)



[Signature of Head of the Institute]
 Name of: Dr.K.PALANIKUMAR
 Designation: PRINCIPAL
 Full Address: Sri Sai Ram Institute of Technology,
 Sai Leo Nagar, West Tambaram, Chennai-44
 [with seal]



**In case of private institutions/self-financing Institutions

UDIN : 22019873BATXAB7577



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Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairamit.edu.in

Founder Chairman : MJF. Ln. Leo Muthu



Dr.K.PALANIKUMAR, M.E.,Ph.D.,
Principal

29-09-2022

To

Mentor-Mentee Scheme

Innovation Officer

Room No. 319,

MoE's Innovation Cell,

All India Council for Technical Education (AICTE),

Nelson Mandela Marg, VasantKunj,

New Delhi 110070

Respected Sir,

Sub: Submission of Utilization Certificate and Statement of Expenditure -Mentor-Mentee Scheme -IIC- Reg.

Ref: Sanction Order No: Mentor-Mentee Scheme / 596/2020-21 Dated 09/12/21

From MOE's IIC we have received fund amount Rs 2,25,000/- for Mentor-Mentee Programme in the Academic year 2021-2022. As per the guidelines we have conducted the Mentor Mentee Programs. In that we have to submit the utilization certificate and statement of expenditure for the Academic year 2021-2022. But in the sanctioned amount, we are refunding the I&E two days participant's accommodation charges of Rs 45,000/- . Kindly acknowledge the same.

Thanking You

Yours

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044

Encl: i. DD Enclosed Unutilized amount Rs 45,000/-

ii. Audited Utilization Certificate and Statement of Expenditure



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

/SairamInstitutions

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SRI SAIRAM INSTITUTE OF TECHNOLOGY, CHENNAI - 44

Admn. Office, T.Nagar, Chennai – 17.

No. 19/SIT/TBM/AICTE – SKILL DEV PR/2022

Dated: 08.09.2022

Sub: SIT -TBM – Admn. – To organise AICTE initiated Skill Development Program KARMA for our students through Mechanical Engineering Department – Approved - Orders issued.

Ref: Letter No. 254/S2/SSIT, Ch-44/1577/2022. Dated 07.09.2022 from the Principal.

ORDER:

The Principal has been permitted to organize 'AICTE initiated Skill Development Program - KARMA (Kaushal Augmentation and Restructuring Mission of AICTE)' for our students as per Guidelines **through Mechanical Engineering Department** in our College campus for two months from **12.09.2022 to 12.11.2022** - as requested in the reference cited.

For SRI SAIRAM INSTITUTE OF TECHNOLOGY,

(Sd/xxxxxxxxx)

CHIEF EXECUTIVE OFFICER

/ By order of Chief Executive Officer/

EXECUTIVE DIRECTOR

To:

The Principal,
Sri Sairam Institute of Technology,
Chennai -44.

Copy to:

Accounts Section

Copy to: ITO/MECH

" : IDRC . Dr. Shanmuga Sundaram .



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Ref T.O.No:254/S2/SSIT/Ch -44/1577/2022

Date: 07.09.2022

Submitted to the Chairman

Sub: SSIT, Ch-44 – Conduct AICTE – KARMA Skill Development Program
for our students from 12.09.2022 to 12.11.2022 - Permission – Requested – Reg.

Ref: Letter dated 06.09.2022 received from the HoD., Department of Mechanical Engineering.

A copy of the letter under reference cited is submitted herewith for kind perusal.

It is submitted that the Dean R&D, Department of Mechanical Engineering has requested in his letter cited that necessary permission may kindly be granted to conduct "AICTE initiated skill development program KARMA (Kaushal Augmentation and Restructuring Mission of AICTE (KARMA))" for our students during the period from 12.09.2022 to 12.11.2022 on free of cost for the participants.

Therefore, it is requested that necessary permission and approval may kindly be granted to conduct the above program at SSIT.

Submitted to the Chairman for kind perusal and approval

[Handwritten signature]
7/9

Encl: as above

copy to: Dr. Phaniya...

O/C

[Handwritten signature]

PRINCIPAL
PRINCIPAL

SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



FROM

Dr. G. Shanmugasundar
Dean R&D
Department of Mechanical Engineering,
Sri Sai Ram Institute of Technology,
Chennai-44.



06/09/2022

Chennai-44

TO

The Principal,
Sri Sai Ram Institute of Technology,
Chennai-44.

Recd
06/09

Respected Sir,

Subject: Seeking permission to conduct AICTE – KARMA skill development program – Reg.

As our institution got approved for conducting **AICTE initiated skill development program KARMA** (Kaushal Augmentation and Restructuring Mission of AICTE (KARMA)) for our students. The following are the details of the approved courses, the departments and stationed student strengths. So we request you to give permission and approval to conduct the same at our campus from 12/09/2022 to 12/11/2022 with free of cost for the participants.

Sl no	Department	Name of the Course	Name of the faculty	No .of students
1	Mechanical Engineering	Certificate course in CNC turning	1.Dr.G.Shanmugasundar 2. Mr.S.Balasubramani	25 Nos. From Mech.Engg.
2	Computer Science and Engineering	Computer hardware and network maintenance	1.Dr.B.Sreedevi 2.Mr.J.Thirunavukkarasu	25 Nos. From CSE
3	Computer Science and Engineering	Computer hardware and network maintenance	1.Dr.V.Brindha Devi 2. Mr.P.Suthahar	25 Students (11 th & 12 th STD) Sairam Matriculation Higher Secondary School, Tambaram

Thanking you

Yours faithfully


G. Shanmugasundar

Encl: 1. AICTE Approval Copy

F. No. 8-1/KARMA/**model2**/SRO/1-2501960 Dated:

The principal

Sri Sai Ram Institute of Technology

SAI LEO NAGAR, DHARKAST ROAD, WEST
TAMBARAM, CHENNAI. 600 044

KANCHIPURAM , Tamil Nadu

Subject : Approval for courses under **model2** of KARMA Scheme

Dear Sir/Madam,

In reference to your online application for running Job roles under KARMA scheme.

AICTE has approved the following courses to be conducted in your Institution.

Model : model2.

Sno	Sector/Course Basket	Job roll	Applied intake	Approved Intake	NSQF level	No. of Hours
1	Certificate Course in CNC Turning		25	25	Level 4	
2	Computer Hardware & Network Maintenance		25	25	Level 4	

Note :

01. Institute will utilize its existing infrastructure form running these course.
02. The College/Institute shall maintain complete attendance of students and trainers during classes and practical of each job role.
03. The College/Institute shall fully implement the official Language Policy of Union Govt. and comply with the official Language Act, 1963 and Official Languages (use for official purposes of the Union) Rules, 1976 etc.
04. The institute will ensure the eligibility criteria of the students as per the NSDC Norms.
05. The Institute shall run training for each job role as prescribed by respective sector skill council.

06. Institute may charge a reasonable fee for each course under Model 1 and 2 with intimation to AICTE, while course under Model 3 will be provided without charging fee from students.
07. The institute found violating the above-described conditions, will be debarred for running the courses.
08. Project sanctioned by AICTE is assigned a specific Reference No. given on the pre-page. All correspondences related to the project must contain this number with year of sanction of the project failing which correspondence will not be entertained.
09. The Annual Progress Report in the prescribed format shall be submitted to AICTE not later than one month after completion.
10. Institute can charge fee from students to meet expenditure for running the courses under Model 1 and Model 2 and same may be communicated to AICTE. But for running the Model 3 Vidyanjali, Institute has meet out the funds from CSR funds, no fee can be charged from students.
11. Project Completion Report (PCR) in the prescribed format in the total duration of the project in the prescribed format, Utilization in the format shall be submitted to the Council.
12. This sanction issues to run the courses under KARMA scheme as per NSQF guidelines. AICTE will not be responsible for certification of students. Certificate/Assessment will be done by third party i.e. Sector Skill Councils or any agency approved by NSDC.

Yours faithfully,

(Dr Neetu Bhagat)

Dy Director,

Skill Development Cell (SDC)

F. No. 8-1/KARMA/**model3**/SRO/1-2501960 Dated:

The principal

Sri Sai Ram Institute of Technology

SAI LEO NAGAR, DHARKAST ROAD, WEST
TAMBARAM, CHENNAI.600 044

KANCHIPURAM , Tamil Nadu

Subject : Approval for courses under **model3** of KARMA Scheme

Dear Sir/Madam,

In reference to your online application for running Job roles under KARMA scheme.

AICTE has approved the following courses to be conducted in your Institution.

Model : model3.

Sno	Sector/Course Basket	Job roll	Applied intake	Approved Intake	NSQF level	No. of Hours
1	Computer Hardware & Network Maintenance		25	25	Level 3	

Note :

01. Institute will utilize its existing infrastructure form running these course.
02. The College/Institute shall maintain complete attendance of students and trainers during classes and practical of each job role.
03. The College/Institute shall fully implement the official Language Policy of Union Govt. and comply with the official Language Act, 1963 and Official Languages (use for official purposes of the Union) Rules, 1976 etc.
04. The institute will ensure the eligibility criteria of the students as per the NSDC Norms.
05. The Institute shall run training for each job role as prescribed by respective sector skill council.
06. Institute may charge a reasonable fee for each course under Model 1 and 2 with intimation to AICTE, while course under Model 3 will be provided without charging fee from students.
- 07 The institute found violating the above-described conditions, will be debarred for running the courses.

08. Project sanctioned by AICTE is assigned a specific Reference No. given on the pre-page. All correspondences related to the project must contain this number with year of sanction of the project failing which correspondence will not be entertained.
09. The Annual Progress Report in the prescribed format shall be submitted to AICTE not later than one month after completion.
10. Institute can charge fee from students to meet expenditure for running the courses under Model 1 and Model 2 and same may be communicated to AICTE. But for running the Model 3 Vidyanjali, Institute has meet out the funds from CSR funds, no fee can be charged from students.
11. Project Completion Report (PCR) in the prescribed format in the total duration of the project in the prescribed format, Utilization in the format shall be submitted to the Council.
12. This sanction issues to run the courses under KARMA scheme as per NSQF guidelines. AICTE will not be responsible for certification of students. Certificate/Assessment will be done by third party i.e. Sector Skill Councils or any agency approved by NSDC.

Yours faithfully,

(Dr Neetu Bhagat)

Dy Director,

Skill Development Cell (SDC)



Lr. No. 006 / ANIHEES / EQUIPMENT / 2022-23

Date: 10.06.2022

From,

Coordinator – ANIHEES,
Centre for Excellence Building,
Anna University, Chennai – 25.

To,

M/s. Sairam Techno Culture,
No.31, Madley Road,
Sai Bhavan, T. Nagar,
Chennai – 600 017.

Handwritten: 20/06

Handwritten: Dr. Mareswari

Sub: Quotations for Supply and erection of Kiln with Steam Injector and Bin with Blower – Reg.

Please furnish your quotation, in duplicate, for the items described in the schedule below, in a closed cover addressed to

Coordinator - ANIHEES,
Centre for Excellence Building,
Anna University, Chennai – 25.

so as to reach him on or before 24.06.2022.

The cover containing the quotation in duplicate may be sent by post duly sealed with wax and super scribed as

"QUOTATION as per Letter No. 006 / ANIHEES / EQUIPMENT / 2022-23, dated:10.06.2022 due on 24.06.2022".

Quotation should be furnished only for the items required and available in ready stock, for free delivery in the institution and should contain details such as

- (I) Make/Brand/Type of the items offered
- (II) Complete specification of the items offered including the materials
- (III) Illustrative pamphlets/drawings
- (IV) ISI Certificate, if any, whether available
- (V) GST No. should be provided.

Packing and Forwarding Charges should be furnished separately. The rates quoted will be taken as net and for free delivery in the institution, if the above details are not furnished

Off-season and special discount, if any, applicable to educational institutions may please be indicated separately. The required delivery period for the supply of the items and the validity period for the rates quoted may also be separately mentioned. Advance payment or payment against delivery is not normally possible.

Quotations should not be sent through any one, unless specifically required to do so, under proper authorization or delivered in person under any circumstances.

Please note that quotations received in covers which are not wax sealed and which are not received by post, and which are received late, will not be considered.

SCHEDULE

S. No.	Description	Specifications	Quantity
1.	Kiln with Steam Injector	As given in Annexure	1 No. each
2.	Bin with Blower		

[Signature]
10/06/2022
COORDINATOR - ANIHEES

[Signature]
10/06/2022

ANNEXURE

Kiln with Steam Injector

- Maximum temperature : 1000°C
- Working temperature : 950°C
- Inner Size : 600mm x 600mm x 600mm
- Control Accuracy : 1°C
- Insulation : Ceramic Fibre
- Necessary instruments for steam temperature and pressure measurements at both ends (inlet and outlet)
- Should have necessary instruments for temperature control and auto cutoff.

Bin with Blower

- Capacity : 1 metric ton
- Material : MS C45 powder coated
- Blower : Capacity – 3000 CFM,
Type – Centrifugal blower,
Blower motor – as per requirement from
Crompton greaves / Valeo / Delphi / from any
other standard manufacturer.
- Should have ^{the} cyclone.
- The above items should be erected at CARD, NLCIL, Neyveli.

[Signature]
Coordinator ANIHEES

[Signature]
10/06/2022



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Ref T.O.No:190/S4/SSIT/Ch-44//2022

Date: 13.06.2022

Submitted to the Chairman

Sub: SSIT, Ch-44 – ANIHEES, Anna University, Chennai- Purchase of Equipments – Reg.

Ref: Letter dt.08.06.2022 received from Dr.M.Mareeswaran, a.P.Gr.II, Dept. of Mechanical Engineering.

A copy of the letter received from Dr.M.Mareeswaran, Asst. Prof. Grade II, Dept. of Mechanical Engineering is submitted herewith for kind perusal.

It is submitted that Dr.M.Mareeswaran has given a proposal to the Anna University for sanction a sum of Rs.17,88,000/- (Rupees seventeen lakhs eighty eight thousand only) to him for purchase of Equipments as listed in the project sanctioned.

The letter received from Dr.M.Mareeswaran is submitted herewith for further deliberations and approval.

Submitted to the Chairman for kind information and approval.

Encl : as above

PRINCIPAL

PRINCIPAL
SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI - 600 044.



Date : 8/06/2022

From
Dr. MAREESWARAN M
Asst.Prof. Gr-II
Department of Mechanical Engineering
Sri Sai Ram Institute of Technology
Chennai.



To
The Principal
Sri Sai Ram Institute of Technology
Chennai.

Sir,

Under ANIHEES-Anna University, I had been sanctioned Rs.17,88,000/-+ Taxes for prototype demonstration. Based on the meeting held on 7/06/22 at Anna University, The sanctioned amount had been transferred to Anna University from NLC towards the purchase of Equipment. The Anna University will release the amount through Limited Tender for the purchase of Equipment proposed by me.

As an Innovator I cannot directly participate in the Tender, in this regard I request our college to participate in the Tender through the company registered as a start-up initiative (Sairam Techno Culture).

The Tender is Limited, only listed company (given by me) will be participating in the Tender. In tender process no advance will be provided and hence I request for funding support also.

Benefits in Participation:

- 1) College will get direct Purchase order from Anna University, it will be very useful in NIRF, NBA and NAAC
- 2) 15% profit will be given to the college.
- 3) All the equipment will be manufactured inside the campus, so students can participate and learn.
- 4) It is a start-up initiative, it helps to get future orders from Govt. sectors.
- 5) Name plate will be fixed in the machinery, it will be available at NLC.

Required Items:

- 1) Investment of fund Rs.15,00,000/-
- 2) Space for manufacturing equipment
- 3) Extended time to work in the lab
- 4) Usage of Machinery and power available in the lab

So, I kindly request you to give your concern for participating in the Tender and financial support to complete this work. I here with attached the sanction letter for your reference.

Thanking you.

Yours faithfully,

M.

Dr. MAREESWARAN M

13/06/2022



AU – NLCIL INNOVATION HUB
for
ENERGY, ENVIRONMENT & SUSTAINABILITY
ANNA UNIVERSITY, CHENNAI – 600 025

Dr. V. KUMARESAN
Associate Professor & Coordinator

Phone: 044 2235 7964 / 7590
Email : aniheescoordinator@gmail.com

Lr. No. 002 / ANIHEES - I / 2021-22

Date: 07.02.2022

To,
M/s. Revo Technologies and Enterprises
100 B, 8th Street, Shanmuga Nagar,
Mannivakkam, Chennai – 600 048

Sir,
Sub: AU – ANIHEES – Prototype Demonstration (1st Wave) – Sanction Accorded
– Reg.

Ref: Lr. No. 35 / CARD / GM / IIC / ANIHEES / First Wave / Prototype / 2022,
dated 08.02.2022

I am pleased to inform that your project proposal titled "Activated Carbon Development Using Lignite – HA sludge" has been approved for prototype demonstration under IIC innovation incubation programme with a financial outlay of Rs. 17,88,000/- plus applicable taxes. In this regard, you are requested to execute a Memorandum of Agreement (Triparty) with ANIHEES & CARD-NLCIL on or before 08.02.2022. The venue for signing of MoA will be at ANIHEES, Centre for Excellence Building, Anna University, Chennai – 600025.


Coordinator-ANIHEES

Copy to:

1. CGM - CARD, NLCIL, Neyveli
2. Director, IQAC, Anna University
3. PS to the Vice-Chancellor
4. PA to the Registrar
5. File



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Mobile: 9940812937, 9445470317

GST : 33A0XPM4580J1ZA

TIN: 33146367358



Equipment Details and List of Suppliers

Group	Sl.No	Part Name	Specifications	Qty
1	1	Cone mill with ash collector	Hammer mill to break the Lignite sludge with blower with speed controller(3000CFM), cyclone and dust collection setup. Capacity : 100 Kgs/hr. The Equipment should have the following measuring facility: 1) RPM 2) Voltage and Amps 3) Air flow rate	1 set
	2	Destoner	The equipment should separate sand and carbon. Equipped with vibromotor and with measurement arrangement for vibration level, Voltage and Amps. Capacity: 100Kgs/hr	1 set
2	3	Elevator	Bucket Elevator with following specifications; 1)Height=15Feet, 2) Bucket Size = 5"x4" 3) Capacity =100Kgs/hr with measurement setup for Voltage and Amps	2 set
	4	Conveyor	1) Length = 1.5 meters 2) Screw OD = 6" 3) Capacity = 100Kgs/hr with measurement setup for Voltage and Amps	2 set
3	5	Mixer with washing setup	1) 500Lts Capacity 2) SS316 for contact surfaces The mixer should have the provision to pour HCl, KOH and water with reservoyor facility and quantity controlling facility. It should have the facility to drain the liquids: with measurement setup for Voltage and Amps	1 set

4	6	Kiln with Steam Injector	Max. Temperature = 1000°C Working Temp. = 950°C Inner size = 600mm x 600mm x 600mm Control Accuracy = 1°C Insulation = Ceramic fibre with Temperature Controller and auto cutoff. It should have the provision to inject the steam with control valve, and it should have the steam outlet with temperature and pressure measurement at inlet and outlet.	1 set
	7	Bin with colling setup	Bin of 1 MT capacity with cooling facility with blower and cyclone.	1 set

List of suppliers for the above

Sl.No	Company name and address	E-Mail
1	Sanjmar Industries Pvt Ltd, 1, Thiruvengadam Nagar 8th Strret, Mannivakkam, Chennai-600048 8220903877	sanjmar600048@gmail.com
2	Standard Instruments, 4/124, 2nd Floor, Shanthi Nagar, Moondrumavadi, K.Pudur, Madurai-625007. 9442880048, 8072913295	standardinstruments@gmail.com
3	Electro Tech, No.26, Sentamil Nagar, Muggapair west, Chennai-600037	electrotech.ewe@gmail.com
4	Silicon Systems, 15/29, Mahaliamman Nagar, Kalapatti, Coimbatore-641048.	siliconsystems@scbe@gmail.com
5	Sairam Techno Culture, Sai Bhavan, No.31, Madley Road, T. Nagar, Chennai-600017. 044-42267777	info@sairamgroup.in



தமிழ்நாடு அறிவியல் தொழில்நுட்ப மாநில மன்றம்

TAMIL NADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Established by Government of Tamilnadu)

Directorate of Technical Education Campus, Chennai – 600 025

Ph : 044-22301428, Telefax : 044-22301552 www.tanscst.nic.in



Dr.R.Srinivasan, M.Sc., Ph.D., F.I.C.S., M.A.C.S.(USA),
Member Secretary

Lr.No.TNSCST/SPS/2021-2022/

To
The Principal
Sri Sairam Institute of Technology
Sai Leo Nagar, West Tambaram,
Chennai - 600 044.

11.03.2022

1002
22/03

Sir/Madam,

Sub: TNSCST – Student Project Scheme (2021-2022) – approval intimation–grant release- reg.

With respect to the above scheme, the list of projects approved by the State Council is enclosed along with terms and conditions. You are requested to adhere to terms and conditions such as submission of UC and seminar paper in time.

No	Guide Name and Institutional Address	Title of the Project	Students Name	Project Code	Amount
1	Mr.R.Dhanasekar Assistant Professor, Department of EEE Sri Sairam Institute of Technology Chennai - 600 044.	Water absorbing pavements by using porous concrete	P.Kirubanandhan, V.Rahul	EEE-0492	7500/-
2	Dr.Gladys Aani Sujitha.J Assistant Professor, Department of Computer Science and Engineering Sri Sairam Institute of Technology Chennai-600044.	Milk distribution management system	Sivashankaran.E, Vasanth Allen Raj.A, Vijay.M	CSE-0393	7500/-
3	Dr.G.Shanmugasundar Associate Professor and Dean R & D, Department of Mechanical Engineering Sri Sairam Institute of Technology Chennai-600044.	Design and fabrication of smart voice controlled robotic wheel chair (vcr bot- v1) for disabled people	A.Aravindh Krishna P.Kishore Kanna S.M.Anand A.Yamini	EME- 0129	7500/-

Herewith enclosed the cheque for the approved grant and disburse the grant to the concerned students through the guides at the earliest.

Kindly send the utilisation certificate (format enclosed) and seminar paper (Ref.T&C-No.5&6) on completion of the project.

Thanking you,

Yours faithfully,

11.03.22
Member Secretary.

- Encl: a) Terms & Conditions (T&C)
b) Format of Utilisation Certificate (UC)
c) Cheque for Rs.22,500/- No: 409438 dt:11.03.2022

Copy to: The individual guides

Dr. Shanmugasundar, Dept. of Tech.

copy to: AIC PPSI

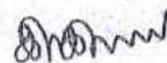
TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE Campus, Chennai-600025

STUDENT PROJECTS SCHEME 2021-2022

Terms and Conditions of the grant

1. The project team SHOULD NOT change the topic of the project and should not deviate from the objectives of the sanctioned proposal. In the event of any such changes, sponsoring will be treated as cancelled and the college should return the sanctioned amount to TNSCST.
2. Every sanctioned project is allotted with a Project code Number. Please refer this number while corresponding with TNSCST.
3. The project sanction letter and the money will be sent to the Principal/Registrar of the institution with a copy to the Project guide.
4. The sanctioned project should be completed and the report should be submitted before end of **May 2022**.
5. The state council will review the progress of the project at any time before completion of the project.
6. On completion of the project, 2-3 pages seminar paper (500 words, Times New Roman, 12 font size, single column, margins left- 2.5cm, right-2cm, top-2cm & bottom- 2cm, Word format without any figures & tables) should be submitted/uploaded in the council website.(link will be activated in due course of time) by mentioning the project code.
7. Utilization certificate (**UC**) should be sent to The Member Secretary, Tamilnadu State Council for Science and Technology, DOTE Campus, Chennai-600025. The Utilization Certificate should be signed by the Guide, HOD and Principal/Registrar/Dean with official **seal** as the case may be.
8. The guides are responsible for timely submission of Seminar Paper and UC.
9. The seminar paper will be included in the form of Proceedings which will be brought out during Seminar cum Exhibition, only for those who submit the **UC**
10. **Anyone student** of the project team should present and exhibit the findings before the experts in the Seminar cum Exhibition which will be organized during **July/August 2022**.
11. The project model /fabrication/equipment are all properties of the council and therefore these are to be kept safely in the college and it should be handed over to the council with necessary details and bills as and when required.
12. During the Seminar cum Exhibition, " best project award and certificate" will be presented to the outstanding selected projects and completion certificates to all.
13. The council reserves the right to terminate the project at any stage if it is convinced that the grant has not been properly utilized or appropriate progress is not being made. In addition, the Council may designate officer/an Expert to review the work done.
14. If the guide wishes to leave the Institution where the project is based, the Institute/guide will inform the same to the Council and in consultation with Council, evolve steps to ensure successful completion of the project, before relieving the guide. The Council reserves the right to order verification/audit of accounts by any Officer authorized by it. The bills and accounts shall be kept safely.

15. Unspent money if any should be refunded in the form of DD drawn in favour of The Member Secretary, Tamilnadu State Council for Science and Technology, DOTE Campus, Chennai-600025 payable at Chennai.
16. Students/faculties are requested to publish the research papers emerging out of the project work in leading Journals.
17. Investigators must acknowledge the Council in reports and technical/scientific papers publishing based on the research work done under the project
18. If the results of research are to be legally protected by way of patent/copy rights etc. the results should not be published in any form without action being taken to secure legal protection for the research results.
19. The state council encourages the students/faculties, who want to protect the results/invention created out of the project by getting patents through its Patent Information Centre free of cost.
20. The knowledge generated from the project will be the property of TNSCST and should be properly acknowledged. Transfer to technology generated shall be done in consultation with the Council.
21. The recipient organization shall comply, with such other conditions as may be suggested in the 'guidelines' issued in this regard from time to time.
22. All further correspondence should be addressed to **The Member Secretary, Tamilnadu State Council for Science and Technology, DOTE Campus, CHENNAI-600025** and should include project code.



MEMBER SECRETARY

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE Campus, Chennai - 600 025

STUDENT PROJECT SCHEME 2021-2022
UTILISATION CERTIFICATE

(TWO COPIES)

1. Name of the guide and address :

2. Name of the student(s) :

3. Title of the project :

4. Project code :

It is certified that a sum of Rs..... (Rupees) Sanctioned by the council for carrying out above mentioned student project has been utilized for the purpose for which it was sanctioned and sum of Rs.remaining unutilized is refunded.

Signature of the guide

Signature of the HOD

Signature of the
REGISTRAR/PRINCIPAL/DEAN
With SEAL

भारतीय बैंक Indian Bank
इलाहाबाद ALLAHABAD

Branch : DOTE CAMPUS
DOTE OFFICE BUILDINGS
GUINDY, CHENNAI
IFS Code : IDIB000D050

A/c. Payee Only

VALID FOR THREE MONTHS ONLY

1 1 0 3 2 0 2 2
D D M M Y Y Y Y

PAY The Principal, Sri Sairam Institute of Technology धारक को OR BEARER
J. Tambaram.
RUPEES रुपये Twenty Two Thousand Five Hundred only.

अदा करें ₹ 22,500/-

खा.सं. SB 479135159
A/c.No.

FOR MEMBER SECRETARY, TAMILNADU STATE COUNCIL SCIENCE & TECHNOLOGY

CBS Code: 01636



AUTHORISED SIGNATORY

992000090

PAYABLE AT PAR AT ALL OUR BRANCHES

Please sign above

⑈409438⑈ 600019119⑈ 135159⑈ 31

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE CAMPUS, CHENNAI - 600 025

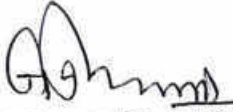
STUDENT PROJECT SCHEME 2019-2020
UTILISATION CERTIFICATE

(TWO COPIES)


1. Name of the guide and address : **Dr.G. SHANMUGASUNDAR**
Associate Professor
Department of Mechanical Engineering
Sri Sri Ram Institute of Technology
Chennai -44.
2. Name of the student(s) : A. Aravindha Krishna
S M. Anand
P. Kishore Kanna
A. Yamini
3. Title of the project : "DESIGN AND FABRICATION OF SMART VOICE
CONTROLLED ROBTIC WHEEL CHAIR (VCR BOT-
V1) FOR DIASABLED PEOPLE"
4. Project code : **EME-0129**

It is certified that a sum of **Rs.7500 (Rs. Seven thousand five hundred Only)** Sanctioned by the council for carrying out above mentioned student project has been utilized for the purpose for which it was sanctioned and sum of **Rs NIL** remaining unutilized is refunded.


Signature of the guide


Signature of the HOD

HEAD OF THE DEPARTMENT
DEPARTMENT OF MECHANICAL ENGG.
SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044


Signature of the
REGISTRAR/PRINCIPAL/DEAN
With SEAL
Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE CAMPUS, CHENNAI - 600 025

STUDENT PROJECT SCHEME 2019-2020
UTILISATION CERTIFICATE

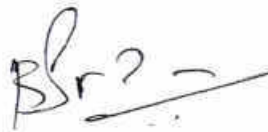
(TWO COPIES)

1. Name of the guide and address : **Dr.J.GLADYS AANI SUJITHA**
Assistant Professor
Department of Computer Science and Engineering
Sri Sri Ram Institute of Technology
Chennai -44.
2. Name of the student(s) : E.Sivashankaran
Vasanth Allen
A.Raj
M.Vijay
3. Title of the project : "Milk Distribution Management System"
4. Project code : **CSE-0393**

It is certified that a sum of **Rs.7500 (Rs. Seven thousand five hundred Only)** Sanctioned by the council for carrying out above mentioned student project has been utilized for the purpose for which it was sanctioned and sum of **Rs NIL** remaining unutilized is refunded.



Signature of the guide



Signature of the HOD



Signature of the
REGISTRAR/PRINCIPAL/DEAN



Dr. B. SNEEDEVI
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI - 600 044.

With SEAL
Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
DOTE CAMPUS, CHENNAI - 600 025

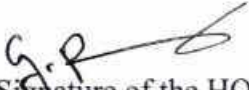
STUDENT PROJECT SCHEME 2021-2022
UTILISATION CERTIFICATE

(TWO COPIES)


1. Name of the guide and address : Mr.R.Dhanasekar
Assistant Professor,
Department of Electrical and Electronics Engineering,
Sri Sriram Institute of Technology,
Chennai - 44.
2. Name of the student(s) : Kirubanandhan.P
Rahul.V
3. Title of the project : Water Absorbing Pavements by using Porous Concrete
4. Project code : **EEE-0492**

It is certified that a sum of **Rs.7500 (Rs. Seven thousand five hundred Only)** Sanctioned by the council for carrying out above mentioned student project has been utilized for the purpose for which it was sanctioned and sum of **Rs NIL** remaining unutilized is refunded.


Signature of the guide


Signature of the HOD

Dr.G.Prakash, M.E., Ph.D.,
HOD, Department of Electrical & Electronics Engineering
Sri Sri Ram Institute of Technology
Chennai - 600 044.


Signature of the
REGISTRAR/PRINCIPAL/DEAN
With SEAL
Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-500 044.

10/10

**Audited Utilization Certificate
Mentor-Mentee Scheme**

Name of Institute (with city and state): **Sri Sai Ram Institute of Technology**
IIC ID: **IC201811089**

Name of the Scheme under which Grant was sanction: **Mentor-Mentee Scheme**

AICTE Sanction Order No. & Date under which Grant was sanctioned	Amount Sanctioned (Rs.)	CERTIFICATE
Innovation/Mentor Mentee Scheme/596/2020-21 dated 9 th Dec. 2021	Rs.2,25,000	Certified that out of the grant-in-aid of Rs. Two Lakhs Twenty five Thousands sanctioned by the AICTE during the Financial Year 2021-22 as per letter mentioned in the margin, Rs. <u>Nil</u> on account of Interest there on , a sum of Rs.1,80,000 has been utilized for the purpose for which it was sanctioned, and the balance of Rs 45,000 remained unutilized* at the end of the program.

Certified that I have satisfied myself that the conditions on which the grant-in-aid was sanctioned have been duly fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised:

1. Audited Annual Accounts of the Institute
2. Receipt & Payment Account of the Institute
3. Periodical Progress Report of the Institute
4. Audited Statement of Expenditure.
5. Consolidated report of the activities conducted under Mentor Mentee Scheme.

[Signature of Chartered Accountant]

Name of CA : _____

Membership No. : _____

Full Address : _____

**For P.T. PONNAIAH & CO.,
Chartered Accountants**

[with seal] (mandatory for self financing institutes)

**(P.T. PONNAIAH)
Partner, M. No. 019873**

[Signature of the Finance Officer]

Name : **RAMRAJ**

Designation : **MANAGER**

Full Address : _____

[with seal] (Govt./Govt.Aided/University & whatever applicable)

Place : _____

Date : _____

[Signature of Head of the Institute]

Name : **Dr.K.PALANIKUMAR**

Designation : **PRINCIPAL**

Full Address : **Sri Sai Ram Institute of Technology, Sai Leo Nagar, West Tambaram, Chennai-44**

[with seal] (mandatory for all institutes)



**Audited Utilization Certificate
Mentor-Mentee Scheme**

Name of Institute (with city and state): **Sri Sai Ram Institute of Technology**
IIC ID: **IC201811089**

Name of the Scheme under which Grant was sanction: Mentor-Mentee Scheme

AICTE Sanction Order No. & Date under which Grant was sanctioned	Amount Sanctioned (Rs.)	CERTIFICATE
Innovation/Mentor Mentee Scheme/596/2020-21 dated 9 th Dec. 2021	Rs.2,25,000	Certified that out of the grant-in-aid of Rs. Two Lakhs Twenty five Thousands sanctioned by the AICTE during the Financial Year 2021-22 as per letter mentioned in the margin, Rs. <u>Nil</u> on account of Interest there on, a sum of Rs.1,80,000 has been utilized for the purpose for which it was sanctioned, and the balance of Rs 45,000 remained unutilized* at the end of the program.

Certified that I have satisfied myself that the conditions on which the grant-in-aid was sanctioned have been duly fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised:

1. Audited Annual Accounts of the Institute
2. Receipt & Payment Account of the Institute
3. Periodical Progress Report of the Institute
4. Audited Statement of Expenditure.
5. Consolidated report of the activities conducted under Mentor Mentee Scheme.

[Signature of Chartered Accountant] 2/2

Name of CA : _____
Membership No. : _____
Full Address : _____

P.T. PONNAIAH & CO.,
Chartered Accountants

[with seal] _____
(mandatory for self financing institutes)

(P.T. PONNAIAH)
Partner. M. No. 019873)

UDIN : **ddo19873BAJXAB7597**

[Signature of the Finance Officer]

Name : **RAMRAS**
Designation : **MANAGER**
Full Address : _____

[with seal]
(Govt./Govt.Aided/University & whatever applicable)

Place : _____
Date : _____

[Signature of Head of the Institute]

Name : **Dr.K.PALANKUMAR**
Designation : **PRINCIPAL**
Full Address : **Sri Sai Ram Institute of Technology, Sai Leo Nagar, West Tambaram, Chennai-44**
[with seal]

(mandatory for all institutes)



[Handwritten signature]



All India Council for Technical Education
(A Statutory body under Ministry of Education, Govt. of India)



Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org

MoE's Innovation Cell
Mentor-Mentee Program for IIC Institutions - Sanction Letter

To,

The Drawing and Disbursing Officer,
All India Council for Technical Education,
Nelson Mandela Marg, Vasant Kunj,
New Delhi - 110070

Sub: Sanction of Rs. 2,25,000/-(Rupees Two Lakh Twenty Five Thousand only) being the Grant-in-Aid under the Mentor- Mentee Program for IIC institutions 2021-22, MIC payable during the current financial year 2021-22- reg.

Sir,

With reference to the proposal submitted by the Sri Sai Ram Institute of Technology, this is to convey that the sanction of the Council for payment of Rs. 2,25,000/-(Rupees Two Lakh Twenty Five Thousand only) as Grant-in-Aid under the Mentor- Mentee Scheme for IIC institutions 2021-22, MIC as per details given below:

1.	Name and address of the Beneficiary Institution:	Sri Sai Ram Institute of Technology Sri Sai Ram Institute of Technology , Sai Leo Nagar , West tambaram , Chennai Chennai Tamil Nadu ,600044
2.	Duration of the scheme:	Academic Year 2021-22
3.	Name of the Program Coordinator:	Dr.G.Shanmugasundar
4.	Total Grant-in-aid Sanctioned:	Rs. 2,25,000/-(Rupees Two Lakh Twenty Five Thousand only)
5.	Amount to be released during the year 2021-22:	Rs. 2,25,000/-(Rupees Two Lakh Twenty Five Thousand only)
6.	Sanctioned grant-in-aid is debit to:	INNOVATION CELL ACCOUNT

- The amount of the Grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education on the Grant-in-Aid bill and shall be disbursed to and credited to the account of Director/Principal/ Registrar of the Institute through RTGS/PFMS.
- This Grant-in-Aid is being released in conformity with the terms & conditions as well as norms of the scheme as already communicated, and also being communicated in this letter.

The instructions/guidelines to be followed by University/Institution

- Release of funds (Reimbursement as per actual basis)

- ✓ The Principal/ Director/Head of the institute are hereby requested to verify the correctness of the under mentioned bank account/ RTGS details submitted by them, in which the grant is being released:

Institute PAN No.	Bank Name	Bank Branch Name	Bank Branch Address	Account Holder Name	Account Type	Account Number	IFSC Code
AABTS7101F	Citi Union Bank	Poonthandalam	City Union Bank ,Poonthandalam, Sairam College Campus Tamil Nadu Chennai	SRI SAI RAM INSTITUTE OF TECHNOLOGY	Savings	500101012388680	CIUB0000634

In case of any omission the same should be reported to AICTE immediately.

- ✓ The sanction is issued in exercise of the powers delegated to the council and other terms & conditions laid down in the guidelines of the scheme. 100% of the sanctioned amount will be released as grant in aid to the account of the beneficiary institute (Mentor IIC Institute).

II. Maintenance of accounts

- ✓ The Institute shall strictly follow the provisions laid down in the scheme document and sanction order No. *F.No. Innovation/Mentor Mentee Scheme/596/2020-21* Dated: 9th Dec. 2021 issued by this office. All correspondences related to the scheme must contain this number along with year of sanction of the scheme; failing which correspondence will not be entertained.
- ✓ The mentor IIC institute shall maintain proper accounts of the expenditure out of the grants, which shall be utilized only on the scheme.
- ✓ Institute needs to maintain the record of all original bills/honorarium receipts/transaction proof/voucher and invoice etc., AICTE/MIC or its nominee shall have the right to check/verify the account to satisfy that the fund has been utilized for the purpose for it was sanctioned.
- ✓ The Principal / Director / Registrar shall intimate about the receipt of the grant to AICTE/MIC.

III. Instructions for implementation of Project Funds

Sr. No	Activity	No of activities	Budget in Rupees	Expenses Covered
1	Conduct an orientation cum mentoring sessions for all the key functionaries of IIC members at mentee institutions. It may be conducted online mode.	At least 2 nos/Year {@Rs.3000 /mentor expert, 2 mentor experts per session}	12,000/-	honorarium

2	Mentor Institute Representative to take part in the quarterly progress meetings of mentee IIC institutions and provide guidance on planning, action plan preparation and improvisation of I&E activities to be conducted in the mentee institutions. Sessions may be conducted in online mode.	Minimum 15 nos. @Rs.1000/ meeting. (at least 3 meetings /mentee institute for 5 mentee institutions). A senior and competent IIC member of the mentor to take part in quarterly planning and review meetings conducted during the IIC calendar year in mentee institutions	15,000/-	honorarium
3	Mentor Institute to handhold all mentee institution in conducting at least two activities listed in the IIC calendar activity plan and support in identifying competent external experts and arranging sessions and honorarium to external experts. Sessions may be conducted in online mode.	At least 2 nos {@Rs.3000 /external expert, 2 external experts per session}	12,000/-	Expert's fee/honorarium
4	Mentor institute to organize a 2-day exposure visit cum training program focusing on long Innovation, IP, Entrepreneurship, pre-incubation and Incubation facility creation, IPR filing & management and start-up services and policy mechanisms (NISP, ARIIA and others) support for student and faculty etc. for mentee institute representatives. This is ideally a physical mode activity.	1 Number (Refer Table-2 for budget breakup)	1,25,000/-	Expert's fee/honorarium, food, site visits, accommodation and training and communication material cost for the participants
5	Mentor institute to conduct progress monitoring cum feedback & Impact evaluation study visit to each mentee institute especially towards the end of IIC calendar year or in	Total 5 nos of visits. (One-day visit by an expert/IIC member from the Mentor institute to the mentee institute. It covers local travel ad train or Air Travel cost	50,000/-	Mentors TA, honorarium cost.

	the 4 th Quarter. Ideally this should be a physical visit.	with upper cap of Rs.10000 per visit includes local travel cost). Stay arrangement to be made by the respective mentee institute		
6	Miscellaneous/contingency fund		11000/-	
	Total		2,25,000/-	

Table:2			
Budge Breakup for Activity 4			
S.No	Particulars	Maximum Amount/Person/Day In Rupees	Maximum Amount/Particular In Rupees
1	Accommodation for Participants (up to 10 members @2 members per mentee institute for 2 days)	Rs. 1500/-per person for 3 days	45000/-
2	Food	Rs. 800/- per person per day for 3 days	24000/-
3	Honorarium to invited external experts only (up to 4 numbers)	Rs. 5000/ expert	20000/-
4	Travel Reimbursement for Participants	Actual travel cost (Road or train or flight) with upper cap Rs. 5000/ mentee institute (with maximum 2 participants) and from 5 mentee institutions	25,000/-
5	Stationary, Printing (Design and printing of Brochure, registration kit and banner) etc.		11000/-
Total			125000/-

I. Utilization & Refund of Grant

- The Principal / Director / Registrar shall intimate about the receipt of the grant to AICTE/MIC.
- The fund, so released shall be utilized to conduct the prescribed activities for handholding, mentoring, and supporting mentee institutions in building/streamlining/strengthening the innovation and entrepreneurship eco-system and shall not be used for purchase of equipment like computer, laptop or fixed assets etc.
- The released/sanctioned fund for Mentor-Mentee program cannot be utilized for any other program/ sessions or activities.
 - ✓ In case the Mentor-Mentee program is cancelled, the funds must be returned back to AICTE/MIC immediately with interest accrued thereon.

- ✓ In any case, if the institute is required to refund the grant or interest accrued thereon or balance amount, the amount will be refunded to AICTE/MIC. (by way of a demand draft in favor of INNOVATION CELL ACCOUNT payable at New Delhi or through NEFT/RTGS at INNOVATION CELL ACCOUNT, Account No:37903899633, IFSC: SBIN0050203, SBI, SHASTRI BHAWAN, RAJENDRA PRASAD ROAD, NEW DELHI 11000).
- ✓ As MIC needs adequate time for depositing the Demand Draft in the bank, the same be immediately dispatched to avoid any lapse of the validity period. Meanwhile, institute can plan and start the activities as prescribed from the date of issuance of sanction order.
- The Institute shall strictly follow the provisions laid down in the scheme document and sanction order No. *F.No. Innovation/Mentor Mentee Scheme/596/2020-21 Dated: 9th Dec. 2021* issued by this office. All correspondences related to the scheme must contain this number along with year of sanction of the scheme; failing which correspondence will not be entertained.

II. Progress Monitoring and Reporting

IIC institution needs to upload the quarterly or semester wise progress reports periodically in the Mentor-mentee portal and final report submission along with following supporting documents within prescribed period of the completion of Mentor- Mentee program activities.

✓ Usage of Fund:

Original Statement of actual expenditure in the prescribed proforma duly signed by the Head of the institution, president of IIC Institute and countersigned by Registrar/Finance Officer/Govt. Auditor

or

In case of self-financing/private institutions, Statement of actual Expenditure & Utilization Certificate are required to be audited & signed by a Chartered Accountant (with membership no., full address & stamp). Photocopies of formats are enclosed.

- ✓ The **Utilization Certificate (UC)** supported by Audited Statement of Expenditure to the effect that the grant has been utilized for the purpose for which it has been sanctioned shall be furnished to the AICTE/MIC immediately after completion of the scheme to the following **Address: MoE's Innovation Cell(MIC), Room No. 316, 3rd Floor, AICTE HQ, Nelson Mandela Road, New Delhi-110070**
 - It should contain the head-wise break up of expenditure made from the grant-in-aid provided by the Council. Audited Statement of Expenditure indicating expenditure incurred in the total duration of the scheme in the prescribed format and GFR-19 shall be submitted to the Council.

III. Prescribed Activities for IIC Institutions

Under the Mentor-Mentee program, the mentor IIC institution will do the following suggestive activities for their mentee institutions;

1. The key functionaries of IIC at the mentor institute will conduct orientation sessions for all the key functionaries of IIC members of mentee institutions.

2. The mentor institute shall nominate its key functionaries of IIC to join the IICs of mentee institutions as an external expert member.
3. The mentor institute is required to handhold all mentee institutions in conducting at least two activities listed in the IIC calendar activity plan and support in identifying competent external experts and arranging sessions and honorarium to external experts
4. Mentor institute shall organize a 2-day exposure visit cum training program focusing on pre-incubation and Incubation facility creation, IPR filing & management and start-up services and policy mechanisms (NISP, ARIIA and others) support for student and faculty etc. for mentee institute participants. This is ideally a physical activity.
5. The mentor institute needs to conduct progress monitoring cum feedback & impact evaluation study visit to each mentee institute especially towards the end of IIC calendar year or in the 4th Quarter. Ideally this should be a physical visit.
6. The mentor institution is expected to encourage, guide and handhold mentee institutions in participating various innovation and entrepreneurship initiatives of MoE such as adoption of NISP, formulation of I&E policy at the institute level, Participation in ARIIA, Training of Innovation Ambassadors, Mentoring support to students and establishment of pre-incubation and incubation facilities etc.
7. Inviting participation form mentee institutions for the innovation and entrepreneurship activities are being organised by mentor institute as part of IIC calendar, Self-Driven activities etc.

**The activities 1, 2, and 3 may be organised either on online mode or physical mode as per the convenient to both mentor and mentee institutions.*

VII. Guideline for Conducting and delivering of the activities:

1. **To conduct orientation sessions for all the key functionaries of IIC members of mentee institutions.**
 - ✓ At least two orientations cum mentoring sessions for all mentee institutions or separate session for each mentee institution may be planned and conducted.
 - ✓ One orientation session should be organised at the beginning of the Semester/IIC Calendar year and one at the mid of IIC calendar year.
 - ✓ Orientation session shall be conducted on online mode using video conferencing platforms.
 - ✓ Key functionaries of mentor IIC institution shall join as mentor expert and will take the session and explain the best practices, cases of their institute on how they are driving the I&E ecosystem highlighting resource mobilization strategies.
 - ✓ A competent and experienced Key functionary from the mentor IIC institute will deliver the session on above objectives, and a maximum honorarium amount of Rs. 3000/- per expert per orientation session can be provided for this purpose.
 - ✓ A total budget of maximum Rs. 12000/- for two orientation sessions is provisioned.
2. **Take part in the quarterly progress meetings of mentee institutions and provide guidance and support in planning, action plan preparation, and improvisation of I&E activities to be conducted**

in the mentee institutions.

- ✓ At least one-member representation from the mentor institution in each mentee institution is required.
- ✓ The president of mentor IIC institute will nominate the member and he/she will take part in quarterly IIC meetings of IIC mentee institute.
- ✓ Once the member nominated for the mentee institute, same member is required to continue till the end of the IIC calendar year.
- ✓ Each nominated member need to take part in at least 3 such quarterly/semester meetings during the IIC calendar year.
- ✓ Quarterly meetings shall be conducted on online mode using video conferencing platforms.
- ✓ Role of member in mentee IIC institute is to actively participate in quarterly progress meeting of mentee IIC institutions and provide guidance on planning, action plan preparation, progress assessment and improvisation of I&E activities to be conducted in the mentee institutions.
- ✓ Mentor IIC institute may provide an honorarium of Rs. 1000/- to the nominated members upon completion of the such meeting and submission of verified report along with meeting outcomes to the president of IIC institute.
- ✓ A senior and competent IIC member of the mentor to take part in quarterly planning and review meetings conducted during the IIC calendar year in mentee institutions
- ✓ A total budget of maximum Rs. 15000/- for participation in 15 numbers of meetings in 5 mentee institutions during the IIC calendar year.

3. Planning and delivering of two IIC calendar activities for mentee IIC institutions

- ✓ Mentor institute in coordination with mentee institutions will identify two IIC calendar activities to be conducted for the mentee IIC institutions.
- ✓ Mentor institute will prepare the session plan and identify the external resource persons to deliver the session.
- ✓ Repute and experienced experts drawn from national and regional ecosystem should deliver the session.
- ✓ All mentee institute should ensure minimum participation of 250 nos includes IIC members, students and faculty members and staff.
- ✓ Activities shall be conducted on online mode using video conferencing platforms.
- ✓ Each session/activity should accommodate at least two external experts. A maximum honorarium amount of Rs. 3000/- per expert per session can be provided for this purpose.
- ✓ A total budget of maximum Rs. 12000/- for orientation sessions is provisioned.

4. Organize a 2 days long I&E exposure visit cum training program on I&E related theme such as pre-incubation and Incubation facility creation, IPR filing & management etc. for mentee institute representatives.

- ✓ Mentor institute will plan, host and organize a 2-day long exposure cum training program for the participants from mentee IIC institutions.
- ✓ Mentor institute shall get participant nominations from mentee IIC institutions.

Mentee institutions can nominate up to two key functionaries of their IICs.

- ✓ A total 10 participants from the 5 mentee institutions shall comprise the one cohort of training to be conducted on physical mode.
- ✓ The mentor institute shall take care the venue related expenses and delivering the training program. Expenses may include expert's fee/honorarium, food, site visits, accommodation and training and communication material cost for the participants etc. A detail breakup is provided in Table 2.
- ✓ The mentor institute shall reimburse the travel cost of nominee/representatives from the mentee institutions. Actual travel cost (road or train or flight) or the upper cap Rs. 5000/ mentee institute (with maximum 2 participants) can be accommodated.
- ✓ A total budget of maximum Rs. 125000/- for a batch size of 10 participants from 5 mentee institutions is provisioned.

5. To conduct visits to each mentee institution for progress monitoring & impact evaluation study especially towards the end of IIC calendar year or in the 4th Quarter.

- ✓ The Key functionaries or nominated members of mentor IIC institution to mentee institutions shall make a one-day visit to the campus of mentee institute to observe the progress, facility and function of IICs and discuss with the IIC members.
- ✓ Mentor expert will check the progress and provide feedback and on spot mentoring support to the mentee institute on improvisation of I&E ecosystem, strategies and how to improve the score and star of mentee institute.
- ✓ An impact evaluation study shall be planned and conducted and represented. A well designed communication brochure and annual report of IIC institute with achievement and impact should be incorporated. Mentor institute will guide mentee institutions in preparing and finalizing the IIC annual reports.
- ✓ The local and travel (road, train and air) expense of members shall be drawn from the budget provisioned.
- ✓ A total budget of maximum Rs. 25000/- covers visits to 5 mentee institutions (Rs.10000 per member per visit covers TA and honorarium) is provisioned.
- ✓ Mentee institute will provide local stay and organizing progress monitoring cum feedback/mentoring meeting should be planned in advance.

6. The mentor institution is expected to encourage, guide and handhold mentee institutions in participating various innovation and entrepreneurship initiatives of MoE such as adoption of NISP, formulation of I&E policy at the institute level, Participation in ARIIA, Training of Innovation Ambassadors, Mentoring support to students and establishment of pre-incubation and incubation facilities etc.

7. Inviting participation form mentee institutions for the innovation and entrepreneurship activities are being organised by mentor institute as part of IIC calendar, Self-Driven activities etc.

8. Delivering activities of Mentor-Mentee Scheme

- ✓ The President and concern program coordinator of the mentor institute shall be primarily responsible for the implementation of the project.

- ✓ All mentee institutions are also required to nominate coordinators (one from each mentee institutions) as the co-coordinators of the project at mentee institution level.
- ✓ Quarterly presentation on the planned activities and implementation progress should be submitted in the Mentor-Mentee section of the IIC Portal.
- ✓ If it is found that the grant-in-aid released is not being utilized for the purposes for which it was intended for and the progress of the programme is not satisfactory, action may be taken or funding support may be withdrawn.
- ✓ Further extension of financial support from AICTE, MIC shall be based on the progress of the scheme and effective utilization of the earlier grant-in-aid provided.
- ✓ If the Mentor institute coordinator leaves the institution, retires, or goes on long leave, the institute will appoint another Mentor Institute Coordinator to the programme, and immediate intimation to the MIC in this regard.

VIII. Use of Logos

- ✓ In case of activities organized in online mode, the logos of MIC, AICTE and IIC should be used properly labelled and prominently displayed.
- ✓ In case of physical activities, logos of MIC, AICTE and IIC must be prominently placed in the banners/stage backdrop/podium/venue, and displayed.
- ✓ All publicity materials/ advertisements/ brochures/ invitation cards/ any other collaterals/ event backdrop etc. related to Mentor-Mentee Program must carry the MIC, AICTE and IIC logo.

IX. Activity Report

Both mentor and mentee institutions are required upload activity reports related to mentor-mentee program in the IIC portal. Following documents and reports are required to upload by end of every quarter/semester or periodically by the mentor and mentee institutions;

- ✓ Brief plan and calendar for the Activities to be conducted
- ✓ A time activity chart indicating schedule along with deliverables for each participating institution.
- ✓ Reports for the activities completed.
- ✓ Sessions details, experts' details and feedback from participants.
- ✓ Details of financial layout and expenses incurred for the activities.
- ✓ Copies of letters of intents/MOU are signed with mentee institutions.
- ✓ The Mentor Institute Coordinator must submit progress report every quarter indicating
 - a. The progress of the activities under Mentor-Mentee Scheme and the status of the grant-in-aid utilized.
 - b. Geotagged photographs (maximum 15) of all the activities under Mentor-Mentee Scheme.
 - c. A video of 2-minute duration (per mentee institute) having: (i) Introduction by Coordinator mentioning the name and state of Mentee IIC and Mentor IIC institute. (ii) Activities conducted under Mentor-Mentee scheme (iii) How the Mentor-Mentee Scheme was beneficial to students, faculty and institute? (iv) Acknowledgement of AICTE/MIC support.

X. Monitoring

- ✓ AICTE/MIC may depute an Officer/Observer to oversee the quality of the conference and collect feedback from the venue

XI. Expected Outcomes

- ✓ Active participation and involvement of IIC members; students, faculty members and staff from both mentor and mentee institutions.
- ✓ A streamlined and strengthened innovation and entrepreneurship ecosystem with functional IICs in mentee institutions.
- ✓ Increase in awareness level among students, faculties and staff on recent developments and approaches in for innovation, entrepreneurship and intellectual property and their importance in wealth creation at individual level and national level.
- ✓ Nurturing leadership potential of student innovators, and entrepreneurs by providing them coordination role to achieve the program objective.
- ✓ Program will set foundation for institute's participation in MoE's Innovation and Entrepreneurship initiatives such as IIC, ARIIA, Hackathons, NISP, National Innovation Contest, and YUKTI and related programs at MIC and AICTE.

XII. General instructions

- ✓ The grantee Institution shall observe all financial norms and guidelines as prescribed by the AICTE/ Government of India from time to time. GOI GFR rules (@<https://doe.gov.in/order-circular/general-financial-rules2017-0>) should be followed during utilization of grant.
- ✓ This Sanction Order may be treated as Offer Letter for all purposes.

XIII. Duration of the Project: Duration of project shall be of one IIC calendar year.

For more information, please write your query to Ms. Selvarani, Innovation Officer.

Email: selva.rani@aicte-india.org, mm.iic.mic@aicte-india.org, **Phone no:** 011 2958 1513

Yours sincerely,



Dipan Sahu
Asst. Director, MIC

Copy forwarded for information and necessary action to:

- ✓ Principal/Hol
- ✓ IIC President
- ✓ Guard File

**PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME
(2021-2022)**

**FUSION OF ARTIFICIAL VISION AND GPS TO IMPROVE BLIND
PEDESTRIAN POSITIONING**

PROJECT MEMBERS:

S BOOJASHREE

K LOHITHA

PROJECT GUIDE:

Dr. G. THAMARAI SELVI

Head of the Department,

Department of Electronics and Communication Engineering,

Sri Sairam Institute of Technology,

West Tambaram, Chennai - 600044.



SUBMITTED TO:

The Member Secretary,

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,

DOTE Campus, Chennai - 600025.

PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME

(2021-2022)

**FUSION OF ARTIFICIAL VISION AND GPS TO IMPROVE BLIND
PEDESTRIAN POSITIONING**

PROJECT MEMBERS:

S. Boojashree

K. Lohitha

PROJECT GUIDE:

Dr.G.Thamarai Selvi,

Head of the Department,

Department of Electronics and Communication Engineering,

Sri Sairam Institute of Technology,

West Tambaram, Chennai - 600044.



SUBMITTED TO

The Member Secretary,

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,

DOTe Campus, Chennai - 600025.

Fusion of Artificial Vision and GPS to Improve Blind Pedestrian Positioning.

Abstract :

In current scenario mobility appears to be the most problematic issue in the visually impaired population. With about nine persons out of ten having strong difficulties. Navigation in the blind population raise problems related to orientation (knowing where one is and being able to go to the desired destination) and mobility (example: obstacle avoidance, maintaining consistent headings, estimate distance and angles). Assistive technologies based on Global Positioning System (GPS) could provide them with a remarkable autonomy. Unfortunately, GPS accuracy, Geographical Information System (GIS) data and map-matching techniques are adapted to vehicle navigation only, and fail in assisting pedestrian navigation, especially for the Blind. In this project , we designed an assistive device for the Blind based on adapted GIS, and fusion of GPS and vision based positioning. The assistive device may improve user positioning, even in urban environment where GPS signals are degraded.

INTRODUCTION :

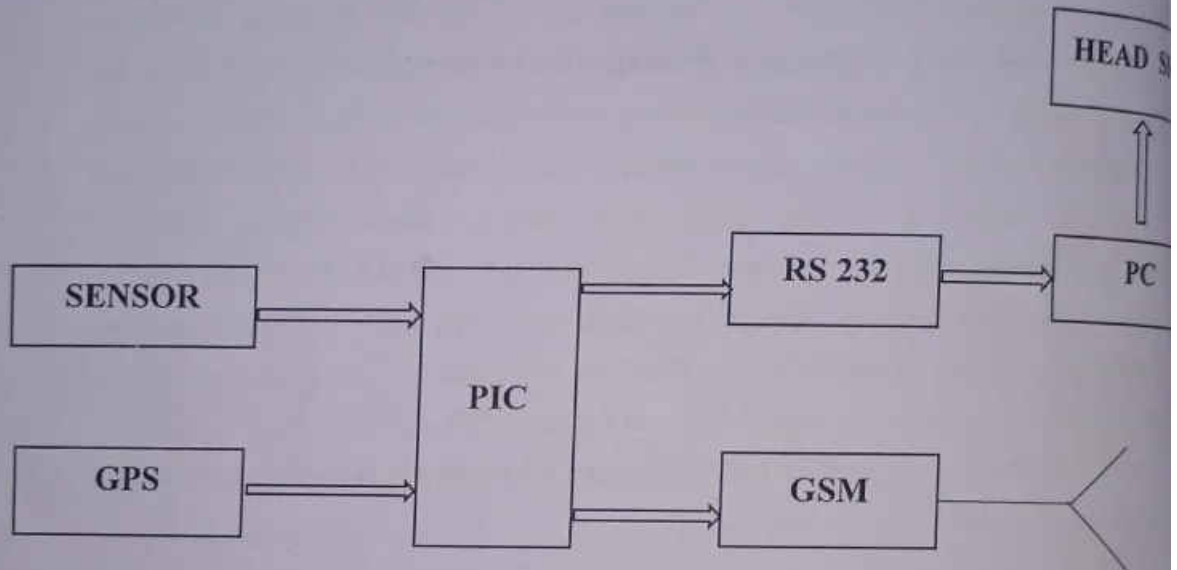
Navigation in the Blind population raise problems related to Orientation (knowing where one is, and being able to go the desired destination) and Mobility (e.g. obstacle avoidance, maintaining consistent headings, estimating distances and angles). The key issues relevant to Blind mobility and orientation. They can be classified into two main categories: Electronic Travel Aids (ETAs) and Electronic Orientation Aids (EOAs). ETAs are designed to improve mobility by detecting obstacles in the surrounding. They are usually based on ultrasonic or laser telemeters that measure the distance to features, and reconstitute distance information by tactile vibrations on the fingers or sound generation. In this project, we focus on the issue of positioning that is the most problematic limitation in EOA for the Blind.

COST ESTIMATION:

Head Mounted Device - 7000

Total Cost - 7000

BLOCK DIAGRAM :



CONCLUSION :

This paper presented the most problematic issue in the visually impaired (VI) population. This approach eliminates the problem of blind pedestrians. We designed an assistive device for the Blind based on adapted GSM, fusion of GPS and vision based positioning. The assistive device improve user positioning, the estimated position would compatible with assisted navigation for the blind positioning. The future work enhances autonomous robots or vehicles localization. Our preliminary experiments demonstrate the feasibility of a GPS and vision-based assistive device for a blind pedestrian with the proposed architecture. The positioning module based on fusion is now being integrated in the NAVIG EOA prototype and will be tested in different environments to determine the gain in accuracy offered by the use of geolocated landmarks.

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- 5) D. Bernstein et A. Kornhauser, "An introduction to map matching for personal navigation assistants," Transportation Research Part C: Emerging Technologies 8, vol. 1, p. 91–108, 2000.

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Student Project Scheme -2021-2022

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Email *

i8ec025@sairamtap.edu.in

GUIDE NAME *

Dr . G . ThamaraiSelvi

DESIGNATION *

Head Of the Department

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DEPARTMENT *

Electronics and Communication Engineering

NAME OF THE INSTITUTION *

Sri Sairam Institute Of Technology

INSTITUTION ADDRESS WITH PINCODE *

Sairam College Rd, Sai Leo Nagar, Tambaram West, Chennai, Tamil Nadu - 600044

GUIDE CONTACT MOBILE NUMBER *

8754582229

GUIDE EMAIL-ID *

hodece@sairamit.edu.in

TITLE OF THE PROJECT *

Fusion of Artificial Vision and GPS to Improve Blind Pedestrian Positioning

STREAM *

Science

Engineering

<https://mail.google.com/mail/u/07?ik=08b55bfff69&view=pt&search=all&permthid=thread-f%3A1711158877390100872&simpl=msg-f%3A1711158877390100872>

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software, ECV-Civil Engineering, EME-Mechanical/ Mechanical/ Production/Automobile etc/, EEE-EEE/ECE/E/E/ENCE, CHE-Chemical Engineering

	CSE	ECV	EME	EEE	CHE
CODE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Institution Details

INSTITUTION CATEGORY *

GOVT, SELF FINANCE GOVT.AIDED UNIVERSITY

STATUS	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
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STUDENT(S) NAME (Maximum 4 students) *

S . BOOJASHREE . K . LOHITHA

STUDENT STUDYING *

U.G ENGINEERING P.G PROFESSIONAL COURSE P.G SCIENCE

COURSE	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
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CERTIFICATE

This is to certify that Mr./Miss S. Boojashree, K. Lohitha is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.

Signature of

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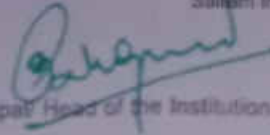
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Guide

HOD

Principal Head of the Institution



(Dr. S. Srinivasan)

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**PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME
(2021-2022)**

DEVELOPMENT OF EMOTION RECOGNITION SYSTEM

PROJECT MEMBERS:

AKSHAYA S R
SIVASHREE J
CYRILLA SWATHI J

PROJECT GUIDE:

Dr. R. PRABHA
Associate Professor,
Department of Electronics and Communication Engineering,
Sri Sairam Institute of Technology,
West Tambaram, Chennai - 600044.



SUBMITTED TO:

The Member Secretary,
TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,
DOTE Campus, Chennai - 600025.

EMOTION RECOGNITION SYSTEM

Abstract:

The purpose of this project is to create a digital friend to enhance mental health of the people. This device focuses on detecting the face and analysing the emotion, according to which the system displays message that enhances the user's emotional state. These small encouraging words could make a big difference in their point of view and will help them in working efficiently without any emotional stress or pressure. These messages could brighten their day and bring up real smiles.

Introduction:

The project uses machine learning to detect one's face and neural networks to analyse the emotion. With the help of pre trained models, the input given to this program gives out an output indicating the emotion expressed.

In this digital world, everyone is hiding behind virtual profiles and manipulating themselves into the false belief of well being. Assuming that they are feeling okay doesn't make them happy. But whatever the emotions that are bottled up, if once opened to a friend, their emotional state will no longer be faked as happy. But in this busy world, there comes a resistance in meeting with a friend every day. This device is an attempt to create a digital friend, a talking diary alike, which could fill the place of a friend time to time.

The device extracts the features required from the visual input captured by the camera. With the facial landmarks and comparisons with the pre trained image models, the device system will detect the emotion of the user. According to the emotion the user expresses, the system will print out encouraging messages on its screen. If there is no significance change in user's emotion, the system will give out more messages or maybe a joke or two to make the user smile. This positive action results in their work efficiency. A simple action or smile could brighten someone else and this chain reaction will provide a happy surrounding and optimistic environment.

Cost Estimation:

- GPU processor - Rs. 8000/-
- Arduino Nano - Rs. 600/-
- Camera - Rs. 700/-
- Hardware components - Rs. 2000/-

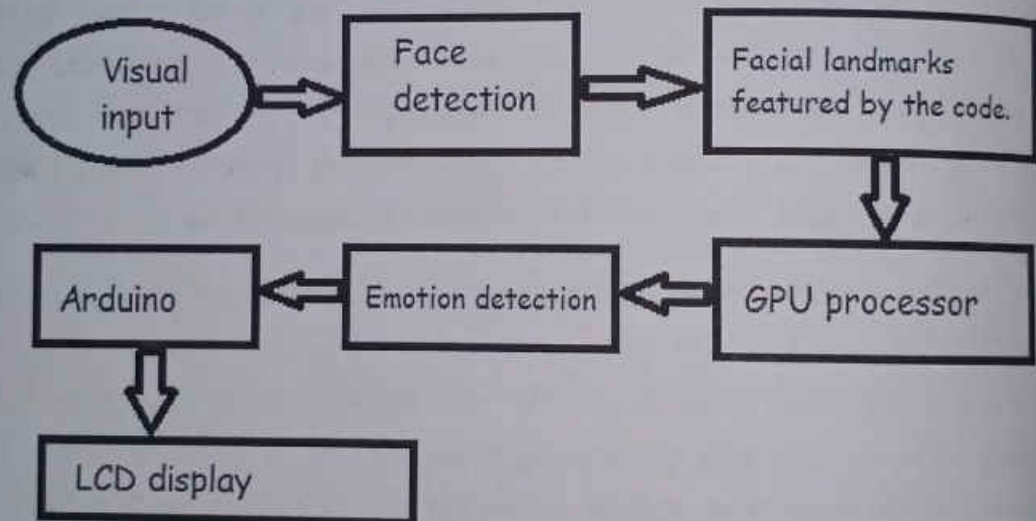
Estimated cost: Rs. 11,300/-

Components:

GPU processor (Graphical Processing Unit) to program Machine learning programming code. Arduino is used to improvise the code into hardware.

Camera to capture the user's face to analyse the emotion expressed. LCD display to print the messages for the user to read and get their mental health in check.

Flowchart:

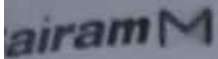


Conclusion:

This project can be considered as a digital friend and help people in their state of mind. This project is cost efficient and very much user friendly. This is an attempt to eradicate stress related problems in work and to infuse emotional well being in people.

References:

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Email *

i8ec013@sairamtap.edu.in

GUIDE NAME *

Dr. R. Prabha

DESIGNATION *

Associate Professor

DEPARTMENT *

Electronics and Communication Engineering

NAME OF THE INSTITUTION *

Sri Sairam Institute of Technology

INSTITUTION ADDRESS WITH PINCODE *

Sri Sai Ram Institute of Technology, Sai Leo Nagar, West Tambaram, Chennai - 600 044.

GUIDE CONTACT MOBILE NUMBER *

+91 94448 95163

GUIDE EMAIL-ID *

prabha.ece@sairamit.edu.in

TITLE OF THE PROJECT *

Emotion Recognition System

STREAM

Science

Engineering

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software; ECV-Civil Engineering; EME-Mechanical/ Mechatronics/ Production/automobile etc/; EEE-EEE/ECE/EIE/ICE; CHE-Chemical Engineering

	CSE	ECV	EME	EEE	CHE
CODE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Institution Details

INSTITUTION CATEGORY *

	GOVT.	SELF FINANCE	GOVT.AIDED	UNIVERSITY
STATUS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

STUDENT(S) NAME (Maximum 4 students) *

Akshaya SR, Sivashree J, Cyrilla Swathi J

STUDENT STUDYING *

	U.G ENGINEERING	P.G PROFESSIONAL COURSE	P.G SCIENCE
COURSE	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

CERTIFICATE

S.R.Akshaya, J. Sivashree,
 This is to certify that Mr./Miss. J. Cyrilla Swathi is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.
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R. Pillai
Guide

S. Srinivasan
HOD

Sairam
Principal, Head of the Institution

Note:

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PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME
(2021-2022)

FLOOD ALERT INTIMATION SYSTEM USING GOOGLE MAPS FOR PREVENTION AND NAVIGATION

PROJECT MEMBERS

Yashwanth Krishna B
Aakash Richard M
Sanjai P

PROJECT GUIDE

Prasanna Kumar S.
Assistant Professor

Department of Electronics and Communication Engineering,
Sri Sairam Institute of Technology,
West Tambaram, Chennai -600044



Submitted to
The Member Secretary,
TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,
DOTE Campus, Chennai-600025

STUDENT PROJECT PROPOSAL

1. NAME OF THE STUDENT(S) : Yashwanth Krishna B
Aakash Richard M
Sanjai P
2. NAME OF THE GUIDE : Prasath Kumar S
Assistant Professor
Department of ECE
Sri Sairam Institute of Technology
- EMAIL ID: prasathkumars.ece@sairamit.edu.in
- MOBILE NUMBER: +91 96773 80167
- INSTITUTIONAL ADDRESS : Sai Leo Nagar, West Tambaram,
Chennai - 600044.
3. PROJECT TITLE : FLOOD ALERT INTIMATION SYSTEM USING
GOOGLE MAPS FOR PREVENTION AND
NAVIGATION
4. SECTOR : Electronics and Communication Engineering

PROJECT DETAILS

INTRODUCTION

Floods have been the cause of death in many disasters during monsoon. During every monsoon we get to experience devastating floods and many lives are lost. Thus the prevention of flood and sudden water level raise has become the need of the hour. The objective is to introduce a system that uses water level acquiring methods on geological specific water bodies, sewers and lanes which are located in low line areas that gives information to computing server which provides mapping of water level raise and flood alert which updates My Maps in real time about water level raise and flood alerts that can be viewed in our web page or in Google Maps without any need of external applications. It can be accessible by the public to navigate for emergencies during floods & government officials to take necessary action to contain the water level in specific regions for upcoming disaster in real time.

OBJECTIVES

The goal is to ensure that government officials get an intimation of flood alert and people to avoid navigating through flood prone regions to neglect the consequences.

Objective 1 : To locate the low line area of the city we are going to implement the system.

Objective 2 : To set up the remote modules(sensors) at the low line area.

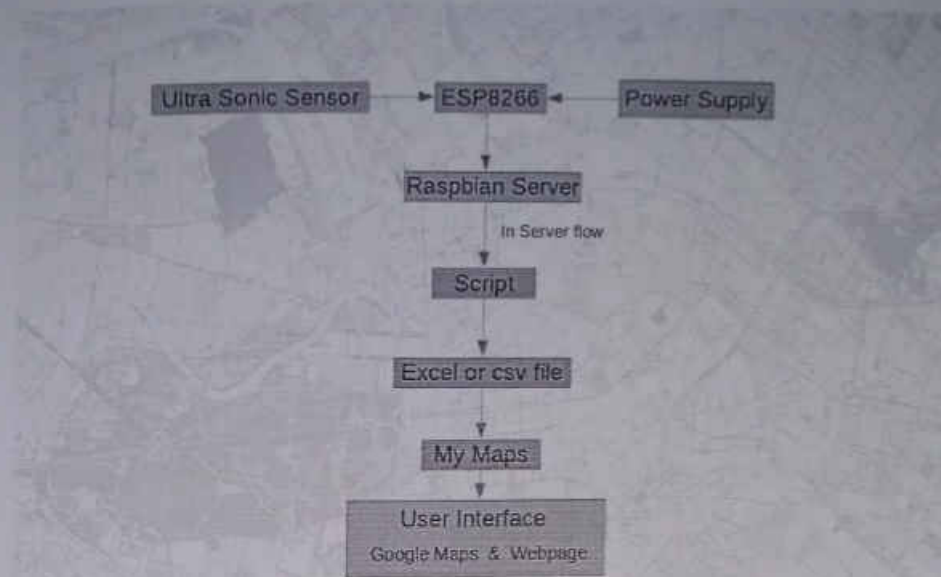
Objective 3 : To collect the data and produce the MyMaps(Google Maps) to the end user.

IMPLEMENTATION AND PROJECT MANAGEMENT :

The remote modules produce data to the Raspberry Pi server in which the script generates an excel or csv file from the data received. The generated excel or csv file is then imported frequently in a time interval to the My Maps which produces a map with live water level rise and flood alert and then My Maps will be embedded to a faismap (to create) website and the link will be provided. The generated link will be accessible to the public for safe navigation & Government Officials, so that the officials can take necessary action towards the upcoming disaster.

The system is splitted into three parts. They are:

- Remote Modules
- Raspbian Server
- User Interface



Remote Modules :

Remote contains Node MCU – ESP8266 12e board, Ultrasonic Sensor HC-SR04 , Network Source. The Ultrasonic Sensor transmits analog signals to the ESP8266 according to the water level raised by using sound waves . The ESP8266 converts the received signal from the ultrasonic sensors into Algorithm written to the ESP8266 by Arduino IDE to convert them into percentage . Then the processed output is feeded to the Raspbian Server using the static IP of the server, by inbuilt WiFi module of ESP8266 via nearby network source or a separate router depending on the position.

Raspbian Server :

The server module is an Raspberry Pi 4 with Raspbian Operating System which is open source Linux distribution specifically designed for Raspberry Pi and the necessary Python libraries are deployed to read and write csv files and the python script is written by geo-tagging each remote module and an algorithm for the mapping of flood prediction in My Maps format with multiple layers of flood alert Zones like danger zone, predicted zone and safe zones colored in Red, yellow and green.



Software Requirement :

- MY MAPS
- PYTHON
- EXCEL , CSV
- RASPBAN

BUDGET

Cost Estimation :

- NODE MCU – ESP8266 - Rs 500 x (Area we are going to cover approx 10 for a city).
- ULTRASONIC SENSOR – HC-SR04 - Rs 200 x (No of Node MCU in the SYSTEM)
- RASPBERRY PI - 4 - Rs 4000
- POWER SUPPLY (TRANSFORMER) -Rs 200 (Depends on the location may be not needed too).
- WATER LEVEL SENSORS - Rs 100 (No of Node Mcu's)

TOTAL COST ESTIMATION : ~ 14,000 /-

REFERENCES :

1. Real-time flood monitoring and warning system School of Engineering and Resources, Walailak University, Thasala, Nakhon Si Thammarat, 80160 Thailand. March 2011
2. FLOOD DETECTOR SYSTEM USING ARDUINO International Journal of Management and Applied Science, ISSN: 2394-7926 Volume-2, Jul.-2016 .
3. FLOOD EARLY WARNING SYSTEM- a WARNING SYSTEM FOR MITIGATING DISASTERS DURING FLOOD Department of Administrative Reforms and Public Grievances Ministry of Personnel , Public Grievances & Pensions and Government of India
4. PRE-FLOOD WARNING SYSTEM BASED ON USER MOBILITY VOL. 10, NO. 23, DECEMBER 2015 ISSN 1819-6608 ARPN Journal of Engineering and Applied Sciences ©2006-2015 Asian Research Publishing Network (ARPN). All rights reserved. www.arpnjournals.com17905.
5. High-Resolution 3-D Flood Information From Radar Imagery for Flood Hazard Management Guy Schumann, Student Member, IEEE, Renaud Hostache, Christian Puech, Lucien Hoffmann, Patrick Matgen, Florian Pappenberger, and Laurent Pfister

ge
H RICHARD M <i8ec034@sairamtap.edu.in>
HWANTH KRISHNA B <i8ec053@sairamtap.edu.in>

Thu, Sep 16, 2021 at 9:33 F

Forwarded message -----
Google Forms <forms-receipts-noreply@google.com>
Thu, Sep 16, 2021 at 9:32 PM
st:
ec034@sairamtap.edu.in>

Thanks for filling out

Here's what was received.

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
Student Project Scheme -2021-2022
Applicant's registration for data collection. Fill required details. Take a printout of the same, get signatures and send it with project details [3 pages only].

Email *

i8ec034@sairamtap.edu.in

GUIDE NAME *

PRASATH KUMAR S

DESIGNATION *

ASSISTANT PROFESSOR

DEPARTMENT *

ELECTRONICS AND COMMUNICATION ENGINEERING

NAME OF THE INSTITUTION *

SRI SAIRAM INSTITUTE OF TECHNOLOGY

INSTITUTION ADDRESS WITH PINCODE *

Sairam College Rd, Sai Leo Nagar, Tambaram West, Chennai, Tamil Nadu-600044

GUIDE CONTACT MOBILE NUMBER *

+91 96773 80167

GUIDE EMAIL-ID *

prasathkumar.ece@sairamit.edu.in

TITLE OF THE PROJECT *

Flood Alert Intimation System Using Google Maps For Prevention And Real-Time Navigation

STREAM *

- Science
- Engineering

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software; ECV-Civil Engineering; EME-Mechanical/ Mechatronics/ Production/automobile etc; EEE-EEE/ECE/EIE/ICE; CHE-Chemical Engineering

CSE ECV EME EEE CHE

CODE

Institution Details

INSTITUTION CATEGORY *

GOVT. SELF FINANCE GOVT.AIDED UNIVERSITY

STATUS

STUDENT(S) NAME (Maximum 4 students) *

Yashwanth Krishna B , Aakash Richard M , Sanjai P

STUDENT STUDYING *

U.G ENGINEERING P.G PROFESSIONAL COURSE P.G SCIENCE

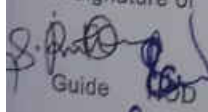
COURSE

CERTIFICATE

B. YASHWANATH KRISHNA
M. AAKASH RICHARD
P. SANJAI

This is to certify that Mr./Miss. _____ is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.

Signature of


Guide


Principal/ Head of the Institution

(Dr. S. S. Srinivasan)

Note:

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 17 September 2021, 5.00PM



Developing powerful and effective hybrid model for obtaining high precision rainfall predictions using intelligent algorithms in India.

Reference No. : 182022009203

Saved By : Dr. S VIDYA

Saved Date : 19-Apr-2022



Sri

SAI RAM INSTITUTE OF TECHNOLOGY

Sai Leo Nagar, West Tambaram, Chennai - 44



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - II

HOD ROOM

DOOR

MOBILE APPLICATION LAB / SECURITY LAB



CASE TOOL LAB / OS LAB / GRAPHICS LAB



DOOR

COMPILER LAB / INTERNET PROGRAMMING LAB



COMPUTER NETWORK LAB / GRID AND CLOUD COMPUTING LAB



DOOR

UPS ROOM

Network Rack



6 KV



10 KV



10 KV



6 KV



10 KV



DOOR





Sri

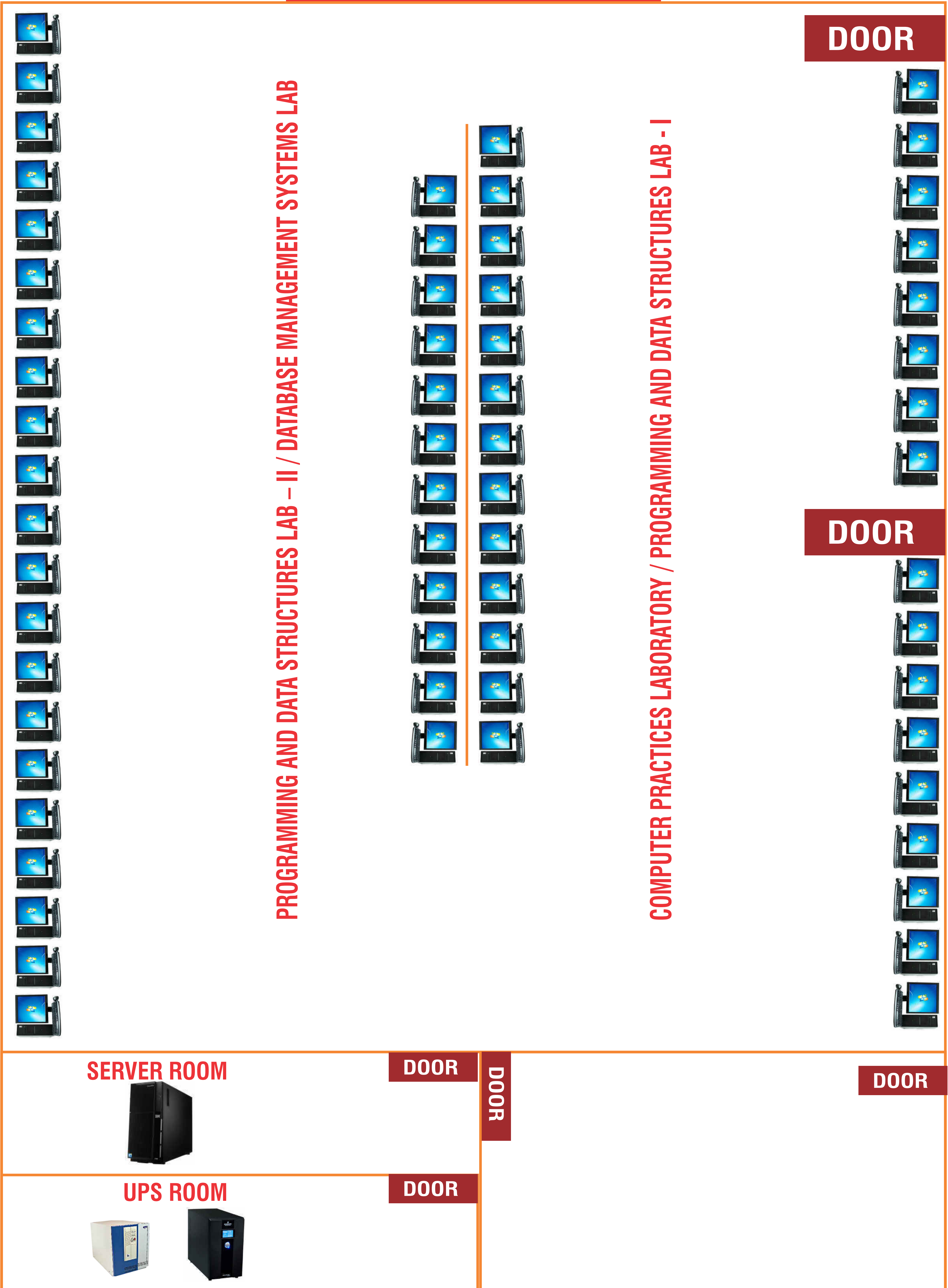
SAI RAM INSTITUTE OF TECHNOLOGY

Sai Leo Nagar, West Tambaram, Chennai - 44



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - I



PROGRAMMING AND DATA STRUCTURES LAB - II / DATABASE MANAGEMENT SYSTEMS LAB

COMPUTER PRACTICES LABORATORY / PROGRAMMING AND DATA STRUCTURES LAB - I

SERVER ROOM



DOOR

DOOR

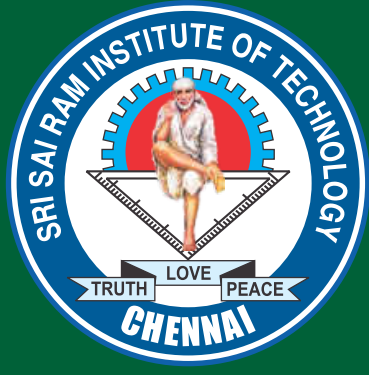
DOOR

UPS ROOM



DOOR





Sri

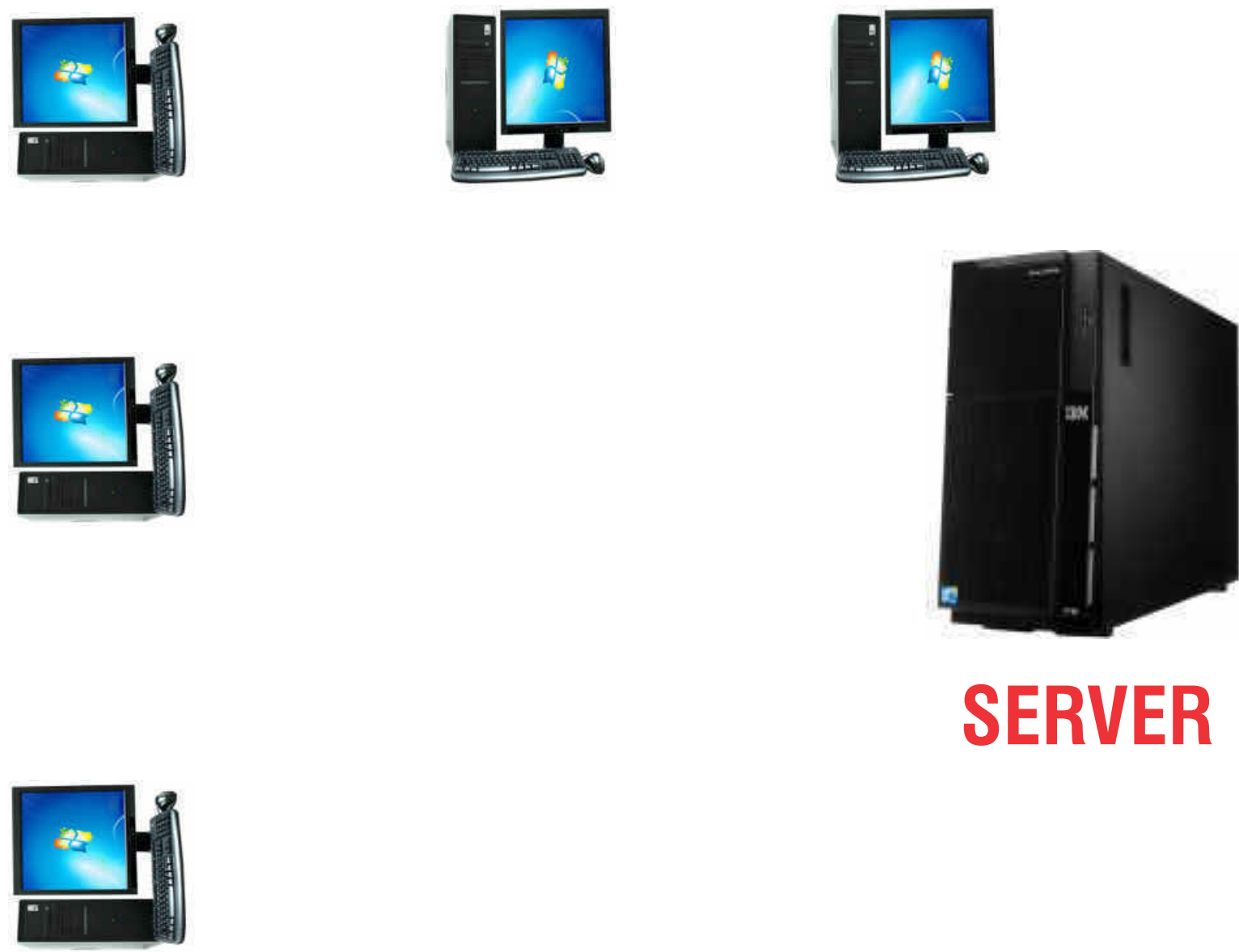
SAI RAM INSTITUTE OF TECHNOLOGY

Sai Leo Nagar, West Tambaram, Chennai - 44



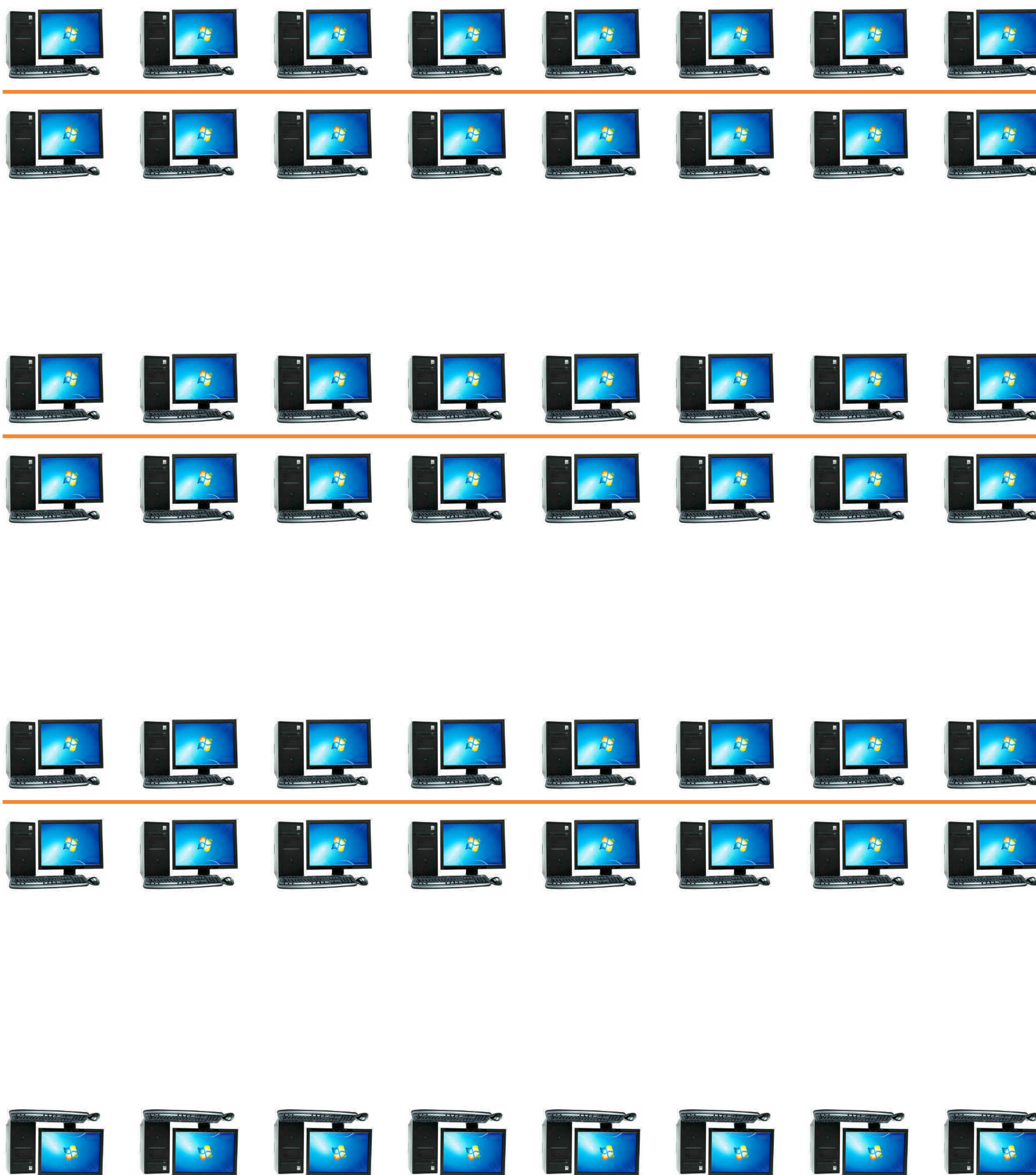
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - III



SERVER

COMMUNICATION SKILLS LAB



DOOR





To,

The Principal
Sri Sairam institute of technology
West Tambaram
Chennai-600044

We are pleased to know that Sri Sairam Institute of Technology is submitting a proposal with SERB (Scientific Engineering and Research board) under the title “**An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer’s Disease Progression and Intervention**” to facilitate Research and Development in the campus.

Vectra Technosoft Pvt. Ltd is herewith agreed to support this initiative by providing technical software requirements.

Sri Sairam Institute of Technology is solely responsible for the safety and insurance measures to safeguard against any loss incurred.

Vectra Technosoft Pvt Ltd.


Ranjit Sengupta
Director





Sri SAI RAM INSTITUTE OF TECHNOLOGY

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Sai Leo Nagar, West Tambaram, Chennai. Tel : 044 - 2251 2111 . www.sairamit.edu.in

Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

/SairamInstitutions

+91 98848 45678



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Founder Chairman : M.J.F. Ln. Leo Muthu



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2. The PI,Dr.K.Palanikumaris a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
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Seal of
Host Institute

Date:




Signature

Head of the Institute

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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2024

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2024

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2024

Place: Chennai



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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
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9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
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Seal of
Host Institute

Date:




Signature


Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
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7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2024

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2024

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2024

Place: Chennai

Undertaking by the Principal Investigator

To

The Secretary
SERB, New Delhi

Sir

I Dr K.Palanikumar hereby certify that the research proposal titled *An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention* submitted for possible funding by SERB, New Delhi is my original idea and has not been copied/taken verbatim from anyone or from any other sources. I further certify that this proposal has been checked for plagiarism through a plagiarism detection tool i.e. TURNITIN approved by the Institute and the contents are original and not copied/taken from any one or many other sources. I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grant Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulation, 2018. I also declare that there are no plagiarism charges established or pending against me in the last five years. If the funding agency notices any plagiarism or any other discrepancies in the above proposal of mine, I would abide by whatsoever action taken against me by SERB, as deemed necessary.



Signature of PI with date

Name / designation

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

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Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi,Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI,Dr.K.Palanikumaris a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
5. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
6. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
7. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research objectives.
8. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
9. The University/ Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of the SERB.
10. University/ Institute agrees to undertake the financial and other management responsibilities of the project as per SERB guidelines.
11. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:




Signature


Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2024

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2024

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2024

Place: Chennai

2021 International Conference on
**Innovative Computing, Intelligent Communication
and Electrical System (ICSES 2021)**

24th - 25th September, 2021 | Chennai | India.

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This certificate is presented to



Dr. L. Antony Rosewelt

Assistant Professor
Computer Science and Engineering
Sri Sai Ram Institute of Technology,
Chennai, Tamil Nadu, India.

as a token of appreciation for his/her notable service as a **SESSION CHAIR** for a technical presentation session and contributions towards the successful organization IEEE sponsored 2021 International Conference on Innovative Computing, Intelligent Communication and Electrical System (ICSES 2021) held at the Department of Computer Science and Engineering, St. Joseph's Institute of Technology, Chennai, Tamil Nadu, India during 24 - 25, September 2021. The conference has been organized in HYBRID MODE.

Dr. K. Vijayakumar
Organizing Chair

Dr. S. Kalarani
Convenor

Dr. P. Ravichandran
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ICSES 2021

Session Chair



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(An Autonomous Institution)

St. Joseph's Group of Institutions

Jeppiaar Educational Trust

OMR, Chennai - 600 119, Tamil Nadu, India.

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Assistant Professor
Computer Science and Engineering
Sri Sai Ram Institute of Technology
Chennai, Tamil Nadu, India.

Session Chair

as a token of appreciation for his/her notable service as a **SESSION CHAIR** for a technical presentation session and contributions towards the successful organization of IEEE sponsored 2022 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI 2022) held at St. Joseph's College of Engineering, Chennai, Tamil Nadu, India during 28 - 29, January 2022.

Dr. A. Chandra Sekar
Conference Chair

Dr. Vaddi Sesha Giri Rao
Principal



2022 IEEE International Conference on
**Advances in Computing, Communication
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28th - 29th January, 2022 | Chennai | India



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2022 INTERNATIONAL CONFERENCE ON
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(IC3IoT- 2022)

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Dr. L ANTONY ROSEWELT

in recognition of her/his most valuable contribution and service
as a **REVIEWER OF PAPERS**

for the **2022 INTERNATIONAL CONFERENCE ON
COMMUNICATION, COMPUTING & INTERNET OF THINGS (IC3IoT-2022)**
held on 10th & 11th March 2022.

Dr. S. Brindha
Conference Chair

Dr. J. Raja
General Chair

Dr. K. Porkumaran
Principal

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(IC3IoT- 2022)

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Dr. B SREEDEVI

in recognition of her/his excellent support as a SESSION CHAIR for the
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COMMUNICATION, COMPUTING & INTERNET OF THINGS (IC3IoT-2022)
held on 10th & 11th March 2022.

S. Brindha
Dr. S. Brindha
Conference Chair

Dr. J. Raja
Dr. J. Raja
General Chair

Dr. K. Porkumaran
Dr. K. Porkumaran
Principal

Sai Prakash LeoMuthu
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Mamta R. Agarwal
Adviser-I

Prof. Anil D. Sahasrabudhe
Chairman



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Dr. B. Sreedevi

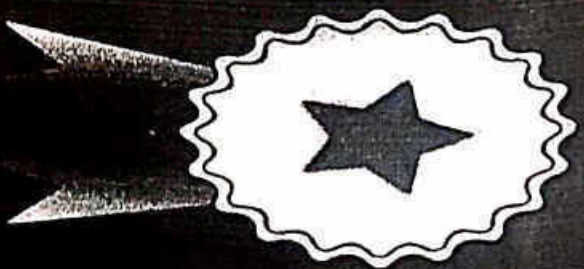
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07.04.2022, Thursday
10.30 am onwards

Mentor Experts



Dr. K. Palani Kumar

Professor & Principal
President - IIC

Topic: Role of IIC for Student Innovation



Dr. V. Brindha Devi

HoD/Department of Information Technology

Topic: Incubation and Pre-Incubation



Dr. B. Sreedevi

HoD/Department of Computer Science & Engineering

Topic: Design Thinking



Dr. Rajarajan Somasundaram

Dean (Academics)

Topic: Entrepreneurship

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2. S.A Engineering College
3. St Peter's College of Engineering and Technology
4. G.K.M. College of Engineering and Technology
5. Prince Dr. K. Vasudevan College of Engineering & Technology

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Dr.G.Shanmuga Sundar
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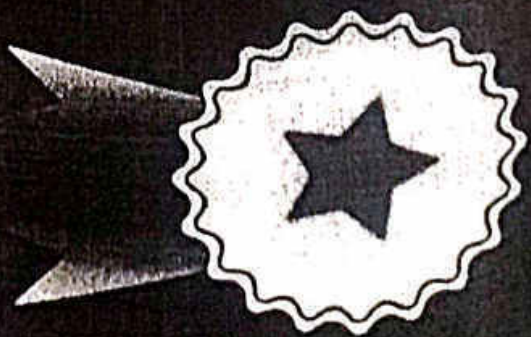
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அண்ணா பல்கலைக்கழகத்தின் ஸ்ரீ சாய்ராம் தொழில் நுட்ப நிறுவனத்தில் 10 ஆண்டுகளாகக் கணினி அறிவியல் மற்றும் பொறியியல் துறைத் தலைவராகவும் பேராசிரியராகவும் உள்ளார். கணினி அறிவியல், தகவல் தொழில் நுட்பம் சார்ந்த பல ஆய்வுக் கட்டுரைகளைத் தேசிய மற்றும் பன்னாட்டுக் கருத்தரங்குகளிலும் மா நாடுகளிலும் வழங்கியவர். துறை சார்ந்த ஆய்வுகளில் பல்வகைப் புதுமைகளைப் புகுத்தி அதற்கான சான்றிதழ்களையும் பெற்றுள்ளார். பாங்காக் ஆராய்ச்சிப் பல்கலைக்கழகத்தில் நிகழ்த்திய ஆய்வுப் பணிகள் குறிப்பிடத் தக்கன. அறிவியல் நூல்கள் பலவற்றை எழுதியுள்ளார். பல்வகை விருதுகளைப் பெற்றவர்; இவரின் பன்முகப் பரிமாணத் திறனைப் பாராட்டி மயிலைத் திருவள்ளூர் தமிழ்ச் சங்கம் பெருமையுடன் வழங்கும் சிறப்புமிக்கு

பேராசிரியர் டாக்டர் ஹேமா சந்தானராமன் நினைவு
அறிவுக்களஞ்சியம் விருது-2022
(Treasure Trove of Knowledge - 2022)



பேரா. முனைவர் B. ஸ்ரீதேவி

தலைவர், கணினி அறிவியல், ஸ்ரீசாய்ராம் தொழில் நுட்ப நிறுவனம் சென்னை
வழங்குபவர்

மாண்புமிகு நீதியரசர் டாக்டர் தி. நெ.வள்ளிநாயகம்

நீதிபதி, லோக் அதாலத், உயர் நீதிமன்றம், சென்னை.

நிகழிடம்: திருவள்ளூர் அறிவுக்களஞ்சியம் வளர்ச்சி மையம், பூந்தண்டலம், சென்னை-69,

ஞாயிறுக்கிழமை 27-03-2022

கலைமாமணி முனைவர் சேயோன்
செயலர்

பேரா.முனைவர் மு.பொன்னவைக்கோ
தலைவர், விருதுக் குழு

மயிலைத் திருவள்ளூர் தமிழ்ச் சங்கம்-600 004.



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DR. B SREEDEVI
Sri Sairam Institute Of Technology

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Conferred to

Dr. B.SREEDEVI ,
Professor and Head
Department Computer Science and Engg
Sri Sairam Institute of Technology, chennai



**In recognition of her out standing contribution and active
involvement for promoting Technical Activities through IEI
Students Chapter at**

Sri Sairam Institute of Technology, chennai

on 3rd September 2021 at

**1st Southern Regional Technical Conclave (SRTC) held at
Adhiyamaan College of Engineering, Hosur, Tamil Nadu**


Organizing Secretary- SRTC


Chairman IEI, HLC


Chairman, AISC, IEI

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on

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Professor and HOD
Department of Computer Science
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12th February, 2022
10.00 am – 11.30 am

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COMPUTING AND COMMUNICATIONS TECHNOLOGIES
(ICCCT'21)

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— of Appreciation —

This certificate of appreciation is presented to

Dr./Mr./Ms **Dr.B.Sreedevi**

in recognition of your excellent support by sharing your knowledge and most valuable time as a Session Chair for the 2021 Fourth International Conference on Computing and Communications Technologies (ICCCT'21) proceedings, held on 16th and 17th December 2021.

Dr. T. Sheela
HOD

Dr. K. Porkumaran
Principal

Sai Prakash LeoMuthu
Chairman & CEO



PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME

(2021-2022)

SMART TICKETING CARD

PROJECT MEMBERS

Yuvaraj V

Kishore R

Mohamed Bashid S

PROJECT GUIDE

Ms.V.Subashini,

Assistant Professor,

Department of Electronics and Communication Engineering,

Sri Sairam Institute of Technology,

West Tambaram, Chennai-600044



SUBMITTED TO

The Member Secretary,

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,

DOTE Campus, Chennai-600025

PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME

(2021-2022)

SMART TICKETING CARD

PROJECT MEMBERS

Yuvaraj V

Kishore R

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PROJECT GUIDE

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West Tambaram, Chennai-600044



SUBMITTED TO

The Member Secretary,

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,

DOTE Campus, Chennai-600025

PROJECT DETAILS

1. INTRODUCTION:

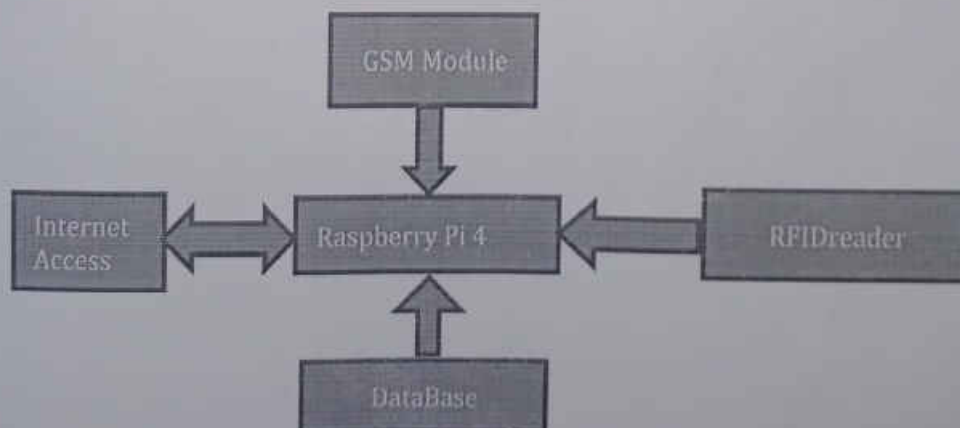
Generally in railway stations, we have long queues particularly in local train stations in metro Politian cities for getting tickets. Because of this people need to waste lot time. In order to avoid the above mentioned, we are going to build an innovative smart ticketing card for local trains based on RFID. With this project person who has the smart card, they can directly using the local train services without buying ticket at the time. we will need Arduino to interface the Microcontroller with the RFID scanner and Wi-Fi module. Here everyone will have one RFID card. There will be RFID scanner in every railway station at entrance and exit. If anyone wants to enter or exit the railway station, he needs to scan his RFID. Once the RFID card is scanned then only the gate will be opened. we will program the microcontroller in such a way that whenever a person scans his RFID card at entrance of the station, that station will be marked as Starting station and as soon as he scans his card at exit of the other station, that will be assigned as ending station. Now based on the distance between starting station, fare will be assigned.

2. OBJECTIVES:

- Easy to travel without buying ticket.
- To minimize the usage of paper.
- To minimize the chances for COVID-19 spread

3. METHODOLOGY:

RFID has been an emerging technology in recent years. RFID consists of two components, RFID Tag and RFID Reader. RFID Tag contains Unique ID number. RFID reader reads the above informations from the RFID Tag. Now Scan the RFID card at on station Entrance and Scan the RFID card at the exit of the other station. Now based on the distance the person travelled fare will be collected.



STUDENT PROJECT PROPOSAL

1. NAME OF THE STUDENT (S) : Yuvaraj V
Kishore R
Mohamed Bashid S
2. NAME OF THE GUIDE : Ms.V.Subashini,
Assistant Professor,
Department of ECE ,
Sri Sairam Institute of Technology,
Chennai.
- EMAIL ID : subashini.ece@sairamit.edu.in
- INSTITUTIONAL ADDRESS : Sai Leo Nagar, West Tambaram,
Chennai - 600 044.
- MOBILE NO. : +91 9384449860,9884384488
3. PROJECT TITLE : Smart Ticketing Card
4. SECTOR : Electronics and Communication Engineering

4. WORK PLAN:

PHASE 1: Designing and Modeling.

PHASE 2: End to end testing of the designed system.


5. THE ESTIMATED BUDGET:


S.NO.	Proposed equipment/s	Number of units	Estimated Cost in Rs.
1	Raspberry pi 4	1	4500
2	Rfid Reader	2	1000
3	Clampshell cards	4	200
4	Gsm module	1	1500
5	Led display	1	200
TOTAL			7400


6. Has a similar project been carried out in your college / elsewhere? If so furnish details the previous project and highlight the improvements suggested in the present one. : **NO**

CERTIFICATE

This is to certify that Yuvaraj V, Kishore R, Mohamed Bashid S are bonafide final year students of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.


Signature of the Guide


Signature of the HOD


Signature of the Principal

22/9

/ <i8ec035@sairamtap.edu.in>
ti.ece@sairamit.edu.in

Wed, Sep 15, 2021 at 2:56

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Google Forms <forms-receipts-noreply@google.com>
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035@sairamtap.edu.in>

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Student Project Scheme -2021-2022

Applicant's registration for data collection. Fill required details. Take a printout of the same, get signatures and send it with project details [3 pages only].

Email *

i8ec035@sairamtap.edu.in

GUIDE NAME *

Mrs Subashini V

DESIGNATION *

Assistant professor

DEPARTMENT *

NAME OF THE INSTITUTION *

Yuvraj V

INSTITUTION ADDRESS WITH PINCODE *

600096

GUIDE CONTACT MOBILE NUMBER *

6383128413

GUIDE EMAIL-ID *

subashini.ece@sairamit.edu.in

TITLE OF THE PROJECT *

Smart ticketing card

STREAM *

- Science
- Engineering

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software; ECV-Civil Engineering; EME-Mechanical/ Mechatronics/ Production/automobile etc/; EEE-EEE/ECE/EIE/ICE; CHE-Chemical Engineering

CSE ECV EME EEE CHE

INSTITUTION CATEGORY *

GOVT. SELF FINANCE GOVT. AIDED UNIVERSITY

STATUS

STUDENT(S) NAME (Maximum 4 students) *

S Mohammad Bashid R kishore V.Yuvaraj

STUDENT STUDYING *

U.G ENGINEERING P.G PROFESSIONAL COURSE P.G SCIENCE

COURSE

CERTIFICATE

This is to certify that Mr./Miss. YUVARAJ, KISHORE, BASHID is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.

.. Signature of

K. Sub

[Signature]
19/21

[Signature]

Guide HOD Principal/ Head of the Institution

Note:

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 17 September 2021, 5.00PM

**PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME
(2021-2022)**

IRIS BASED VOTING SYSTEM

PROJECT MEMBERS:

NANDHINI G

ARCHANA G

KAMALESHWARI G

PROJECT GUIDE:

Mrs. S. SWEETLINE SHAMINI

Assistant Professor,

Department of Electronics and Communication Engineering,

Sri Sairam Institute of Technology,

West Tambaram, Chennai - 600044.



SUBMITTED TO:

The Member Secretary,

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,

DOTE Campus, Chennai - 600025.

IRIS BASED VOTING SYSTEM

Sweetline shamini, Professor Department of ECE G. Nandhini, G. Archana, G. Kamaleshwari

IVth year Department of ECE

Sri Sairam Institute of Technology, Chennai-44

ABSTRACT:

The election commission is facing a lot of troubles and various types of problems throughout the election. The most familiar issue faced by the election commission is improper confirmation with respect to the arrangement of casting the votes, duplication or illegal casting of votes. In this project a secure and new voting system is developed to improve the existing voting system using iris recognition. Iris is one of the most secure biometric of person identification. The main goal of this project is to avoid the duplication of casting votes. Iris recognition refers to automatic method of verifying a match between the iris image taken during voting and the one which is present in the database using a Iris sensing module.

INTRODUCTION:

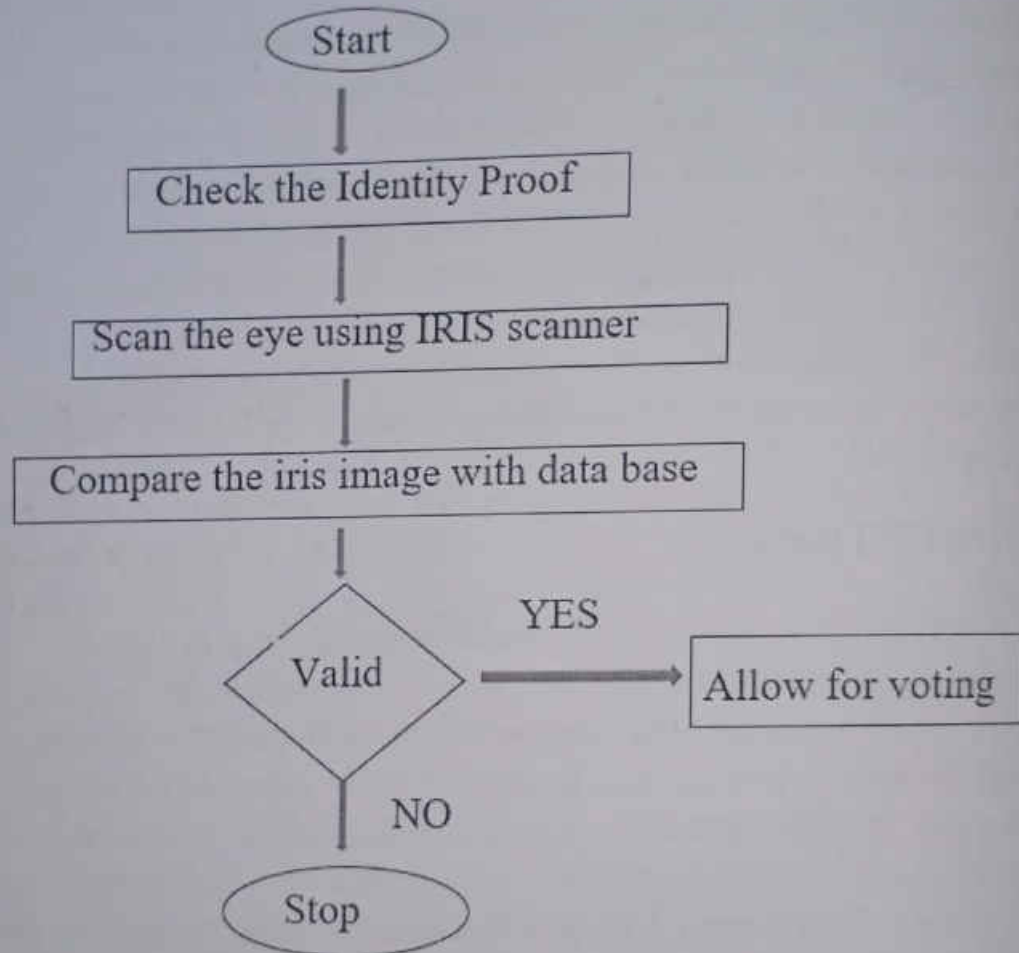
In this project we are scanning an individual's iris and storing it in a voters database by giving appropriate AADHAR card no. If a person comes for voting then his or her iris is detected and this detected image is compared to the image in the voter's database. When the iris is detected we get the information about the voter in our PC, then that information is compared to voter's ID. If both the details get matched then the person is allowed to vote. In this project the Security of the voter is discussed and in general focus is on making the voting system more robust and reliable by eliminating dummy voters. By using Daughman's algorithms will scan IRIS and check those details in our database for match. After voting the SMS will be send to the all voters to their registered mobile number

Cost Estimation:

Iris Scanner - 4000

Total cost - 4000

FLOW CHART:



CONCLUSION:

With the increasing population day by day, the improvement of the voting system is necessary. Undoubtedly the proposed voting system's techniques are

especially good. We have used iris recognition and smart cards for improving this system. Many biometric methods are available but iris recognition has a high accuracy rate. Using the smart card, it is likely to poll from any polling booth rather than the particular polling booth. The iris pattern of the person is obviously unique. It reduces the polling time which is most important. It totally rules out the chance of invalid vote.

REFERENCES:

1. R. Murali Prasad, PhD Professor Dept. of ECE Vardhaman College of Engg., Hyderabad, AADHAR based Electronic Voting Machine using Arduino.
2. Libor Masek, "Recognition of Human Iris Patterns for Biometric Identification", The University of Western Australia, 2003.
3. K. Seetharaman, R. Ragupathy, "Iris Recognition for Personal Identification System", ICMOC-2012, India
4. K. Seetharaman, R. Ragupathy, "Iris Recognition for Personal Identification System", Procedia Engineering, Volume 38 p:1531 – 1546, 2012
5. Ashok Kumar D., Ummal Sariba Begum T., "A Novel design of Electronic Voting System Using Fingerprint", International Journal of Innovative Technology & Creative Engineering (ISSN:2045-8711), Vol.1, No.1. pp: 12-19, January 2011.
6. Rathna Prabha., Assistant Professor, Dept. of ICE, Saranathan College of Engineering, Trichy, Tamilnadu, India, "A Survey on E-Voting System Using Arduino Software".

<i8ec056@sairamtap.edu.in>
<prabha.ece@sairamit.edu.in

Thu, Sep 16, 2021 at 12:52 F

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Student Project Scheme -2021-2022

Applicant's registration for data collection. Fill required details. Take a printout of the same, get signatures and send it with project details [3 pages only].

Email *

i8ec056@sairamtap.edu.in

GUIDE NAME *

Sweetlineshamini

DESIGNATION *

Professor

DEPARTMENT *

NAME OF THE INSTITUTION *

Sri Sairam institute of technology

INSTITUTION ADDRESS WITH PINCODE *

Sai Leo Nagar, West Tambaram, Chennai-600044

GUIDE CONTACT MOBILE NUMBER *

9952866571

GUIDE EMAIL-ID *

sweetlineshamini.ece@sairamit.edu.in

TITLE OF THE PROJECT *

IRIS BASED VOTING SYSTEM

STREAM

- Science
- Engineering

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software; ECV-Civil Engineering; EME-Mechanical/ Mechatronics/ Production/automobile etc.; EEE-EEE/ECE/EIE/ICE; CHE-Chemical Engineering

CODE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	CSE	ECV	EME	EEE	CHE

Institution Details

INSTITUTION CATEGORY *

STATUS

GOVT. SELF FINANCE GOVT. AIDED UNIVERSITY

STUDENT(S) NAME (Maximum 4 students) *

Nandhini G ,Kamaleshwari G ,Archana G

STUDENT STUDYING *

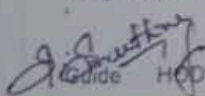
COURSE

U.G ENGINEERING P.G PROFESSIONAL COURSE P.G SCIENCE

CERTIFICATE

This is to certify that Mr./Miss GI. Nandhini GI. Archana ^{GI. Kamaleshwari} is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.

.. Signature of


Guide HOD


Principal/ Head of the Institution

Note:

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 17 September 2021, 5.00PM

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**PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME
(2021-2022)**

**MONITORING AND SAFEGUARDING SYSTEM USING HEART
PULSE SENSOR**

PROJECT MEMBERS:

S L SRIVATSAV
S NATHISH KUMAR
V ASWIN RAJA

PROJECT GUIDE:

Mrs. G. VALARMATHI
Assistant Professor,

Department of Electronics and Communication Engineering,

Sri Sairam Institute of Technology,

West Tambaram, Chennai - 600044.



SUBMITTED TO:

The Member Secretary,
TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,
DOTE Campus, Chennai - 600025.

PROJECT PROPOSAL FOR STUDENT PROJECTS SCHEME

(2021-2022)

**MONITORING AND SAFEGUARDING SYSTEM USING
HEART PULSE SENSOR**

PROJECT MEMBERS

S L SRIVATSAV

S NATHISH KUMAR

V ASWIN RAJA

PROJECT GUIDE

Mrs,G.Valarmathi

Assistant Professor,

Department of Electronics and Communication Engineering,

Sri Sairam Institute of Technology,

West Tambaram, Chennai-600044



SUBMITTED TO

The Member Secretary,

TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY,

DOTE Campus, Chennai-600025

STUDENT PROJECT PROPOSAL

1. NAME OF THE STUDENT (S) : S L Srivatsav
S Nathish Kumar
V Aswin Raja
2. NAME OF THE GUIDE : Mrs.G.Valarmathi,
Assistant Professor,
Department of ECE ,
Sri Sairam Institute of Technology,
Chennai.
- EMAIL ID : valarmathi.ece@sairamit.edu.in
- INSTITUTIONAL ADDRESS : Sai Leo Nagar, West Tambaram,
Chennai - 600 044.
- MOBILE NO. : +91 9789992329
3. PROJECT TITLE :Monitoring and Safeguarding Systemusing Heart
Pulse Sensor
4. SECTOR : Electronics and Communication Engineering

PROJECT DETAILS

1. INTRODUCTION:

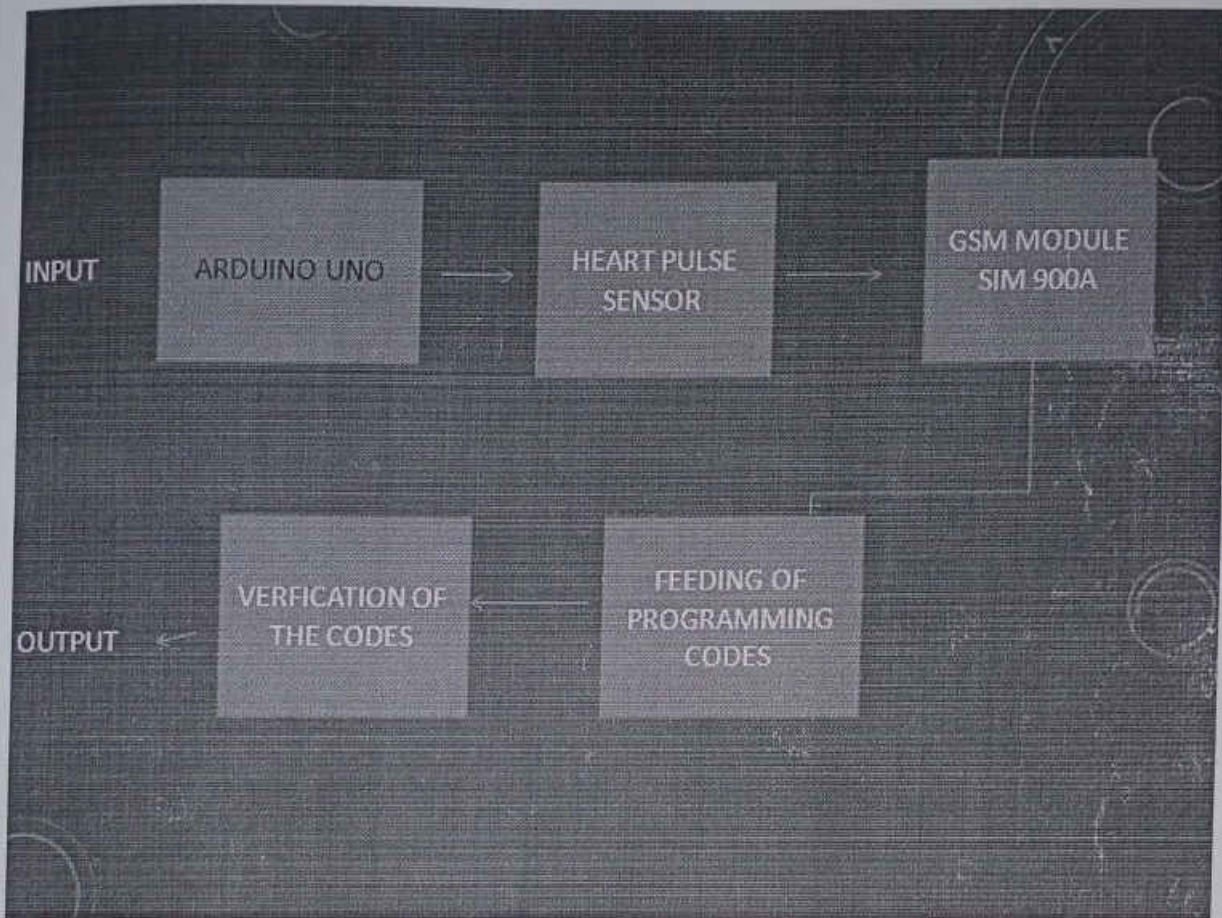
The main concept of this project is to safeguard the driver of the vehicles and immediate measures to save them. When the driver of the vehicle gets some health issues like heartache, chest pain and ,etc, the heart pulse sensor will immediately detect the driver's heart pulse in bpm (beats per minute).If the bpm is **greater than 120 or less than 40** , the GSM module connected with the heart pulse sensor will immediately share the location to the concerned person with exact location of the vehicle and the siren or horn in the vehicle will be horned high, so that the vehicles in front of the truck or bus will be noticed and they can be safeguarded or the vehicle slows down itself and finally the vehicle stops. **In general the bpm level of the adult should be in between 40 – 120 bpm (may be subject to changes)** .The bpm level will be displayed with the help of the Digital Display placed with the Arduino UNO and the GSM Module and the sensor.

2. OBJECTIVES:

- To avoid accidents in highways.
- To get the nearest location of hospital
- To know the accurate heart pulse in real time
- To know whether the driver can ride the vehicle or not using the LCD Display and Heart Pulse Sensor

3. METHODOLOGY:

When the driver of the vehicle gets some health issues like heartache, chest pain and ,etc, the heart pulse sensor will immediately detect the driver's heart pulse in bpm (beats per minute).If the bpm is greater than 120 or less than 40 , the GSM module connected with the heart pulse sensor will immediately share the location to the concerned person with exact location of the vehicle and the siren or horn in the vehicle will be horned high, so that the vehicles in front of the truck or bus will be noticed and they can be safeguarded or the vehicle slows down itself and finally the vehicle stops

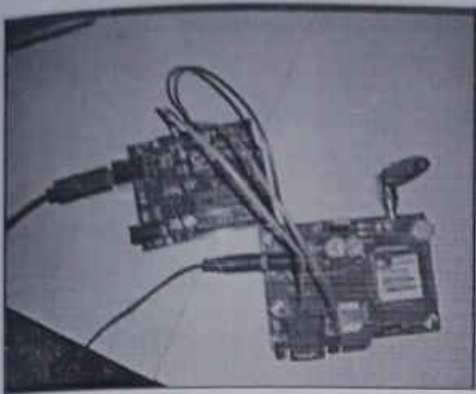


4. WORK PLAN:

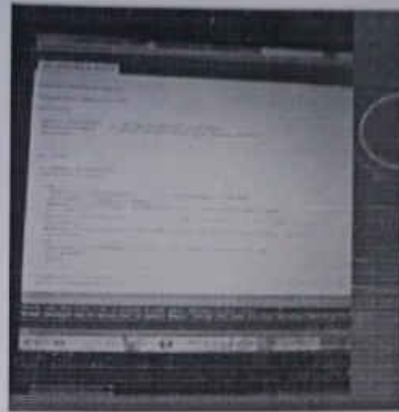
PHASE 1: Designing and Modeling.

PHASE 2: End to end testing of the designed system.

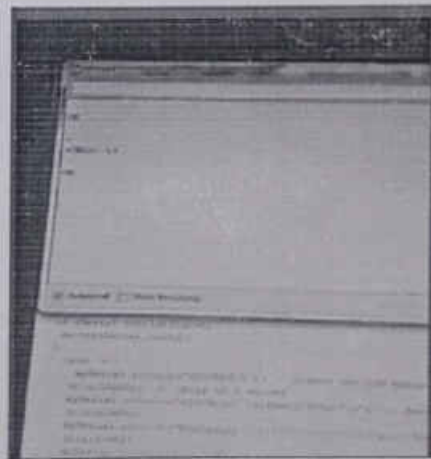
Module



Coding Screenshot



After Execution




5. THE ESTIMATED BUDGET:

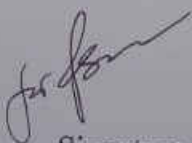
S.NO.	Proposed equipment/s	Number of units	Estimated Cost in Rs.
1	Ardiuno UNO	1	200
2	16X2 LCD Display	3	200
3	Push Button	10	50
4	Heart Pulse Sensor	8	2500
5	GSM SIM 900a Module	1	1000
6.	Jumper Wires	1 Pack	700
TOTAL			4650

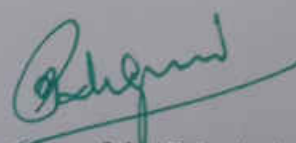
6. Has a similar project been carried out in your college / elsewhere? If so furnish details the previous project and highlight the improvements suggested in the present one. : **NO**

CERTIFICATE

This is to certify that S L. Srivatsav ; S Nathish Kumar ; V Aswin Raja are bonafide final year students of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.


Signature of the Guide


Signature of the HOD


Signature of the Principal

no subject)

message

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Wed, Sep 15, 2021 at 4:26 PM

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Student Project Scheme -2021-2022

Applicant's registration for data collection. Fill required details. Take a printout of the same, get signatures and send it with project details [3 pages only].

Email *

i8ec007@sairamtap.edu.in

GUIDE NAME *

G. VALARAMATHI

9/16/2021, 1:46 PM

DESIGNATION *

ASSISTANT PROFESSOR

DEPARTMENT *

ECE

NAME OF THE INSTITUTION *

SRI SAI RAM INSTITUTE OF TECHNOLOGY

INSTITUTION ADDRESS WITH PINCODE *

Sairam College Rd, Sai Leo Nagar, Tambaram West, Chennai, Tamil Nadu 600044

GUIDE CONTACT MOBILE NUMBER *

9789992329

GUIDE EMAIL-ID *

valarmathi.eca@sairamit.edu.in

TITLE OF THE PROJECT *

MONITORING AND SAFEGUARDING DEVICE USING HEART PULSE SENSOR

9/16/2021, 1:46 PM

STREAM *

- Science
- Engineering

Engineering Stream

Project to be considered under the Sector: CSE-CSE/IT/Computer Application/Software; ECV-Civil Engineering; EME-Mechanical/ Mechatronics/ Production/automobile etc/; EEE-EEE/ECE/EIE/ICE; CHE-Chemical Engineering

- | | | | | | |
|------|-----------------------|-----------------------|----------------------------------|-----------------------|-----------------------|
| | CSE | ECV | EME | EEE | CHE |
| CODE | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Institution Details

INSTITUTION CATEGORY *

- | | | | | |
|--------|-----------------------|----------------------------------|-----------------------|-----------------------|
| | GOVT. | SELF FINANCE | GOVT. AIDED | UNIVERSITY |
| STATUS | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

STUDENT(S) NAME (Maximum 4 students) *

S L SRIVATSAV V ASWIN RAJA S NATHISH KUMAR

STUDENT STUDYING *

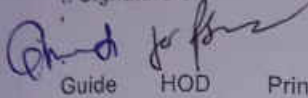
- U.G ENGINEERING P.G PROFESSIONAL COURSE P.G SCIENCE

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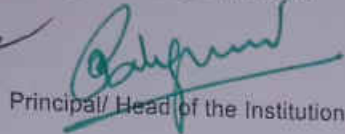
CERTIFICATE

This is to certify that Mr./^{Nathish kumar} ~~Miss~~ Sri Vasavi Ashwin Raja is a bonafide final year student of P.G. Science / U.G. Engineering / P.G. professional courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of April 2022.

Signature of


Guide

HOD


Principal/ Head of the Institution

Note:

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 17 September 2021, 5.00PM

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All India Council for Technical Education
(A Statutory body under Ministry of Education, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



Scheme for Promoting Interests, Creativity and Ethics among Students (SPICES) – Offer Letter

To

The Registrar / Director / Principal,
Sri Sai Ram Institute Of Technology,
Sai Leo Nagar, Dharkast Road, West
Tambaram, Chennai.600 044,
Kanchipuram, 600044, Tamil Nadu.
[PID: 1-2501960]

Subject: Offer of the Financial Assistance under the Scheme for Promoting Interest, Creativity and Ethics among Students (SPICES) for the Financial Year 2022-23 - reg.

Sir/Madam,

All India Council for Technical Education is pleased to grant approval of the financial assistance towards a project sanctioned under the **Scheme for Promoting Interest, Creativity and Ethics among Students (SPICES)** for the Financial Year 2022-23 on reimbursement basis. The purpose of this offer is to energize and position one of the **club/chapter/society** (hereinafter referred to as 'Club') as facilitating entity for pursuit of individual's interests, creativity work, showcasing talent, networking and teamwork opportunities, social experience; organization and management skills, exposure to professional ethics, etc.

Following are the details of the project:

1.	Name & address of the beneficiary institute:	Sri Sai Ram Institute Of Technology, Sai Leo Nagar, Dharkast Road, West Tambaram, Chennai.600 044, Kanchipuram, 600044, Tamil Nadu
2.	Permanent ID of institute:	1-2501960
3.	Name of the Club:	SAIRAM SDG ACTION CLUB
4.	Name of the Coordinator:	Dr. VARDHARAJALU BRINDHA DEVI
5.	Name of Co-coordinator:	RAMAN PRABAVATHI
6.	Maximum financial assistance offered:	Rs.1,00,000/- (Rupees One lakh only)
7.	Offer of financial assistance is debitable to:	Major Head 602.22 (a) General (Non-Plan Head)

The said offer is as per the norms and guidelines of the scheme as well as subject to the following terms and conditions: -

I. Release of funds and maintenance of the accounts

- The amount will be reimbursed on receipt of requisite documents after completion of 1 year of project.
- This offer is issued in exercise of the powers delegated to the Council and other Terms and Conditions laid down in the guidelines of the scheme.

II. Limit of Funding

- The grant from AICTE will be **Rs. 1 Lakh (one time grant to one institute)** for developing a students' club.
- The grant from AICTE will be **Rs. 1,00,000/- (Rupees One lakh only)** and the institute is required to make a contribution of **Rs.(100001 to 200000)** to the club (as committed by the institute in the proposal), non-compliance of which shall invite penal action.

AQIS ID: 1-11137828221

III. Utilization of funds

- a. Funds sanctioned for supporting the particular student club cannot be utilized for any other programme/ student club.
- b. Only students on roll in the institute shall be the member of the club.
- c. The grant can be utilized for supporting a range of student activities (viz. developing Interests/Hobbies, Creativity/ Imagination/ Innovation and Ethics/ Values) and meeting the cost of registration and travel of students of the beneficiary club for participating in outstation activities (up to 40% of the total grant) but **cannot be used for procurement of hardware & software.**
- d. Ex-students and ex- faculty members and other officials of the institute shall not be the member of club.
- e. The clubs must be encouraged to reach out alumni and industries for fund-raising for their events.
- f. Coordinator must maintain an electronic record of activities, participants etc. and update same on the SPICES Review Portal.
- g. **No payment is permissible against the activities already conducted by the club (i.e. before receipt of this offer letter).**

III. Disbursement of funds to the institution

- a. The amount of the grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education and shall be disbursed to and credited to the Registrar/Director/Principal of the institute through RTGS.
- b. Grant will be released in conformity with the Terms & Conditions as well as norms of the scheme as already communicated and also being communicated in this letter.
- c. The sanctioned amount is debitible to the Non-Plan Head of the Scheme for Promoting Interest, Creativity and Ethics among Students (SPICES).
- d. The admissibility of claim will be calculated as per the norms of AICTE only. **If the expenditure incurred is less than the amount offered, the reimbursement will be limited to the actual expenditure amount.**

IV. Documents to be uploaded on SPICES Review Portal

- a. **On receipt of offer:**
Institute must upload the Acceptance Letter within 7 days from the date of receipt of the offer letter duly signed and seal affixed by Coordinator and Head of the Institutions on the SPICES Review Portal.
- b. **After completion of every activity/ events:**
 - i. Upload the list of activities /events /participation date-wise brief description, achievement and 4-5 pictures on the SPICES Review Portal.
- c. **After completion of project:**
Institute has to fill up Report on SPICES Review portal and upload following documents:
 - i. Photographs showing various activities, events organized by club.
 - ii. Feedback from members of the club.
 - iii. Identify 2 other clubs which the institution proposes to develop on the lines of club benefited under SPICES.

V. Submission of documents by institute for project closure (after 1 year)

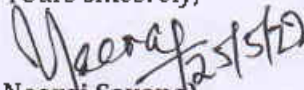
The following documents must be submitted to AICTE within a period of one month from the date of completion of project for reimbursement of the grant:

- a. Statement of Expenditure in prescribed format duly audited by the Chartered Accountant in the case of a private institution and by the Finance Officer/Account Officer in case of government/government-aided institution.
- b. Supporting bills/documents on account of expenses incurred for the purpose duly attested by the Head of the Institute.
- c. Soft copy of final report submitted on portal as mentioned above (in section VII).
- d. e-Payment details/ Mandate form in the prescribed proforma is to be uploaded on the SPICES portal.

VI. General instructions

- a. Change of Coordinator name, should be effected only after prior approval of the Council, failing which the offer would be treated as automatically withdrawn.
- b. The assets acquired wholly or substantially of the All India Council for Technical Education's grants shall not be disposed or encumbered or utilized for the purposes other than those for which it was given without proper sanction of the Council and should, at any time the Institution ceased to function, such assets shall revert to the All India Council for Technical Education.
- c. The beneficiary institute will make best efforts to promote the scheme by mentioning the sponsorship/ support from AICTE, carrying the Logo of AICTE and SPICES name in events and other means.
- d. The beneficiary institution shall observe all financial norms and guidelines as prescribed by the AICTE/ Government of India from time to time. GOI GFR rules (@<https://doe.gov.in/order-circular/general-financial-rules2017-0>) should be followed while spending for the event.
- e. The beneficiary institute must create and maintain separate webpage for the Students' Club highlighting all the activities/ events being organized.
- f. The institute shall strictly follow the provisions laid down in the scheme document and of this offer letter. All correspondence related to the SPICES scheme must contain the number of this letter, failing which correspondence will not be entertained.

Yours sincerely,


(Dr. Neeraj Saxena)
Adviser (IDC)

Copy forwarded for information and necessary action to:

1. The Registrar/ Director/ Principal,
Sri Sai Ram Institute Of Technology,
Kanchipuram, Tamil Nadu.
2. Dr. VARDHARAJALU BRINDHA DEVI,
Sri Sai Ram Institute Of Technology,
Kanchipuram, Tamil Nadu.
3. Guard File.
4. QR Code for Review Portal Manual and Scheme Guidelines:





उन्नत भारत अभियान

UNNAT BHARAT ABHIYAN



शिक्षित भारत-स्वस्थ भारत- स्वच्छ भारत- स्वावलंबी भारत- संपन्न भारत

Form Apply (TECHNOLOGY DEVELOPMENT)

Upper cap funding Rs. 1,00,000

Applied For

TECHNOLOGY DEVELOPMENT

Name of College/Institution

Sri Sai Ram Institute of Technology

Coordinator Name

Mr.D.Muralidharan

UBA Coordinator Email

sairam@sairamit.edu.in

UBA Coordinator Contact No

9840761997

State

Tamil Nadu

District

Kanchipuram

Block

kundrathur

Select your SEG Name

Sanitation & Solid Waste Manage

Select your RCI

Indian Institute of Technology Ma

AISHE Code of the College

C-16476

Title of the technology :

IOT model for a smart sewage management system using

Village where it is to be implemented :

Erumaiyur

Pazhathandalan

Village Name

Village Name

Village Name

Why this technology required (Objective of the project maximum 200 word) :

- The main aim and priority given to the project is to maintain a proper solid waste management, improve the quality of water, and proper maintenance of sewage systems. Development of IoT based sewage level maintenance is

Total cost of the product/technology:

Site preparation cost

Rs 25000

Equipment/ Machinery cost

Rs 40000

Running cost, Manpower cost,

Electricity cost, etc.

Rs 25000

Miscellaneous expense

Rs 10000

Funds raised from : Gram panchayat CSR District administration State administration

N.O.T

Details of the funds raised from any other agencies apart from above-mentioned:

nil

Describe your role as PI at various stage of the project (Max 500 words): Process of execution of the project

As a consequence, it comments on the level of the sewage. If it reaches the maximum level, it alarms via mails and SMS with the help of module. We will

The total time approximately around 2 to 3 months takes place accordingly. The step by step execution

Who are the beneficiaries (ST,SC,OBC, Tribal, etc.) and potential impact of the technology on the beneficiary & village.

All the villagers and all category of people can be benefited by all the people. The people who suffers

Duration of Project

Five Month

Role of stakeholders in maintaining sustainability after the project duration (please mention point wise role of participating stakeholders)

The stakeholders also take the responsibility of maintaining and servicing the components of use in the whole system.

Execution of the project along with role of all participating stakeholders (write point wise maximum 500 words):

All the technical issues are been deal and studied properly. And finally all the requirements are observed and satisfied the proper management of sewage

Impact of this work on learning of students/teachers:

management of sewage and also to recycle the sewage water for the utilization of irrigation process

Role of PI after completion of the project duration:

Finding the problems and giving constant and continuous support to the village for sanitation and solid waste management.

Enter Name and Contact details of students involved in this project:

BHARATHGANESH S II YEAR MECH (sit20me023@sairamtap.edu.in)

Enter Name and Contact details of peoples those will be involved in this project(Form UBA connected / adopted village):

DR. PRABHA (prabha.ece@sairamit.edu.in)
R M ASHA(asha.civil@sairamit.edu.in)

Captcha:

65884

65884

I agree all information provided are actual & I agree with your all [terms & condition](#).

Submit



उन्नत भारत अभियान

UNNAT BHARAT ABHIYAN



शिक्षित भारत-स्वस्थ भारत- स्वच्छ भारत- स्वावलंबी भारत- संपन्न भारत

Application form Submission Last Date : 10-Feb-2022

Form Apply (TECHNOLOGY DEVELOPMENT)

Upper cap funding Rs. 1,00,000

Applied For

TECHNOLOGY DEVELOPMENT

Name of College/Institution

Sri Sai Ram Institute of Technology

Coordinator Name

Mr.D.Muralidharan

UBA Coordinator Email

sairam@sairamit.edu.in

UBA Coordinator Contact No

9840761997

State

Tamil Nadu

District

Kanchipuram

Block

kundrathur

Select your SEG Name

Sustainable Agriculture System (I/

Select your RCI

Indian Institute of Technology Ma

AISHE Code of the College

C-16476

Title of the technology :

Solar Powered Smart Irrigation System

Village where it is to be implemented :

Erumaiyur

Pazhathandalan

Village Name

Village Name

Village Name

Why this technology required (Objective of the project maximum 200 word) :

right time.

4. Even if we channelize the excess water in a proper way, we can't reuse the water if we really need it.

On considering these issues, we have decided to help farmers to do agriculture in an efficient and conservative way

Total cost of the product/technology:

Site preparation cost

Rs 25000

Equipment/ Machinery cost

Rs 40000

Running cost, Manpower cost,

Electricity cost, etc.

Rs 25000

Miscellaneous expense

Rs 10000

Funds raised from : Gram panchayat CSR District administration State administration

N.O.T

Details of the funds raised from any other agencies apart from above-mentioned:

The increased dependency on renewable energy sources for power generation , subsidies and tax benefits by respective state governments for power generation will positively influence market growth.

Describe your role as PI at various stage of the project (Max 500 words): Process of execution of the project

project life cycle
Foster cross team collaboration

field), so that the stagnant water will be drained out.
The water in the storage tank can be reused later for
further irrigation requirements. The advantage of our

Who are the beneficiaries (ST,SC,OBC, Tribal, etc.) and
potential impact of the technology on the beneficiary &
village.

Duration of Project

The beneficiaries of our project are farmers. The
productivity of the crops is more during the rainy

Four Month

Role of stakeholders in maintaining sustainability after the project duration (please mention point wise role of
participating stakeholders)

-They will be looking into the structural and electrical maintenance periodically.
-The farmers or the people who are using the system will tell the stakeholder if they are facing an issue or a problem

Execution of the project along with role of all participating
stakeholders (write point wise maximum 500 words):

Impact of this work on learning of students/teachers:

- During heavy downpour, if the crops got submerged
in the flooded water and the water level indicating
sensor senses that the level has been achieved. it

development of these irrigation methods in a more
efficient way than ours . This will be the bottom line
for their innovation on irrigation and knowledge on

Role of PI after completion of the project duration:

Scheduling stakeholder meeting and facilitating communication between the members throughout the project life
cycle
Foster cross team collaboration

Enter Name and Contact details of students involved in this project:

SHYAMALAVANIVAN M - sit19ec005@sairamtap.edu.in - 9094902008
DEEPAK N - sit19ec074@sairamtap.edu.in - 8838984614

Enter Name and Contact details of peoples those will be involved in this project(Form UBA connected / adopted village):

DR THAMARAI SELVI G (hodece@sairamit.edu.in) 8754582229
DR PRABHA R (prabha.ece@sairamit.edu.in) 9444895163

Captcha:

74780

74780

I agree all information provided are actual & I agree with your all [terms & condition](#).

Submit



An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

File Number : IPA/2021/000188

Submitted By : Prof. Palanikumar K

Submission Date : 30-Dec-2021

PROPOSAL DETAILS

(IPA/2021/000188)

Prof. Palanikumar K

palanikumar@sairamit.edu.in
Professor and Principal(Mechanical Engineering)

Sri Sairam Institute of Technology

Sairam college rd, sai leo nagar, west tambaram, chennai, tamil nadu , Chennai, Tamil nadu-600044

Technical Details :

Scheme :	Intensification of Research in High Priority Areas (IRHPA)		
High Priority	BSL-3		
Duration :	60 Months	Contact No :	+919677053338
Date of Birth :	10-May-1968	Total Cost (INR) :	49,78,819

Project Summary :

Alzheimer's disease tends to produce immense family, societal, and economic burdens for contemporary society. Current medical approaches remain minimal despite major advancements, therefore alternative therapeutic approaches are desperately needed. With the new affordability of high-performance computing techniques and advent of deep learning architectures over the past decade, it is now possible to perform genomics research at the population level. Focusing on high priority areas, Genomics science is on track to accelerate its data boom as scientists produce petascale and eventually lead to exascale data sizes. In total, it took almost two days for conventional genomic testing methods to process 30 million "reads," including the analysis and assembly of 30 million snippets and the preservation of those using the FASTQ format. This process took 22 minutes, using a dataset of 127 million reads on its current hardware. The proposed method plans to employ Kallisto on the High Performance Computing based GENOME Server using Memory-Driven Computing and Deep Learning Algorithms to analyze the very same data within 13 seconds. An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention will be developed as a patient-centric tool to facilitate personalized treatment strategy during Alzheimer care that can be used in real-time by patients, doctors, caregivers by providing automated reports to monitor any progress thereby aggrandizing treatment for Alzheimer.

Keywords :

HPC, Deep Learning, Precision Medicine, Genomics Science, Alzheimer

Objectives :

- To develop an automated health information application for Alzheimer treatment that can be assessed in real-time for both patients, doctors and caretakers.
- To employ Kallisto using High Performance Genome Server with Memory-Driven Computing and Deep learning algorithms, thereby processing the data within 13 seconds to identify Alzheimer's gene (APOE e4 gene) which is one of the important genetic risk factor.
- To integrate High-Performance Computing (HPC) infrastructures with Deep Learning (DL) techniques to support doctor's treatment that require the analysis of large and complex datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer disease are devised.
- To enable doctors and researchers to identify biomarkers that divide into patient with better and worse prognoses, thereby responding better to different drugs or treatment. .
- To modify k-mer access and memory management using librarian file system (LFS) instead of traditional storage
- To develop of Deep learning architecture to apprehend a tremendous amount of genome data and find nuanced patterns within it

Novelty and impact of the proposal with respect to High Priority Area :

The availability of high-performance computing has become a central method of allowing efficient utilization biological high-performance sequencing (HTS) data, which takes a fair amount of time to collect useful biological knowledge. An analysis of the importance of genetics includes a neurodegenerative disease such as Alzheimer. Researchers survey an enormous number of human genomes to do so and compile those genomes together into recognizable entities. This needs considerable computing resources. It takes 180 uncompressed gigabytes to reassemble one genome into a genetic representation of an organism, while computing specifications on that genome add 500 GB and an additional 100 GB is needed for long-term storage. This helps clinicians and researchers to distinguish biomarkers that are split into persons with positive and negative prognoses, while adapting better to various medications or therapies. In order to define treatment targets, the proposed work incorporate radiology, imaging, blood, and genomics results. That is the development cycle in the proposed work. The application of deep learning to genomic datasets is a fascinating field that is quickly evolving and is intended to revolutionize the study of genomes.

How do you envision the progress of the proposed area after 5 years taking into view your expected contribution ?

The proposed project will reduce the additional costs incurring hospitals as well as research Institutes by streamlining and support biomedical applications that require the analysis of large and complex genome datasets. Mixed methods of both quantitative and qualitative data in a series of studies will be followed for a better understanding of Alzheimer research problem. Intervention-specific questionnaire items will be included in a follow-up questionnaire to gain personal health record and detailed medical history of the patient, and then combined into statistical evaluation for implementation. Semi-structured interviews for patients with Alzheimer, doctors and caretakers (families) to meet the objectives of proposed project which are consistent with beneficiary's requirement. Long-term field observations will be carried out to study the cognitive function of patients with Alzheimer to enhance the efficiency of the proposed project. An intelligent light weight application termed as "AlzeCare" will be developed to reach every Indian population groups with Alzheimer.

To what extent the proposed work qualify as high priority in the specified area :

Based on the statistical value given by World Health Organization, around 50 million people suffer from Alzheimer, and every year, nearly 10 million new cases are included in particularly developing countries such as India. Alzheimer not only causes burden to families but also inflicts a heavy economic burden on India. It is estimated by World Health Organization that around US\$ 818 billion annual global cost is spent on Alzheimer. More than 80% of costs relate to family and remaining 20% is spent on medical as well as care. This number will increase to US\$ 2 trillion by 2030 for taking care of people suffering from Alzheimer. In genomics science, High Performance Computing allows researchers to grasp a vast amount of knowledge and uncover complex trends within it. It is beyond the limits of standard analysis to do so. The availability of high-performance computing has become a central method of allowing efficient utilization biological high-performance sequencing (HTS) data, which takes a fair amount of time to collect useful biological knowledge. High Performance Computing and deep learning technologies provides a pathway to address the issue. Furthermore, the proposed work focus on extracting nuanced patterns within it.

Expected Output and Outcome of the proposal :

Project will be proven to work in its final form under expected conditions, the proposed project will modify the k-mer access and memory management using librarian file system (LFS) for faster processing speed using pseudo-alignment application. The HPC-based Deep Learning project is intended to revitalize genome analysis with genomic datasets. As a software deployment for patients particularly during Alzheimer's care, an intelligent assistive tool health information application (AlzeCare) will be created that can be used in real time for all patients, doctors, caregivers and self-administered assessments to check any progress during treatment, along with an ease-to-interpret summary to build a personalized plan for patients during treatment. The application plan to tie-up with hospitals treating Alzheimer and as a treatment package during Alzheimer care. The usefulness of the application is proven to Ministry of Health and Family Welfare under the Government of India (<https://mohfw.gov.in/>) for deploying the application in government hospitals as recommended by the Ministry.

Sustainability plan of research undertaken after the completion of project :

The proposed scheme upon successful completion will be patented at the intellectual property rights in the name of the institution (SSIT) and SERB. The outcome of the proposed algorithms and its results will be documented with pictorial, experimental results as evidences and a format will be prepared to enable this work to get published in reputed journal. This work upon successful completion and testing for a suitable period will be subjected for approval from concerned authorities for scaling up purposes and for consultancy purposes. This work can be made sustainable through a procedure starting with applying for Intellectual Property Rights, next will the conversion of the project to product. Even after the completion of the project, continuous research and development shall be undertaken to ensure that any necessary modification that will improve the performance of the application can be incorporated successfully. The commercialization aspects of the product like cost, marketing strategy shall be analysed. Scaling up of the project work shall be explored.

Any other relevant information:

Upon completion of project, its usefulness will be proven and meaningful insights would be provided to research community especially in India

Theme of Proposed Work:

Health, Manufacturing

Expertise Area :

Composites, Biomaterials, Materials Processing, Natural Products, Modeling, Optimization, Machining Science, Artificial Intelligence, sustainability, Fuzzy Systems

SN.No.	CO-PI Details
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7	 <p>SIVAKUMAR PONNUSAMY drsivakumar.p@gmail.com Associate Professor(Computer Science and Engineering)</p> <p>SRM University NCR Campus ,Modinagar Sikri Kalan, UTTAR PRADESH, GHAZIABAD D.O.B : 01 Jun, 1982</p>

Industry-wise Contribution :

Head	Industry 1 Contribution (INR)	Details
Manpower	0	NA
Consumables	0	NA
Travel	0	NA
Equipment	0	NA
Contingency	0	NA
Othercost	0	NA
In Kind	0	NA
Total	0	

PROPOSAL SUBMITTED TO (SERB) IRPHA

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

Dr.K.Palanikumar

Dr.B.Sreedevi

Mr.R.Udendhran

1. Origin

As genomic analysis becomes more mainstream, sequencing DNA base pairs is critical to identifying mutations that can cause disease. Alzheimer's disease tends to produce immense family, societal, and economic burdens for contemporary society. Current medical approaches remain minimal despite major advancements, therefore alternative therapeutic approaches are desperately needed. With the new affordability of high-performance computing techniques and storage power over the past decade, it is now possible to perform genomics at the population level. "Large national genomics projects are developing all over the world, such as the "UK Biobank," the "All of Us scheme" in the US, Singapore's "Genome Asia," "Genomics Thailand,". With Precision Medicine, the hope is to provide individualized prevention, diagnosis, and care by exploiting genetic history information from a person. According to World Health Organization, around 50 million people suffer from Alzheimer, and every year, nearly 10 million new cases are included in particularly developing countries such as India. In India, more than 4 million people suffer from some form of Alzheimer. Alzheimer is not a disease, instead it is considered as a syndrome generally as progressive or chronic in nature. Alzheimer is not a normal process of ageing; it is caused due to variety of brain illness and affects the ability to carry out everyday activities. High Performance Computing (HPC) can drive the diagnosis and treatment of the disease forward. In the late 2000s, the advancement of Next-Generation Sequencing (NGS) technology led to a drastic decline in DNA sequencing costs. The introduction of NGS, combined with the developments in HPC storage and computational technology at the time provided the ideal storm for a genomics data deluge. This set of factors has led to an urgent question: how best to use all this information?

2 Review of status of Research and Development in the subject

2.1 International status:

- I. The Big Data for Advancing Alzheimer Research project proposed by Health Ministers of G8 countries emphasizing on importance of integrating Big Data in Alzheimer research which led to enhanced Alzheimer research and development of technology which assists in determining the factors that contribute to Alzheimer such as early detection of Alzheimer in elders, recommending effective support for Alzheimer care as well as proposing new analysis methods. In this perspective, Chen et al (2018) proposed a Alzheimer related medicine database with the capabilities of supercomputers in which data mining concepts were employed to create comorbid associations between Alzheimer and various kinds of illnesses.

- II. On April 2016, one of the founding partners of the JRU, ELIXIR-IT and CINECA, launched a pilot project called ELIXIR-IT HPC@CINECA, aimed at offering an entry-level but still significant HPC resource package (core hours, 1 TB of permanent storage expandable based on project needs) for research projects submitted by Italian and European researchers in the life sciences. Three years since its inception, it can measure the effect of this program, which can now be regarded as effective experimental program with over 60 project applications submitted, an approval rate of around 90% and many publications made possible by the allocated HPC capital.

- III. After the advent of Zero effort technologies which can gather, analysis and incorporating advanced computing techniques such as high performance computing, machine learning, sensor fusion, decision-making and planning, assistive systems were made effective and seamlessly integrated into patient's lives. Robillard et al (2018) proposed an effective as deep learning based assistive technology with emotion and motivation as its main parameters for improving cognitive working of Alzheimer patients.

2.2 National status

- I. Ramanathan Sathianathan et al (2018) presented a detailed report on Alzheimer's disease and its impact, prevention, as well as problem experienced by India. The authors highlighted that lack of effective information application which can provide insight into true trend of the disease and determine the symptoms in early stage and its associated risk factors, paucity of basic as well as advance researches on Alzheimer, poor awareness, and less availability of social benefit.
- II. Bhagyashree et al (2018) presented machine learning methods which can be integrated into Alzheimer's analysis and mainly focused on exploratory study from south India. The authors highlighted several benefits obtained in introducing machine learning concepts into Alzheimer analysis.

References:

1. Chen PH, Lee DD, Yang MH. *Data mining the comorbid associations between Alzheimer and various kinds of illnesses using a medicine database. Computer Electrical Engineering.* 2018; 70: 12–20
2. Robillard JM, Hoey J. *Emotion and Motivation in Cognitive Assistive Technologies for Alzheimer. Computer.* 2018; 51(3): 24–34.
3. Sathianathan R, Kantipudi SJ. *The Alzheimer epidemic: Impact, prevention, and challenges for India. Indian J Psychiatry* 2018;60:165-7
4. Castrignanò, T., Gioiosa, S., Flati, T. et al. *ELIXIR-IT HPC@CINECA: high performance computing resources for the bioinformatics community. BMC Bioinformatics* 21, 352 (2020). <https://doi.org/10.1186/s12859-020-03565-8>
5. Bhagyashree SI, Nagaraj K, Prince M, Fall CH, Krishna M. *Diagnosis of Alzheimer by Machine learning methods in Epidemiological studies: a pilot exploratory study from south India. Social Psychiatry Epidemiology.* 2018 Jan; 53(1): 77–86.

3. Technical Details:

In genomics science, High Performance Computing allows researchers to grasp a vast amount of knowledge and uncover complex trends within it. It is beyond the limits of standard analysis to do so. The availability of high-performance computing has become a central method of allowing efficient utilization biological high-performance sequencing (HTS) data, which takes a fair amount of time to collect useful biological knowledge. An analysis of the importance of genetics includes a neurodegenerative disease such as Alzheimer. Researchers survey an enormous number of human genomes to do so and compile those genomes together into recognizable entities. This needs considerable computing resources. It takes 180 uncompressed gigabytes to reassemble one genome into a genetic representation of an organism, while computing specifications on that genome add 500 GB and an additional 100 GB is needed for long-term storage. This helps clinicians and researchers to distinguish biomarkers that are split into persons with positive and negative prognoses, while adapting better to various medications or therapies. In order to define treatment targets, the proposed work incorporate radiology, imaging, blood, and genomics results. That is the development cycle in the proposed work. The application of deep learning to genomic datasets is a fascinating field that is quickly evolving and is intended to revolutionize the study of genomes. More than 3 billion base pairs compose the human genome. The mechanistic understanding of genome biology has been expanded to an unprecedented degree by recent technical advancements. The scope and sheer quantity of knowledge found in DNA and chromatin, however, remain roadblocks to full understanding of all genome functions and interactions. Connecting genotype to phenotype, forecasting regulatory activity, and classifying forms of mutation are all fields in which new knowledge can be obtained from harnessing the enormous genomic data from a large number of individuals. When traditional approaches are used, however, operating in this broad data space is difficult. Therefore in genome science, new and ground-breaking methods are required to enrich the knowledge of fundamental biology and the ties to disease and the need to understand how a cell functions in order to know how Alzheimer's disease works by acquiring DNA sequencing. Computer scientists have to reassemble snippets of data obtained from a single entity to transform the sequencing from mathematics to knowledge. The genetic data snippets are matched to a reference genome, a complete genome that functions as a guide. This is a computationally costly method, however, the proposed work entails pseudo-alignment method called Kallisto, built at Caltech, to make it as time-effective as possible. It took about two days for previous instruments to process 30 million "reads," which requires evaluating and assembling 30 million snippets and preserving those who use the FASTQ format. This process took 22 minutes, using a dataset of 127 million reads on its current hardware. The same data was analyzed in 13 seconds when used with Kallisto and executed it on Genome Server and used Memory-Driven Computation resources.

In order to accomplish this upgrade, k-mer access and memory management would be incorporated using the librarian file system (LFS). As a result, it could process the data on nodes to reach the index in parallel, transferring the FASTQ files to LFS that separate applications could operate on the same datasets and further it would also discuss what could be exchanged between several instances. The concept of memory mapping is used for data to transfer to any available processing node without waiting period, unlike linear file reading. Then the reads are split into shorter k-mer and the graph generated as a hash table is read. Finally, by taking advantage of the large memory pool available, a hard-coded load factor of 95 percent in the hash table is minimized. Deep learning, a variant of machine learning that uses neural networks to automatically extract novel features from input data, is one exciting and promising technique now being applied in the genomics field. A matrix of real values is usually the input into a neural network. The input can be a DNA sequence in genomics, in which nucleotides A, C, T and G are encoded as [1,0,0,0], [0,1,0,0], [0,0,1,0] and [0,0,0,1].

4. Novelty Importance of the proposed project in the context of current status

- I. An automated health information application for Alzheimer treatment which can be assessed in real-time for both patients, doctors and caretakers.
- II. The proposed work intend to employ Kallisto using High Performance Genome Server with Memory-Driven Computing applications and Deep learning algorithms, thereby processing the data within 13 seconds.
- III. In particular, the project will combine High-Performance Computing (HPC) infrastructures with Deep Learning (DL) techniques to support doctor's treatment that require the analysis of large and complex datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer disease.

5. Organization of work elements

- Mixed methods of both quantitative and qualitative data in a series of studies will be followed for a better understanding of Alzheimer research problem. Intervention-specific questionnaire items will be included in a follow-up questionnaire to gain personal health record and detailed medical history of the patient, and then combined into statistical evaluation for implementation
- Relevance: Semi-structured interviews for patients with Alzheimer, doctors and caretakers (families) to meet the objectives of proposed project which are consistent with beneficiary's requirement
- Efficiency: Long-term field observations will be carried out to study the cognitive function of patients with Alzheimer to enhance the efficiency of the proposed project
- Coverage: By deploying an intelligent AlzeCare as light weight application so that it can be deployed in any smart phones to reach every Indian population groups with Alzheimer

6. Time schedule of activities giving milestones

Activities	Months					
	1-10	11-20	21-30	31-40	41-50	51-60
Staff Recruitment	■					
Literature Survey	■	■	■			
Establishing Computing Facility	■	■				
Cognitive & Psychological parameter analysis related to Alzheimer disease		■				
Pre Data Collection of Genome data of patients		■				
Development of pseudo-alignment application using HPC and Library File system			■			
Development of Deep Learning Architecture for analysis of large and complex biomedical datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer.			■			
Development of semantic annotator				■		
Automation of information application (AlzeCare) by applying deep learning techniques				■		
Testing the usefulness of AlzeCare app in real-time with participants					■	
Incorporating further advancements into AlzeCare system based on the real-time information gained from testing AlzeCare app on participants					■	
Validation, Debugging & Report generation					■	■

7. Brief SRS (Software Requirement Specification)

- High performance storage system incorporated with the HPC system (Required)
- Support for HPC mass storage system access (Required)
- Multi-core nodes located on the HPC interconnect (Optional)
- General Purpose GPU nodes residing on the HPC interconnection (Optional)
- Visualization, analysis of data and post-processing nodes that reside on the HPC interconnection (Required)

Prof. Palanikumar K

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Evaluation of mechanical properties of coconut flower cover fibre-reinforced polymer composites for industrial applications	Progress in Rubber, Plastics and Recycling Technology.	10.1177 /147776 0619895 011	3 to 18, and 1	37	Palani Kumar, K., Keshavan, D., Natarajan, E., Deepak, M., Freitas, L.I.
2	Optimization of wear properties on AA7075/Sic/Mos2 hybrid metal matrix composite by response surface methodology	Elsevier materials today proceedings	10.1016 /j.matpr. 2021.02. 541	4019 to 4024, and 46	9	K Umanath, K Palanikumar, Veeramalai Sankaradass, K Uma
3	Influence of Abrasive Water Jet Machining Parameters on Hybrid Polymer Composite	Journal of The Institution of Engineers (India):	10.1007 /s40032 -021- 00672-0	713 to 722, and 102	Series C	G Anand, SV Perumal, N Yuvaraj, K Palanikumar
4	Implications on the influence of mica on the mechanical properties of cast hybrid (Al+10% B4C+Mica) metal matrix composite	International Journal of Materials Research and Technology	10.1016 /j.jmtr. 2020.12. 004	99 to 109, and 10	1	Velavan, K., Palanikumar, K., Natarajan, E., Lim, W.H.
5	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	10.1177 /147776 0620918 605	32 to 48, and 1	37	Palani Kumar, K., Shadrach Jeya Sekaran, A., Dinesh, L., Hari Prasad, D., Deepak kumar, K.
6	Effects of magnesium carbonate concentration and lignin presence on properties of natural cellulosic Cissus quadrangularis fiber composites	International Journal of Biological Macromolecules	10.1016 /j.ijbioma c. 2020.08. 195	3611 to 3620, and 164	1	Siva, R., Valarmathi, T.N., Palanikumar, K.
7	Investigation of the effect of process parameters on surface roughness in drilling of particleboard composite panels using adaptive neuro fuzzy inference system	Materials and Manufacturing Processes	10.1080 /104269 14. 2020.17 11931	469 to 477, and 35	4	Valarmathi, T.N., Palanikumar, K., Sekar, S., Latha, B.
8	Study on a Novel natural cellulosic fiber from Kigelia africana fruit: Characterization and analysis	Carbohydrate Polymers	10.1016 /j.carbpol. 2020.11 6494	1164 to 1194, and 244	15	Siva, R., Valarmathi, T.N., Palanikumar, K., Samrot, A.V.
9	Technologies in additive manufacturing for fiber reinforced composite materials: a review	Current Opinion in Chemical Engineering	10.1016 /j.coche. 2020.01. 001	51 to 59, and 28	1	Palanikumar, K., Mudhukrishnan, M., P., Soorya Prabha
10	Sustainable drilling performance optimization for Nano SiC reinforced Al matrix composites	Materials and Manufacturing Processes	10.1080 /104269 14. 2020.17 72484	1304 to 1312, and 35	12	Kalyan Chakaravathy, V. V., Rajmohan, T., Vijayan, D., Palanikumar, K., Latha, B.

Dr. Arunarasi Jayaraman

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Experimental investigation on inherent properties of Hydroxybutanedioic Acid treated banana/sisal fibers based hybrid composite	Materials Today: Proceedings	https://doi. org/10. 1016/j. matpr. 2020.02. 708	2842 to 2845, and 33		D. Logendran, D. Muruganandam, J. Arunarasi, P. Karthick, A. Abraham Eben Andrews, Raghuram Pradhan

Dr. Sivakumar Ponnusamy

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Analysis of Automatic Generation Control for Three Area Renewable Energy Interconnected Power System	Journal of Computational and Theoretical Nanoscience	https://doi. org/10. 1166/jctn. 2020.84 76	1976 to 1984, and 17		Soorya Priya, G. ; Sivakumar, P.

Dr. Kallam Suresh

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Improved salient object detection using hybrid Convolution Recurrent Neural Network	Expert Systems with Applications	https://doi. org/10. 1016/j. eswa. 2020.11 4064	114 to 130, and 166		NalliannaV Kousik, Yuvaraj Natarajan, R Arshath Raja, Suresh Kallam, Rizwan Patan, Amir H Gandomi

Dr. L Mary Gladence

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Recommender system for home automation using IoT and artificial intelligence	Journal of Ambient Intelligence and Humanized Computing	https://doi. org/10. 1007/s1 2652- 020- 01968-2	78 to 85, and 6		L. Mary Gladence, V. Maria Anu, R. Rathna & E. Brumancia
2	Hybrid data fusion model for restricted information using Dempster-Shafer and adaptive neuro-fuzzy inference (DSANFI) system	Soft Computing, Springer	https://doi. org/10. 1007/s0 0500- 018- 03734-1	2637 to 2644, and 23		Brumancia, E., Justin Samuel, S., Gladence, L.M.

Dr. Suresh Annamalai

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	EECCRN: Energy Enhancement with CSS Approach Using Q-Learning and Coalition Game Modelling in CRN	Information Technology and Control	http://dx. doi. org/10. 5755/jo 1. itc. 50.1.274 94	135 to 145, and 50		Vimal Shanmuganathan, Annamalai Suresh,Seifedine Kadry,Y Harold Robinson,Lim Sangsoon

Dr. B Sreedevi

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques	Journal of Medical Imaging and Health Informatics	https://doi. org/10. 1166/jm ihi. 2016.19 71	2043 to -2047, and 6		Dr.B.Sreedevi,Dr. SP Rajagopalan

Dr. Udendhran R

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Towards secure deep learning architecture for smart farming-based applications	Complex and Intelligent Systems	https://doi. org/10. 1007/s4 0747- 020- 00225-5	659 to 666, and 7		Udendhran, R., Balamurugan, M
2	Enhancing image processing architecture using deep learning for embedded vision systems	Microprocessors and Microsystems, Elsevier	https://doi. org/10. 1016/j. micpro. 2020.10 3094	34 to 44, and 76		R.Udendhran, M. Balamurugan, A. Suresh, R. Varatharajan
3	Hybridized neural network and decision tree based classifier for prognostic decision making in breast cancers	Soft Computing, Springer	https://doi. org/10. 1007/s0 0500- 019- 04066-4	7947 to 7953, and 24		Suresh, A., Udendhran, R. & Balamurugan, M
4	A Novel Internet of Things Framework Integrated with Real Time Monitoring for Intelligent Healthcare Environment	Journal of Medical Systems, Springer	https://doi. org/10. 1007/s1 0916- 019- 1302-9	165 to 173, and 43		Suresh, A., Udendhran, R., Balamurugan, M

Patent by Investigator(s)

Prof. Palanikumar K

SNo.	Title	Patent Status	Date of	Patent Number	Date of Patent	Inventor Details
1	A cattaail fiber activated charcoal cartridge for the filtration and removal of the pah from the aque	Granted	28 Mar, 2017	201741010893	29 Jul, 2020	K Palanikumar R. M.Asha
2	A device and method for assisting in self-learning of the braille language to visually impaired end users	Filed	16 Oct, 2020	202041045084		Vijayaraja L Dhanasekar R. K. Palanikumar
3	An automatized load carrying electric vehicle with custom path navigation	Filed	14 Oct, 2020	202041044652		G. Shanmugasundar K. Palanikumar
4	AN INTEGRATED FARMING EQUIPMENT WITH IOT CONTROL&NBSP; MODULE AND PHOTOVOLTAIC ARRANGEMENT	Filed	14 Jun, 2021	202141026318		K. Palanikumar G. Shanmugasundar V. Brindhadevi
5	AUTO NAVIGATION DRONE SYSTEM	Filed	27 Jul, 2020	202041051703		A.Ponnmalar K. Palanikumar
6	Protective Head wear for Autism Patients	Granted	05 Jan, 2021	33/200-001	03 Feb, 2021	K. Palanikumar
7	Protective Head wear for Autism Patients with LED Light	Granted	31 Dec, 2020	337058-001	21 Jan, 2021	K. Palanikumar
8	VLC TRANSCIEVERS FOR SMART MUSEUMS	Filed	30 Jun, 2021	202141029314		Dr. K. Palanikumar Dr. B. Sreedevi
9	Wireless security camera for stalker and threat identification	Granted	28 Mar, 2019	201941012141	09 Apr, 2021	Dr. K. Palanikumar Dr. V.Brindha Devi P. Sharmila
10	Woven Aloevera/Sisal/Kena fFibre Epoxy composites for Corrugated Roof sheet	Granted	01 Jun, 2016	201641012809	30 Jun, 2021	A. Shadrach jeyasekaran K Palani Kumar

Dr. L Mary Gladence

SNo.	Title	Patent Status	Date of	Patent Number	Date of Patent	Inventor Details
1	IOT enabled smart wearable handy sanitizer dispenser	Filed	06 Dec, 2028	202041028753 A		

Dr. B Sreedevi

SNo.	Title	Patent Status	Date of	Patent Number	Date of Patent	Inventor Details
1	Mind Controlled Gaming for Differently Abled Indian Provisional	Filed	16 May, 2018	201841016343		
2	Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems	Filed	07 Jul, 2020	202041031869		

Research Collaboration of Investigator(s)

SNo.	Investigator Name	Expertise Related to Proposed Work (In what way expertise is complementary towards success of project.)	Role & Responsibility
1	Prof. Palanikumar K Professor and Principal (Mechanical Engineering) Sri Sairam Institute of Technology Sairam college rd, sai leo nagar, west tambaram, chennai, tamil nadu , Chennai, Tamil nadu-600044	Devised new fuzzy systems based for healthcare	Staff Recruitment Literature Survey Establishing Computing Facility
2	Dr. B Sreedevi Professor (Computer Science and Engineering) Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu - 600044	PhD. research focused on medical image processing	Automation of information application (AlzeCare) by applying deep learning techniques Validation, Debugging & Report generation
3	Dr. Kallam Suresh Associate Professor (Computer Science and Engineering) Sree Vidyankethan Engineering Sree Sainath Nagar, A, Rangampet, Chandragiri Manfal, Near Tirupati - 517127	Developed novel algorithms for medical datasets	Cognitive & Psychological parameter analysis related to Alzheimer disease
4	Dr. L Mary Gladence Associate Professor (Information Technology) Sathyabama Institute of Science and Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600119	Improvise and deployed software applications for healthcare sector	Development of semantic annotator and intelligent software
5	Dr. Arunarasi Jayaraman Assistant Professor (Electronics and Communication Engineering) Sri Sairam Engineering College Sairam Campus, Sai Leo Nagar, West Tambaram, Chennai - 600044	Proposed Novel Methodologies for HPC based electrical components	Development of pseudo-alignment application using HPC and Library File system
6	Dr. Suresh Annamalai Associate Professor (Computer Science and Technology) SRM Institute of Science and SRM Nagar, Kattankulathur - 603203	Developed and published algorithms for medical oriented applications	Incorporating further advancements into AlzeCare system based on the real-time information gained from testing AlzeCare application
7	Dr. Udendhran R assistant professor (Department of Computer Science and Engineering) Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu - 600044	Developed Deep Neural Networks for Precision Medicine	Development of Deep Learning Architecture for complex biomedical datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer.
8	Dr. Sivakumar Ponnusamy Associate Professor (Computer Science and Engineering) SRM University NCR Campus ,Modinagar Sikri Kalan - 201204	Devised state of the art methodologies for healthcare analysis	Observational Data Collection of Genome

Other Projects by Investigator(s)

Prof. Palanikumar K

SNo.	Title	Amount (INR)	Funding Agency	Status
1	Technology based training program Role : PI	4,80,000	DST-NSTEDB	Completed 20 Jan, 2021 - 28 Jul, 2021
2	Innovation and Entrepreneurship development center Role : PI	45,00,000	DST-NSTEDB	Completed 11 Dec, 2015 - 15 Apr, 2021
3	Computational Memory Indexed Neural Decision (MIND) Networks Using Block Chain for Materials and Manufacturing Engineering Role : PI	20,00,000	SERB	Submitted 18 March, 2021

Budget Details

Institution wise Budget Breakup :

Budget Head	Manpower	Consumables	Travel	Equipment	Contingencies	Overhead	Total
Sri Sairam Institute of Technology	35,75,000	2,25,000	50,000	1,55,959	1,25,000	8,47,860	49,78,819
Total	35,75,000	2,25,000	50,000	1,55,959	1,25,000	8,47,860	49,78,819

Institute Name : *Sri Sairam Institute of Technology*

Year Wise Budget Summary (Amount in INR) :

Budget Head	Year-1	Year-2	Year-3	Year-4	Year-5	Total
Manpower	9,75,000	6,50,000	6,50,000	6,50,000	6,50,000	35,75,000
Consumables	45,000	45,000	45,000	45,000	45,000	2,25,000
Travel	10,000	10,000	10,000	10,000	10,000	50,000
Equipments	1,55,959	0	0	0	0	1,55,959
Contingencies	25,000	25,000	25,000	25,000	25,000	1,25,000
Overhead	2,82,620	2,82,620	2,82,620	0	0	8,47,860
Grand Total	14,93,579	10,12,620	10,12,620	7,30,000	7,30,000	49,78,819

Manpower Budget Detail(Amount in INR) :

Designation	Year-1	Year-2	Year-3	Year-4	Year-5	Total
Research Associate-I <i>This project requires well-trained, research associate who has completed Ph.D. and a technical assistant with Master Degree as qualification since this project deals with high priority area i.e. precision medicine and HPC to develop and complete this project with utmost care and on-time delivery of the project.</i>	6,75,000	4,50,000	4,50,000	4,50,000	4,50,000	24,75,000
Technician <i>To operate laboratory tools and equipment, , manage inventories and stock supplies, record observations for further examination.</i>	3,00,000	2,00,000	2,00,000	2,00,000	2,00,000	11,00,000

Consumable Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>Installation of High Performance Computing Software and libraries</i>	45,000	45,000	45,000	45,000	45,000	2,25,000

Travel Budget Detail (Amount in INR) :

Justification (Inland Travel)	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>inland travel is necessary for the PI, Co-PI and the project assistant to attend workshops, present in conferences and develop open database therefore it could be useful for research community in India</i>	10,000	10,000	10,000	10,000	10,000	50,000

Equipment Budget Detail (Amount in INR) :

Generic Name ,Model No. , (Make)/ Justification	Quantity	Spare time	Estimated Cost
HP Z440 Workstation E5-1607v4 8GB K620 Win 10 Pro 64bit 1 EW88PA SSD Quadro M2000 Z440 E5-1607v4 (1) <i>Leveraging GPUs to accelerate this proposal's objective can vastly decrease runtime and costs compared to CPU-based approaches. The mentioned equipment is used for performing professional computer-aided design (CAD), computer-generated imagery (CGI), scientific calculations for genome sequencing and deep learning architectures.</i>	1	30 %	1,55,959

Contingency Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>contingency which are unexpected costs away from the budget is much needed for smooth completion of the project. here a contingency of 5 % is calculated per year of total cost and is equated for five years</i>	25,000	25,000	25,000	25,000	25,000	1,25,000

Overhead Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>since the institution is providing space, electricity and other facility to do the project, the institutional overheads are to be considered at 15 % of annual cost</i>	2,82,620	2,82,620	2,82,620	0	0	8,47,860

Reviewers Details

Suggested Reviewers (Max 3) :

SNo.	Suggested Reviewers
1	Dr Bhimsingh bsingh@ee.iitd.ac.in +01126591071 IIT Delhi
2	Dr Subhransu Sekhar Dash subhransudash_fee@gcekJr.ac.in + 9884356933 GOVERNMENT COLLEGE OF ENGINEERING, KEONJHAR
3	Dr PANIGRAHI bkpanigrahi@ee.iitd.ac.in +01126591078 IIT DELHI

BIO-DATA

1. Name and full correspondence address

Dr.K.PALANIKUMAR

Professor & Principal

Sri Sai Ram Institute of Technology

West tambaram, Chennai- 600044

2. Email(s) and contact number(s)

E-mail : palanikumar@sairamit.edu.in

palanikumar_k@yahoo.com

Mobile: 91-9677053338

Ph : 91-44-22512444, 2251 2111 (O)

3. Institution

: **Sri Sai Ram Institute of Technology, Sai
Leo Nagar, Chennai – 600 044.**

4. Date of Birth

: 10-05-1968

5. Gender(M/F/T)

: Male

6. Category Gen/SC/ST/OBC

: OBC

7. Whether differently abled(Yes/No)

: NO

8. Academic Qualification (Undergraduate Onwards)

Sl no	Degree	Year	Subject	University/Institution	% of marks
1.	Post Ph.D work	2008	Machining of Composites	University of Aveiro, Portugal.	NA
2.	Ph.D	2004	Mechanical Engineering - Composites	Anna University	NA
3.	M.E	1996	Production Engineering	Annamalai University	84 University First Rank
4.	A.M.I.E	1994	Mechanical Engineering	Institution of Engineers (India).	58

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title: “Studies on machining characteristics of glass fiber reinforced polymer composites”

Guide: Dr. Karunamoorthy, L , College of Engineering Guindy , Anna University , Chennai

Year of Award: 2004

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Professor and Principal	Sri Sai Ram Institute of Technology	01-09-2008	Till Date	66,986 + DA + HRA 1,39,220/-
2	Professor and Principal	S.R.R. Engineering College	20-10-2004	13-06-2008	75, 000
3	Lecturer, Asst. Professor and Professor	Sathyabama University	20-06-1992	01-06-2004	40, 000

11. Professional Recognition/Award/Prize/Certificate, Fellowship received.

S.No	Name of Award	Awarding Agency	Year
1	World Top 2 % Scientist in Materials Engineering award	Stanford university	2021
2	Chairman	The Institution of Engineers (India)- Kanchepuram Local Centre	2020
3	National Executive Member	Indian Society for Technical Education	2020
4	Executive Committee Member	Computer Society of India - Kanchepuram Local Centre	2020
5	Teaching awards in best research work in Mechanical Engineering	Education Matters	2019
6	Best Faculty of the Year Published Research	Computer Society of India (CSI)	2019
7	President	MOE's Institution Innovation Council (IIC)	2018
8	Coordinator	DST Sponsored IEDC	2015
9	Fellow Member	The Institution of Engineers	2012
10	Chartered Engineer (India),	The Institution of Engineers	2012
11	Fellow Member	Indian Institution of Production Engineers (IIPE)	2004
12	Best Research work in Engineering and Technology	Indian Society for Technical Education	2019
13	Best Principal Award	The Society for Educational and Entrepreneurship Development (SEED)	2017
14	Publons peer review Awards - Top 1% of peer reviewers in Engineering.	Publons from Web of Science	2017

15	Certified Sentinel of Science Award Recipient - As one of the Top 10 percent of Researchers Contributing to the peer review of the field of Engineering	Publons from Web of Science	2016
16	Outstanding Reviewer Award	Elsevier Journal - Measurement In cooperation with International Measurement Confederation	2016
17	Maharashtra State National Award for Best Research work in Engineering and Technology	Indian Society for Technical Education	2014
18	Special paper presentation by National Board of Accreditation	National Board of Accreditation	2013
19	Best Academic Researcher Award	ASDF Global Awards, Techno Forum Group, Pondicherry, India.	2013
20	Best Researcher Award	Association of Scientist, Developer and Faculties	2012
21	Received Best paper award	YMCA University, Faridabad	2012
22	Best Faculty Award	Nehru Group of Institutions	2012
23	Best Teacher award	Sathyabama University	2008
24	Best Teacher award	Sathyabama University	2004
25	Best Technical paper in R&D	Journal of Non-Destructive Testing	2003
26	Best Teacher award	Sathyabama University	2002
27	Best Teacher award	Sathyabama Engineering college	1999
28	University First Rank in M.E (Production Engineering)	Annamalai University	1996
29	Certificate of Excellence in Annamalai University Golden Jubilee Exhibition	Annamalai University	1995

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No	Authors	Title	Name of Journal	Volume	Page	Year
134	Palani Kumar, K., Shadrach Jeya Sekaran, A., Dinesh, L., Hari Prasad, D., Deepak kumar, K.	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	Progress in Rubber, Plastics and Recycling Technology	37(1)	32-48	2021
133	Palani Kumar, K., Keshavan, D., Natarajan, E., Deepak, M., Freitas, L.I.	Evaluation of mechanical properties of coconut flower cover fibre-reinforced polymer composites for industrial applications	Progress in Rubber, Plastics and Recycling Technology,	37(1)	3-18	2021
132	Velavan, K., Palanikumar, K., Natarajan, E., Lim, W.H.	Implications on the influence of mica on the mechanical properties of cast hybrid (Al+10%B4C+Mica) metal matrix composite	International Journal of Materials Research and Technology	10	99-109	2021
131	Chakravarthy, V.V.K., Rajmohan, T., Vijayan, D., Palanikumar, K.	Sustainable Drilling of Nano SiC Reinforced Al Matrix Composites Using MQL and Cryogenic Cooling for Achieving the Better Surface Integrity	Silicon,	In Press		2021
130	Siva, R., Valarmathi, T.N., Palanikumar, K.	Effects of magnesium carbonate concentration and lignin presence on properties of natural cellulosic Cissus quadrangularis fiber composites	International Journal of Biological Macromolecules	164	3611-3620	2020
129	Siva, R., Valarmathi, T.N., Palanikumar, K., Samrot, A.V.	Study on a Novel natural cellulosic fiber from Kigelia africana fruit: Characterization and analysis	Carbohydrate Polymers	244	116494	2020
128	Kalyan Chakaravarthy, V.V., Rajmohan, T., Vijayan, D., Palanikumar, K., Latha, B.	Sustainable drilling performance optimization for Nano SiC reinforced Al matrix composites	Materials and Manufacturing Processes,	35(12)	1304-1312	2020
127	Palanikumar, K., Mudhukrishnan, M., P., Soorya Prabha.	Technologies in additive manufacturing for fiber reinforced composite materials: a review	Current Opinion in Chemical Engineering	28	51-59	2020

126	Natarajan, E., Razif, M.R.M., Faudzi, A.A.M., Palanikumar , K.	Evaluation of a suitable material for soft actuator through experiments and FE simulations	International Journal of Manufacturing, Materials, and Mechanical Engineering	10(2)	64-76	2020
125	Valarmathi, T.N., Palanikumar , K., Sekar, S., Latha, B.	Investigation of the effect of process parameters on surface roughness in drilling of particleboard composite panels using adaptive neuro fuzzy inference system	Materials and Manufacturing Processes	35(4)	469-477	2020
124	Eaben Rajkumar, S., Palanikumar , K., Pitchandi, K., Latha, B.	Subsurface integrity studies on the drilling of Al/B4C/mica hybrid metal matrix composites	Materials and Manufacturing Processes	35(1)	52-60	2020
123	Mudhukrishnan, M., Hariharan, P., Palanikumar , K.	Measurement and analysis of thrust force and delamination in drilling glass fiber reinforced polypropylene composites using different drills	Measurement: Journal of the International Measurement Confederation	14	910-926	2020
122	Velavan, K., Palanikumar, K.	Analysis on sliding wear behavior of Al + B4 C + mica hybrid metal matrix composites	Materials Express	10(7)	986-997	2020
121	Mudhukrishnan, M., Hariharan, P., Palanikumar , K., Latha, B.	Optimization and sensitivity analysis of drilling parameters for sustainable machining of carbon fiber–reinforced polypropylene composites	Journal of Thermoplastic Composite Materials	32(11)	1485-1508	2019
120	Palanikumar , K., Eaben Rajkumar, S., Pitchandi, K.	Influence of Primary B4C Particles and Secondary Mica Particles on the Wear Performance of Al6061/B4C/Mica Hybrid Composites	Journal of Bio- and Tribo-Corrosion	5(3)	77-97	2019
119	Radhakrishnan, E., Kumaraswamidhas, L.A., Palanikumar, K., Muruganandam, D.	Strength and hardness studies of C44300 tube to AA7075-T651 tube plate threaded and unthreaded dissimilar joints fabricated by friction welding process	Journal of Materials Research and Technology	8(4)	3424-3433	2019
118	Rajkumar, S.E., Palanikumar, K., Kasiviswanathan,	Influence of mica particles as secondary reinforcement on the mechanical and wear	Materials Express	9(4)	299-309	2019

	P.	properties of al/b4c/mica composites				
117	Palanikumar, K., Subbiah, V.	Bio Caryota Fiber Reinforced Polymer Composites: Mechanical Properties and Vibration Behavior Analysis	Journal of Bionic Engineering	16(3)	480-491	2019
116	Padmavathi, K.R., Ramakrishnan, R., Palanikumar, K.	Wear properties of sicp and tio2p reinforced aluminium metal matrix composites	Indian Journal of Engineering and Materials Sciences	26(1)	51-58	2019
115	Das, S., Chandrasekaran, M., Samanta, S., Kayaroganam, P., Paulo Davim, J.	Fabrication and tribological study of AA6061 hybrid metal matrix composites reinforced with SiC/B4C nanoparticles	Industrial Lubrication and Tribology	71(1)	83-93	2019
114	NP Kumar, N Mani, K Palanikumar	Influence of Rutile Nano TiO2 on Thrust Force, Mechanical, Wear and Microstructural Behavior of Al-SiC Composites	Nanoscience and Nanotechnology Letters	11	1502-1512	2019
113	Ramya Devi, G., Palanikumar, K.	Analysis on drilling of woven glass fibre reinforced aluminium sandwich laminates	Journal of Materials Research and Technology	8(1)	1024-1035	2019
112	Raja, V.K.B., Palanikumar, K., Sai, A.S., Goud, B.V.	Pitting corrosion studies on Ti6Al4V alloy weldments in marine environment	Indian Journal of Geo-Marine Sciences	48(8)	1179-1182	2019
111	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Experimental investigation and analysis on the wear properties of glass fiber and CNT reinforced hybrid polymer composites	Science and Engineering of Composite materials	25(5)	963-974	2018
110	Anand, G., Alagumurthi, N., Palanikumar, K., Venkateshwaran, N., Elansezhain, R.	Influence of drilling process parameters on hybrid vinyl ester composite	Materials and Manufacturing Processes	35(12)	1299-1305	2018
109	Devi, G.R., Palanikumar, K.	Mechanical Properties Evaluation of Unidirectional Glass Fibre Reinforced Aluminium Sandwich Laminate	Silicon	10(5)	2329-2340	2018

108	Natrayan, L., Senthil Kumar, M., Palanikumar, K.	Optimization of squeeze cast process parameters on mechanical properties of Al ₂ O ₃ /SiC reinforced hybrid metal matrix composites using taguchi technique	Materials Research Express	5(6)	66516	2018
107	R. Anbusagar, N.R., Palanikumar, K.	Nanoclay Addition and Core Materials Effect on Impact and Damage Tolerance Capability of Glass Fiber Skin Sandwich Laminates	Silicon	10(3)	769-779	2018
106	Selvamani, S.T., Vigneshwar, M., Palanikumar, K., Jayaperumal, D.	The corrosion behavior of fully deformed zone of friction welded low chromium plain carbon steel joints in optimized condition	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(5)	246	2018
105	Anand, G., Alagumurthi, N., Elansezhian, R., Palanikumar, K., Venkateshwaran, N.	Investigation of drilling parameters on hybrid polymer composites using grey relational analysis, regression, fuzzy logic, and ANN models	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(4)	214-234	2018
104	Umanath, K., Palanikumar, K.	Evaluation of mechanical performance of friction welded AISI304L grade stainless steel joints	International Journal of Heavy Vehicle Systems	25(3-4)	419-429	2018
103	Kathirvel, M., Kumar, K.P., Diaz, P.M.	Experimental analysis on surface roughness in turning hybrid metal matrix (6061Al+SiC+Gr) composites	Mechanics and Mechanical Engineering	22(1)	341-356	2018
102	Selvamani, S.T., Premkumar, S., Vigneshwar, M., Hariprasath, P., Palanikumar, K.	Influence of carbon nano tubes on mechanical, metallurgical and tribological behavior of magnesium nanocomposites	Journal of Magnesium and Alloys	5(3)	326-335	2017
101	Mudhukrishnan, M., Hariharan, P., Palanikumar, K., Latha, B.	Tool materials influence on surface roughness and oversize in machining glass fiber reinforced polypropylene (GFR-PP) composites	Materials and Manufacturing Processes	32(9)	988-997	2017
100	Rajmohan, T., Sathishkumar, S.D., Palanikumar, K.	Effect of a nanoparticle-filled lubricant in turning of AISI 316L stainless steel (SS)	Particulate Science and Technology	35(2)	201-208	2017

99	Palani Kumar, K., Shadrach Jeya Sekaran, A., Pitchandi, K.	Investigation on mechanical properties of woven alovera/sisal/kenaf fibres and their hybrid composites	Bulletin of Materials Science	40(1)	117-128	2017
98	Srinivasan, T., Palanikumar, K., Rajagopal, K., Latha, B.	Optimization of delamination factor in drilling GFR–polypropylene composites	Materials and Manufacturing Processes	32(2)	226-233	2017
97	Ramesh, M., Palanikumar, K., Reddy, K.H.	Plant fibre based bio-composites: Sustainable and renewable green materials	Renewable and Sustainable Energy Reviews	79	558-584	2017
96	Ramesh, M., Palanikumar, K., Hemachandra Reddy, K.	Evaluation of Mechanical and Interfacial Properties of Sisal/Jute/Glass Hybrid Fiber Reinforced Polymer Composites	Transactions of the Indian Institute of Metals	69(10)	1851-1859	2016
95	Jeyasekaran, A.S., Kumar, K.P., Rajarajan, S.	Numerical and experimental analysis on tensile properties of banana and glass fibers reinforced epoxy composites	Sadhana - Academy Proceedings in Engineering Sciences	41(11)	1357-1367	2016
94	Palanikumar, K., Ramesh, M., Hemachandra Reddy, K.	Experimental investigation on the mechanical properties of green hybrid sisal and glass fiber reinforced polymer composites	Journal of Natural Fibers	13(3)	321-331	2016
93	Dhandapani, S., Rajmohan, T., Palanikumar, K., Charan, M.	Synthesis and characterization of dual particle (MWCT+B4C) reinforced sintered hybrid aluminum matrix composites	Particulate Science and Technology	34(3)	255-262	2016
92	Palanikumar, K., Srinivasan, T., Rajagopal, K., Latha, B.	Thrust Force Analysis in Drilling Glass Fiber Reinforced/Polypropylene (GFR/PP) Composites	Materials and Manufacturing Processes	31(5)	581-586	2016
91	Ramesh, M., Palanikumar, K., Reddy, K.H.	Influence of fiber orientation and fiber content on properties of sisal-jute-glass fiber-reinforced polyester composites	Journal of Applied Polymer Science	133(6)	42968	2016
90	Palanikumar, K., Valarmathi, T.N.	Experimental Investigation and Analysis on Thrust Force in Drilling of Wood Composite Medium Density Fiberboard Panels	Experimental Techniques	40(1)	391-400	2016

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87	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Comparison of the Wear Properties of Polymer Composites Having CNT With and Without Glass Fiber Reinforcement	Transactions of the Indian Institute of Metals	68	91-97	2015
86	Anbusagar, N.R.R., Palanikumar, K., Giridharan, P.K.	Study of sandwich effect on nanoclay modified polyester resin GFR face sheet laminates	Composite Structures	125	336-342	2015
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54	Prakash, S., Palanikumar, K., Krishnamoorthy, A.	Thrust force evaluation in drilling medium density fibre (MDF) panels using design of experiments	International Journal of Manufacturing Technology and Management	25(1-3)	95-112	2012
53	Rajmohan, T., Palanikumar, K., Kathirvel, M.	Optimization of machining parameters in drilling hybrid aluminium metal matrix composites	Transactions of Nonferrous Metals Society of China (English Edition)	22(6)	1286-1297	2012
52	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Measurement and analysis of surface roughness in turning of aerospace titanium alloy (gr5)	Measurement: Journal of the International Measurement Confederation	45(5)	1266-1276	2012
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42	Prakash, S., Palanikumar, K.	Modeling for prediction of surface roughness in drilling MDF panels using response surface methodology	Journal of Composite Materials	45(16)	1639-1646	2011
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35	Palanikumar, K.	Modeling and analysis of delamination factor and surface roughness in drilling GFRP composites	Materials and Manufacturing Processes	25(10)	1059-1067	2010
34	Hussain, S.A., Pandurangadu, V., Palanikumar, K.	Surface roughness analysis in machining of GFRP composites by carbide tool (K20)	European Journal of Scientific Research	41(1)	84-98	2010
33	Palanikumar, K., Prakash, S., Manoharan, N.	Experimental investigation and analysis on delamination in drilling of wood composite medium density fiber boards	Materials and Manufacturing Processes	24(12)	1341-1348	2009
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19	Palanikumar, K., Rubio, J.C., Abrao, A., Esteves, A., Davim, J.P.	Statistical analysis of delamination in drilling Glass Fiber-Reinforced Plastics (GFRP)	Journal of Reinforced Plastics and Composites	27(15)	165-1623	2008
18	Palanikumar, K., Karthikeyan, R.	Modeling of machining parameters to predict surface roughness in machining Al/SiC particulate composites by carbide insert	Multidiscipline Modeling in Materials and Structures	4(4)	345-358	2008
17	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Sivaraj, P.	Influence of process parameters on electric discharge machining of WC/30%Co composites	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	222(7)	807-815	2008
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3	Palanikumar, K.	Cutting parameters optimization for surface roughness in machining of GFRP composites using Taguchi's method	Journal of Reinforced Plastics and Composites	25(16)	1739-1751	2006
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134	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Parametric optimization to minimise the surface roughness on the machining of GFRP composites	Journal of Materials Science and Technology	22(1)	66-72	2006
133	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R., Latha, B.	Optimization of machining parameters in turning GFRP composites using a carbide (K10) tool based on the taguchi method with fuzzy logics	Metals and Materials International	12(6)	483-491	2006
132	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Optimizing the machining parameters for minimum surface roughness in turning of GFRP composites using the design of experiments	Journal of Materials Science and Technology	20(4)	373-378	2004

13. Detail of Patents.

S. No.	Patent Title	Name of The Applicants	Patent No	Award Date	Agency/ Country	Status
20	Protective Head Wear for Autism Patients with LED light	Dr.K.Palanikumar	337058-001	31-12-2020	INDIA	Granted
19	Protective Head Wear for Autism Patients	Dr.K.Palanikumar	337200-001	05-01-2021	INDIA	Granted
18	A device and method for assisting in self-learning of the braille language to visually impaired end users	1 . Vijayaraja L 2 . Dhanasekar r 3 . K. Palanikumar 4 . Dhinakaran m s 5 . Dinesh kumar r 6 . Joahnas mathew saji 7 . Vijay s	202041045084	16-10-2020	INDIA	Published

17	An automatized load carrying electric vehicle with custom path navigation	1 . G. Shanmugasundar	202041044652	14-10-2020	INDIA	Published
		2 . K. Palanikumar				
		3 . Anooj. M				
		4 . Maniponraja.H				
		5 . Jayant.M				
		6 . Yokeshkrishna.P				
16	E-glove	1 . G.saravanan	202041042710	01-10-2020	INDIA	Published
		2 . K.Palanikumar				
		3 . Hrini Karthik				
		4 . M.Unashalini				
		5 . V.Janani				
		6 . B.Uivashini				
15	Wireless security camera for stalker and threat identification	1 . Dr. K.Palanikumar	201941012141	28-03-2019	INDIA	Published & FER Replied
		2 . Dr. V.Brindha Devi				
		3 . P.Sharmila				
		4 . Neeraja.S				
		5 . Pavitra.P				
		6 . Queency Leena Sawyer				
14	An authentication slip procurement system for a public transport vehicle	1 . Dr. K. Palanikumar	201941008408	05-03-2019	INDIA	Published & FER Replied
		2 . Sharmila p				
		3 . Skanda gurunathan				
		4 . S. Vivekanandan				
		5 . Shankar t				
		6 . Aravind g				
13	A sign language translator	1 . K.Palanikumar	201841026260	13-07-2018	INDIA	Published

	glove	2 . K.C.Suresh				& FER Replied
		3 . B. Krishna moorthy				
12	An exoarm frame structure utilizing electrical actuators for arm rehabilitation and effortless load	1 . K. Palanikumar	201841025468	09-07-2018	INDIA	Published & FER Received
		2 . G. Shanmugasundar				
		3 . Tanush.h.bhaskar				
		4 . N.kishore				
		5 . S.a.vetri ganesh				
		6 . Anissh khaan.i				
11	Mind controlled gaming for the differently abled	1 . K. Palanikumar	201841016343	01-05-2018	INDIA	Published
		2 . B. Sreedevi				
		3 . P. Navaneeth				
		4 . H. Akshay				
		5 . M. Nirmalraj				
		6 . S. Athreya				
10	Exo Skeleton Arm using Block and Tackle Mechanism	1 . Dr. K. Palanikumar	201741042997	30-11-2017	INDIA	Published & FER Replied
		2 . G.shanmugasundar				
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		5 . Anissh khaan.i				
		6 . S.a.vetri ganesh				
9	An automatic system and method for the detecting and arresting of the LPG spillage from the gas stov	1 . K. Palanikumar	201741028002	07-08-2017	INDIA	Published & FER Replied
		2 . T. Srinivasan				
		3 . E. Thamizhmaran				
		4 . S. Rahavendhor				
		5 . B. Abhijeeth				
		6 . S. Solomon jaisingh				
8	A system and a method for toggling the operating state of electrical	1 . K.Palanikumar	201741027560	03-08-2017	INDIA	Published & FER Replied
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	appliances through user gesture	3 . V.kayalvizhi 4 . S.mythili 5 . S.malathy 6 . S.rajarajan				
7	A fibre reinforced hybrid polymer composite protective mechanism for the head	1 . Dr.K.Palanikumar 2 . K.R.Bharat	201741016072	08-05-2017	INDIA	Published & FER Replied
6	Phoneme encryptor	1 . K.Palanikumar, 2 . J. Ilakkiya, 3 . A. Subathra, 4 . S. Ragavi,	201741012896	11-04-2017	INDIA	Published & FER Replied
5	Egensor	1 . K.Palanikumar 2 . Arvindh.r 3 . Shubham shekhar 4 . Venkatesan.m 5 . Vignesh.a 6 . L.vijayaraja	201741011384	30-03-2017	INDIA	Published & FER Replied
4	A cattail fiber activated charcoal cartridge for the filtration and removal of the pah from the aque	1 . K.Palanikumar 2 . T. Gowshik 3 . S. Balaji 4 . R.satish 5 . Grandhe Venkata Karthik 6 . S.Aiswarya Devi 7 . R.M.Asha	201741010893	28-03-2017	INDIA	Granted
3	A durable multi-layered protective cover enclosing the head and neck of the firefighters	1 . K.Palanikumar 2 . K.R.Bharat	201641044018	23-12-2016	INDIA	Published & FER Replied
2	Woven Aloe vera/Sisal/Kenaf Fibre Epoxy composites	1 . A. Shadrach jeya sekaran 2 . K Palani kumar	201641012809	01.06.2016	INDIA	Yet to be Granted

	for Corrugated Roof sheet					
1	A multi-layered natural fiber reinforced composite sheet laminate	1. K. Palani kumar 2 . S. Dilip kumar 3 . C. Amarnath 4 . C. Rakesh	201641036636	26-10-2016	INDIA	Published & FER Replied

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
17	Mechanical Properties of Flax-Cotton Fiber Reinforced Polymer Composites	A Sailesh , K Palanikumar	Green Composites Published by Springer, 393-411	2020
16	Influence of fibre arrangement on mechanical properties of glass fibre-reinforced aluminium sandwich laminates Glass Fibre-Reinforced Polymer Composites: Materials	K Palanikumar, GR Devi	Manufacturing and Engineering Walter de Gruyter GmbH & Co KG, 12, 17	2020
15	Preparation and properties of nanopolymer advanced composites: A review	NRR Anbusagar, K. PalaniKumar, A Ponshanmugakumar	Polymer-based Nanocomposites for Energy and Environmental Applications, 27-73	2018
14	Glass Fiber Reinforced Composite materials: Book Chapter in “ Composites in Helicopter industry”	K.Palanikumar	Published by Wood head Publications, UK –In Press.	2016
13	Development and Characterization of Nano Clay Reinforced Three-Phase Sandwich Composite Laminates.	N. R. R. Anbu Sagar, K.Palanikumar	Nanoclay Reinforced Polymer Composites 01/2016: pages 357-391; ISBN: 978-981-10-1952-4, DOI:10.1007/978-981-10-1953-1_16	2016
12	Machinability of Fibre-Reinforced Plastics. Machinability of Fibre-Reinforced Plastics	K. Palanikumar, T. Srinivasan, K. Rajagopal, J.P. Davim	chapter Drilling of high impact Polystrene Materials,	2015

11	Application of response surface method and desirability function for the optimization of machining parameters of hybrid metal matrix (Al/SiC/Al ₂ O ₃) composites. Metal Matrix Composites	Kayaroganam Palanikumar	Walter de Gruyter GmbH & Co KG, ISBN: 9783110315448	2014
10	Application of artificial neural network for the prediction of surface roughness in drilling GFRP composites	K.Palanikumar, B.Latha, V.S.Senthilkumar J.PauloDavim	Materials Science Forum, Trans Tech publications, DOI: 10.4028/www.scientific.net/MSF.766.21.	2013
9	Electrical discharge machining: Study on machining characteristics of WC/Co composites. Machining and Machine-Tools	K. Palanikumar, J. Paulo Davim	chapter Electrical discharge machining: study on machining characteristics of WC/Co composites,DOI:10.1533/9780857092199.135	2013
8	Application of Taguchi method with Grey fuzzy logic for the optimization of machining parameters in machining composites, Computational Methods for Optimizing Manufacturing Technology	K.Palanikumar, B.Latha, J.PauloDavim	Models and Techniques. IGI-GLOBAL Publishers,DOI: 10.4018/978-1-4666-0128-4.ch009.	2012
7	Analyzing surface quality in machined composites. Machining Technology for Composite Materials	Kayaroganam Palanikumar	chapter Analyzing surface quality in machined composites: pages 154-182; Wood Head,	2012
6	Surface Roughness Evaluation in Drilling Hybrid Metal Matrix Composites. Emerging Trends in Science, Engineering and Technology	T. Rajmohan, K. Palanikumar, G. Harish	,DOI:10.1007/978-81-322-1007-8_29	2012
5	Investigation of optimum parameters for multiple performance characteristics in drilling wood composites (MDF) using Grey-Taguchi method. Wood and Wood Products,	K. Palanikumar, S. Prakash, J. Paulo Davim	chapter Chapter 4: pages 87-108; NOVA,ISBN: 978-1-62081-973-9	2012
4	Optimization of machining parameters for multiple performances in drilling hybrid composites using	K. Palanikumar, T.Rajmohan, J. Paulo Davim	Chapter 8 (in press), in Davim, J.P (Ed.), Metal Matrix Composites, NOVA Publishers, New York,ISBN: 978-1-61209-771-8.	2011

	desirability-based approach			
3	Modelling and analysis on wear behaviour of metal matrix composites	K. Palanikumar, T.Rajasekaran, J. Paulo Davim	Chapter 7, (157-174) in Davim, J.P. (Ed.), Tribology of Composite Materials, NOVA Publishers, New York, ISBN: 978-1-61668-319-1	2010
2	Application of fuzzy logic in manufacturing: a study on modelling of cutting force in turning GRFP composites	K. Palanikumar, J. Paulo Davim	Chapter 7, (111-128) in Davim, J.P. (Ed.), Artificial Intelligence in Manufacturing: Research, NOVA Publishers, New York, ISBN: 978-1-60876-214-9	2010
1	Analysis of delamination in drilling wood composite medium density fibre boards. Drilling of Composite Materials	Kayaroganam Palanikumar, S. Prakash, C.V.Jayakumar, J. Paulo Davim	chapter 7: pages 121-136; Nova, ISBN: 978-1-60741-163-5	2009

15. Any other Information :

1. Published more than 100 papers in SCI journals and received the citation of over 8000 having google Scholar h-index: 48.
2. Received best researcher Award 2 times from Indian Society for Technical Education.
3. Coordinated 12 numbers of AICTE sponsored FDPs, STTPs in the recent past.
4. Coordinated DST – NIMAT Sponsored Entrepreneurship Programs (EAC, FDP & TEDP).
5. Received grant for setting up of Innovation and Entrepreneurship Development Centre from DSt-NSTEDB (47 lakhs)
6. Acted as resource person for more than 150 FDP, webinars under various Technical, Research and Administrative topics.
7. Guided, Motivated and actively involved in the following Community Development Activities Through Institute: 1. National Service Scheme (NSS) 2. Swachh Bharat mission Activities 3. Unnath Bharath Abhiyan (UBA) activities for Adopted villages. 4. Lions Club Activities. 5. Skill Development Programs For Unemployed youth coordinating through the PMKVY and other schemes. 6. Entrepreneurship development Activities for Village people and also the S&T institutions.
8. Guided 21 research scholars, out of that 18 were successfully completed the research in the area of composite materials, Friction welding, environmental friendly processes, etc..

Biography



Dr. A. Suresh, B.E., M.Tech., Ph.D works as the Associate Professor, Department of the Computer Science and Engineering in SRM Institute of Science & Technology, Kattankulathur, Chengalpattu Dist., Tamil Nadu, India. He has been nearly two decades of experience in teaching and his areas of specializations are Data Mining, Artificial Intelligence, Image Processing, Multimedia and System Software. He has published two patents and 90 papers in International journals. He has book authored “Industrial IoT Application Architectures and use cases” published in CRC press and edited book entitled “Deep Neural Networks for Multimodal Imaging and Biomedical Application” published in IGI Global. He has currently editing three books namely “Deep learning and Edge Computing solutions for High Performance Computing” in EAI/Springer Innovations in Communications and Computing, “Sensor Data Management and Analysis: The Role of Deep Learning” and “Bioinformatics and Medical Applications: Big Data using Deep Learning Algorithms” in Scrivener-Wiley publisher. He has published 15 chapters in the book title An Intelligent Grid Network Based on Cloud Computing Infrastructures in IGI Global Publisher and Internet of Things for Industry 4.0 in EAI/Springer Innovations in Communication and Computing. He has published more than 40 papers in National and International Conferences. He has served as editor / reviewer for Springer, Elsevier, Wiley, IGI Global, IoS Press, Inderscience journals etc... He is a member of IEEE(Senior Member), ISTE, MCSI, IACSIT, IAENG, MCSTA and Global Member of Internet Society (ISOC). He has organized several National Workshop, Conferences and Technical Events. He is regularly invited to deliver lectures in various programmes for imparting skills in research methodology to students and research scholars. He has published four books in Indian publishers, in the name of Hospital Management, Data Structures & Algorithms, Computer Programming, Problem Solving and Python Programming and Programming in “C”. He has hosted two special sessions for IEEE sponsored conference in Osaka, Japan and Thailand.

Dr. A. Suresh

Senior Member IEEE

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Google Scholar: <https://scholar.google.com/citations?user=S374GVYAAAAJ&hl=en>

Published SI:

As a guest editor - 04 SCI & 18 SCOPUS Special Issue has been completed

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address Mr.R.Udendhran
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2. Email(s) and contact number(s) udendhran.cse@sairamit.edu.in +919626319144

3. Institution Sri Sai Ram Institute of Technology

4. Date of Birth 10.08.1992

5. Gender (M/F/T) M

6. Category Gen/SC/ST/OBC OBC

7. Whether differently abled (Yes/No) No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	Ph D	2021	Computer Science and Engineering	Bharathidasan University	-
2.	M.Tech	2017	Computer Science and Engineering	Bharathidasan University	First Class
3.	B.Tech	2015	Computer Science and Engineering	Bharathidasan University	Fisrt Class

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

A DEEP LEARNING CLASSIFIER AND HOMOMORPHIC ENCRYPTION FOR SECURE MULTIPARTY COMPUTATION FOR ANALYSIS OF CONFIDENTIAL DATA TECHNIQUES, Dr.M.Balamurugan, Bharathidasan University, 2021

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Sri Sai Ram Institute of Technology	2021	Till date	VI Pay Scale
2	Researcher Ph.D Full Time	Bharathidasan University	2008	2021	---

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1			
2			
3			

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	R. Udendhran M.Balamurugan	Towards secure deep learning architecture for smart farming-based applications	Complex and Intelligent. System , Springer	https://doi.org/10.1007/s40747-020-00225-5	1-5	2020
2.	Udendhran, R Annamalai Suresh, M Balamurgan	Enhancing image processing architecture using deep learning for embedded vision systems	Microprocessors and Microsystems, ELSEVIER	https://doi.org/10.1016/j.micpro.2020.103094	1-5	2020
3.	Annamalai Suresh, R Udendhran, M Balamurgan	Hybridized neural network and decision tree based classifier for prognostic decision making in breast cancers	Journal of Soft Computing, Springer	https://doi.org/10.1007/s00500-019-04066-4	1-5	2019
4.	Annamalai Suresh, R Udendhran, M Balamurgan	A Novel Internet of Things Framework Integrated with Real Time Monitoring for Intelligent Healthcare Environment	Journal of Medical Systems, Springer	https://doi.org/10.1007/s10916-019-1302-9	1-5	2018

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1						
2						
3						

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	BOOK - Deep Neural Networks for Multimodal Imaging and Biomedical Applications, IGI GLOBAL	R.Udendhran, Irfan Ahmed	Wiley Press and IEEE Press	2021
2	Deep Neural Networks for Multimodal Imaging and Biomedical Applications	A. Suresh, R.Udendhran, Irfan Ahmed	IGI GLOBAL Press	2020

15. Any other Information (maximum 500 words)

Mr. R. Udendhran, B.Tech, M.Tech. (PhD), works as Assistant Professor Department of the Computer Science and Engineering at Sri SaiRam Institute of Technology, Sairam College Rd, Sai Leo Nagar, Tambaram West, Chennai, Tamil Nadu 600044, Tamil Nadu, India. He is a dignified computer science research scholar focusing on Deep Learning. He worked as a data scientist and presented research work in international conference held at University of Cambridge which is available in ACM digital library and published around 5 research papers indexed in web of science and 11 research papers in Scopus database.

Dr. P. Sivakumar BE (IT)., ME(CSE).,Ph.D., MISTE.,

Associate Professor,
 Department of Computer Science and Engineering,
 SRM Institute of Science and Technology,
 Delhi NCR Campus, Modinagr,
 Ghaziabad, Uttar Pradesh- 201204.
 Email-Id: drsivakumar.p@gmail.com ,ps@srmist.edu.in



CURRICULUM VITAE

Total Experience : **12 Years 9 Months**
 Before PG : 3 Months
 After PG : 5 Years, 9 Months
 After Ph.D : 6 Years 9 Months,
Nationality : Indian
Languages Known : English, Tamil.
Marital Status : Married

Award : Professional Awards & Honors – 2016, Chennai, “Innovative Professional Award” organized by Society of Professional Engineers (India) & Engineering Today,29-Auguest-2016.

Patent Registered : Registered the application for grant of patent titled “Wireless Mesh Networks lifetime maximization for machine Communication”, The application no. E-12/2688/2019/CHE.

Research Supervisor : 1) Anna University, Chennai (**Number Scholar :03**)

Area of Interest: Data Mining, Computer Network, Web Technology

Research and Funding Agency (R&D): 03

Number of Research Project Applied : 01 (DST-SERB)
 Number of Workshop Grand Applied : 01 (DST-SERB)
 Number of Seminar Grand Applied : 01 (Deity)

Education Background :

<i>Course</i>	<i>Institution</i>	<i>University/ Board Type: Government/ Private</i>	<i>Year of Passing</i>	<i>% Aggregate</i>
Ph.D (Information & Communication Engineering)	Anna University, Chennai. Tamilnadu, India.	Anna University, Chennai Government	August 2013	-
M.E (Computer Science and Engineering)	Annai Mathammal Sheela Engineering College, Namakkal, Tamilnadu, India.	Anna University, Chennai. Government	2005-2007	75%
B.E (Information Technology)	Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu, India.	Bharathiyar University, Coimbatore. Government	2000-2004	65%

Teaching Experience : 13 Years

Patent Published : 01

Patent Registered : 03

Consultancy Projects : 02

Book published : 01

No Phd Students produced : 03

Membership : 09

Sessions/Symposium chaired Organized : 03

Faculty Development Program Organized : 01

National Conference Organized : 02

International Conference Organized : 01

International Workshop Organized : 01

Seminar / Workshop / FDP attended : 26

Journal Editorial and Reviewer : 14

International Journal Publications : 20

International Conferences : 07

National Conferences : 10

Total Research Paper published : 06

Project guided for Post Graduate level : 03

Project guided for Under Graduate level : 06

Mini Project guided for Under Graduate level: 03

Number of PhD Scholars

<i>SRL. NO</i>	<i>Status</i>	<i>Research Area</i>	<i>Title of the Thesis Work</i>	<i>Register Number</i>	<i>Name of the Scholar</i>	<i>University</i>
1	Completed 02/03/ 2017	Data Mining	An Improved Hybrid Honey Bee Mating Optimization of k-Means Algorithm for Medical Document Clustering	11160111035	Vengateshkumar.P	Anna University, Tamilnadu
2	Completed 05/06/2018	Grid Computing	Efficient Scheduling of Tabu Search, Round Robin, Earliest Deadline and First Come First Serve with Genetic Algorithm	71070621026	Rajagopal R	Anna University, Tamilnadu
3	Completed 28/12/2018	Web Mining	A Paradigm for Proficient information retrieval using trust based automatic web document classification framework	71070621042	Sridharan K	Anna University, Tamilnadu

Consultancy Projects

<i>S.No</i>	<i>Name of the Project</i>	<i>Client</i>	<i>Faculty members involved</i>	<i>Period</i>	<i>Amount generated (In Rs.)</i>
1	Cloud Based Data Collection and storage in Web portal	Techno soft salutation, Coimbatore	Dr.P.Sivakumar	2013-14	Rs.30,000 (Completed)
2	Design, Development and Maintenance of the web portal for Raja Textiles	Raja Textiles, Erode	Dr.P.Sivakumar	2014-15	Rs.1,00,000 (Completed)

Positions Held

<i>SRL. NO</i>	<i>Designation</i>	<i>Name of the college / University</i>	<i>Teaching Experience</i>			
			<i>Start</i>	<i>End</i>	<i>Total years</i>	<i>Overall Years</i>
1	Associate Professor	SRM NCR,Campus , Delhi	07-09-2020	Till Date	0.0	13.00
2	Associate Professor	Sree Vidyanikethan Engineering College (Autonomous),	13-08-2019	28.08.2020	1.0	13.00
3	Assistant Professor	Saudi Electronic University, Riyadh ,Saudi Arabia	22-03-2017	29-07-2019	2.3	12.00
4	Associate Professor	Sree Vidyanikethan Engineering College (Autonomous),	01-06-2016	31-01-2017	0.8	09.09
5	Assistant Professor	K.S.R. College of Engineering (Autonomous)	01-06 -2011	31-05-2016	5.0	09.01
6	Lecturer	Annai Mathammal Sheela Engineering College, Namakkal	15- 07- 2007	31-05- 2011	3.10	04.01
7	Lecturer	Annai Mathammal Sheela Engineering College, Namakkal	14-06-2005	15-09-2005	0.3	00.03

Research Publications

International Journal Publications SCI Indexed : 2 and Scopus Indexed : 08

- [1]. **Dr.P.Sivakumar**, “Implementing The Model For Software Quality Based On Interaction Between User And Developer”, Journal of Critical Reviews ,ISSN- 2394-5125 VOL 7, ISSUE 15, 2020. **(Scopus)**
- [2]. **Dr.P.Sivakumar**, “Exploring The Trajectory Prediction Using Lstm And Extreme Machine Learning”, journal of critical reviews, issn- 2394-5125 vol 7, issue 10, 2020. **(Scopus)**
- [3]. **Dr.P.Sivakumar**, “Design and analysis the performance of real time content delivery network using beam scanning” journal of critical reviews, ISSN- 2394-5125 VOL 7, ISSUE 04, 2020. **(Scopus)**
- [4]. **Dr.P.Sivakumar**, “Fit for Life: Home Personal Coach”, Bonfring International Journal of Software Engineering and Soft Computing, Vol. 8, No. 2, April 2018.

- [5]. **Dr.P.Sivakumar**, “A Systematic review on Techniques of Feature Selection and Classification for Text Mining”, International Journal of Business Information Systems, Vol. 28, No. 4, 2017. Print –ISSN : 17460972 (**Scopus**)
- [6]. **Dr.P.Sivakumar**, “Trust Factors based Hierarchy Key Distribution Security Protocol in Grid Computing by means of Elliptic Curve Cryptography” Asian Journal of Research in Social Sciences and Humanities. ISSN:2249-7315 (ONLINE) 2250-1665, Jan,2017.
- [7]. **Dr.P.Sivakumar an Mr.K Rajagobal**, ‘Object Based Ring Routing Path Management Algorithm for Energy Efficient Nest Node of Sensor Network’, Journal of Computer and System Sciences, Volume 83, Issue 3, ISSN: 0022-0000, 2017, Pages 3-21. (**Scopus Indexed**)
- [8]. **Dr.P. Sivakumar**, ‘Efficient Job Scheduling of Genetic Algorithm with Tabu Search and Round Robin’, International Journal of Printing, Packaging & Allied Sciences, (ISSN 2320-4387), vol. 4, no. 4, pp. 2864-2878,2016.
- [9]. Dr.P. Sivakumar, “Mobile Agents based Reliable and Energy Efficient Routing Protocol for MANET”, International Journal of Intelligent Engineering and Systems 9(3):110-116 · September 2016(**Scopus Indexed**)
- [10]. **Dr.P.Sivakumar**. “Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, International Journal of Innovations & Advancement in Computer Science (IJIACS), Vol.5, Issue No: 6, June 2016.
- [11]. Dr.P.Sivakumar, “An Integration of Web Mining and Security for Ensuring the E-Marketing Websites”, Asian Journal of Research in Social Sciences and Humanities Vol. 6, No. 12, December 2016, pp. 975-991.
- [12]. **Dr.P.Sivakumar**. “Web Forum Questions using Answers Retrieval Information”, journal of computer science and technology, Vol.5, Issue No: 6, June 2016.
- [13]. **Dr.P. Sivakumar**, “Effectual Web Content Mining is using Noise Removal from Web Page”, Wireless Personal Communications, Vol .84, pp.89-121, 2015, **ISSN: 0929-6212,(SCI & Scopus Indexed) Impact Factor : 1.20.**
- [14]. **Dr.P.Sivakumar**,. “Efficient Methods for Distinction Preclusion in Data Mining”, International Journal of Applied Engineering Research, Special issue Vol.10, Issue.55, pp.2212-2215, 2015.
- [15].**Dr.P.Sivakumar**,. “Ensure and Energy Efficient Data Forwarding in Cluster Based Wireless Sensor Network”, IJSRD -International Journal for Scientific Research & Development , Vol. 2, Issue 12, Pages: 2321-0613,March 2015.
- [16]. **Dr.P.Sivakumar**,. “Multimodal Mobile Visual Search Using Region-Based Matching Algorithm”, International Journal of Current Research Vol. 6, Issue, 01, pp.4750-4753, 2014.
- [17]. **Dr.P.Sivakumar**,. “Interactive Mobile Visual Search using Pixel based Matching Algorithm”, International Journal of Engineering Associates (IJEA), Vol. 3, Issue, 04, pp.20-23, 2014.
- [18]. **Dr.P.Sivakumar**,. “An Efficient Interactive Mobile Visual Search Using Multipart Region based Matching (MRM) Algorithm”, Australian Journal of Basic and Applied Sciences”,Vol 8,Issue,10, Pages: 7-11,July 2014., Print-ISSN : 19918178 (**Scopus Indexed**)
- [19]. **Dr.P.Sivakumar**,“Verifying Integrity and Availability in Multi-Cloud Using PDP”, International Journal of Computer Science and Mobile Computing, Vol. 2, Issue, 4, 2013.

- [20]. **Sivakumar, P.** and Parvathi, R. M. S. "JC- Automatic Manifold Related Pages Reviewed by Jaccard's Coefficient", International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 2, No. 2, pp. 230-232, 2012.
- [21]. **Sivakumar, P.** and Parvathi, R. M. S. "Mainly Significant Content Mining of Entire Web Page", International Journal of Engineering Research and Applications, Vol. 2, No. 2, pp. 719-722, 2012.
- [22]. **Sivakumar, P.** and Parvathi, R. M. S. "Neural Networking using Multiple Web Page Noise Removing Method", International Journal on Computer Science and Technology (IJCST), Vol. 3, No. 1, pp. 336-338, 2012.
- [23]. **Sivakumar, P.** and Parvathi, R.M.S. "Eliminating of Picture Animation from Web Sheet", International Journal of Current Research, Vol. 4, No. 4, pp. 212-215, 2012.
- [24]. **Sivakumar, P.** and Parvathi, R. M. S. "An Efficient Approach of Noise Removal from Web Page for Effectual WCM", European Journal of Scientific Research, Vol. 50, No. 3, pp. 340-351, 2011, Print-ISSN: 1450202X, (**Scopus Indexed**)
- [25]. **Sivakumar, P.** and Parvathi, R. M. S. "Sketching-Din Elimination of Web Page", Journal of Computer Science, Vol. 7, No. 12, pp.1888-1893, 2011, print-ISSN: 15493636, (**Scopus Indexed**)

International Conferences

- [1]. **Dr.Sivakumar Ponnusamy**, Mohsen Ba Omar, Fahad Alshunaybir, Mohsen Alanazi, Mwaz Alzebak, "Fit for Life: Home Personal Coach" ICICS'2018, International Conference on Information and Computational Science (ICICS-2018), KSR College of Engineering, Tiruchengode, Tamilnadu, India, Conference Date :27.03.2018 to 28.03.2018.
- [2]. **Dr.P.Sivakumar.** "Web Forum Questions using Answers Retrieval Information", International Conference on "Latest Concepts in Science, Technology and Management (ICLCSTM-16), is organized by Conference info and Academic Science at The Institutions of Electronic and Telecommunication Engineers (IETE), Institutional Area, Lodhi Road, New Delhi 110003, Date: 19 June, 2016.
- [3]. **Dr.P.Sivakumar.** " Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks", International Conference on "Latest Concepts in Science, Technology and Management (ICLCSTM-16), is organized by Conference info and Academic Science at The Institutions of Electronic and Telecommunication Engineers (IETE), Institutional Area, Lodhi Road, New Delhi 110003, Date: 19 June, 2016.
- [4]. **Dr.P.Sivakumar.** "Web Forum Questions using Answers Retrieval Information (IJCMS)", International Journal of Computer & Mathematical Sciences, Vol.5, Issue No:6, June 2016.
- [5]. **Sivakumar,P.** "Efficient Methods for Distinction Preclusion in Data Mining", International Conference on Advances in Applied Engineering and Technology - 2015 (ICAAET'15). The ICAAET'15 is organized by Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India, May 14-16, 2015.
- [6]. **Sivakumar, P. and Parvathi, R.M.S.** "LS-SVM: Text Document Classification for Particular Value Decomposition", International conference on Recent Advances and Trends in computer Engg, Management and Security, Vivekanandha College of Engineering for Women, Elayampalayam, Tiruchengode, Tamilnadu, India, pp.85, March 2012.

- [7]. **Sivakumar, P. and Parvathi, R. M. S.** “An Efficient Approach of Noise Removal from Web Page for Effectual Web Content Mining”, International conference on Advanced Computer Technology, J.K.K.Nattraja College Of Engineering and Technology Komarapalayam ,Namakkal, Tamilnadu, India, pp.919-922, July 2011.

National Conferences

- [1]. **Sivakumar.p**, “Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March, 2016.
- [2]. **Sivakumar.p**, “A Hierarchical Fuzzy relational Clustering Algorithm for sentence Level Text Clustering” National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March 2016.
- [3]. **Sivakumar.p**, “Web Forum Questions using Answers Retrieval Information”, National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March, 2016.
- [4]. **Sivakumar.p**, ”An Energy Aware data Forwarding using MD5 in Cluster based Wireless sensor Network”, National Conference on Big Data Cloud Computing (NCBDC’15), National Institute of Technology, Tiruchirappalli, 2015.
- [5]. **Sivakumar.p** , “Interactive Mobile Visual Search using Matching Algorithm”, National Conference on Knowledge based Scientific Research and Communication Engineering (NCKSRCE’14), K.S.R. College of Engineering, 2014.
- [6]. **Sivakumar, P.** and Parvathi, R. M. S. “A Syntactic categorization based Web Page Rating Algorithm”, National Conference on Frontiers of Future Generation Computer Systems and Engineering, KSR College of Engineering, Tiruchengode , pp.36, February 2012.
- [7]. **Sivakumar, P.** and Parvathi, R. M. S. “Most Improvement Content Mining from complete web pages”, National Conference on Advances in Computing, Communication, Electrical and Network Technologies, Sengunthar Engineering College, Tiruchengode pp.160-165, March 2012.
- [8]. **Sivakumar, P.** “Scalable Peer-To-Peer File Sharing System in Hybrid Model”, National Conference on Advances in Communication and Computing (NCACC-2011), Karpagam College of Engineering(Autonomous), October 2011.
- [9]. **Sivakumar, P.** “Scalable Peer-To-Peer File Sharing System in Hybrid Model”, Seventh National Conference on Recent Trends in Advanced Computing (RTAC-2011), SNS College of Technology, October 2011.
- [10]. **Sivakumar,P** “Improved Context Based data Access”, First National Conference on Network , Intelligence and Computing System, SNS College of Technology, Coimbatore, Feb 2007.

Journal Editorial Member and Reviewer

- [1]. Reviewer of International Journal of Computer Science and Network (IJCSN)
- [2]. Reviewer of International Journal of Scientific & Engineering Research (IJSER)
- [3]. Reviewer of International Journal of Advances in Engineering and Technology(IJAET)
- [4]. Reviewer of International Journal of Research in Engineering and Technology (IJRET)
- [5]. Editorial Board Member of International Journal of Research in Science & Technology (IJRST).
- [6]. Reviewer of International Journals of Engineering and Sciences (IJENS)
- [7]. Editorial Board Member of Taraksh International Journal of Information Systems (TIJIS)
- [8]. Editorial Board member of Taraksh Journal of Cultural Studies(TJCS)
- [9]. Reviewer of International Journal of Scientific Engineering and Technology (IJSET)
- [10]. Editorial Board Member of International Journal of Advances in Engineering Research (IAER)

- [11].Editorial Board Member of International Journal Of Innovations In Applied Sciences & Engineering (IJIASE)
- [12].Editorial Board Member of International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS) ,SVEC.
- [13].Editorial Board Member of International Journal of Advanced Research in Biology, Engineering, Science and Technology((IJARBEST),SVEC
- [14].International Journal of Advanced Research Trends in Engineering and Technology(IJARTET), SVEC.

Professional Society Membership

Life Member

- Indian Society for Technical Education (ISTE)
Member No: LM 81589
- International Society For Research And Development (ISRD)
Member NO :SR4150900222
- Global Research & Development Services (GRDS)
Membership ID: WASRTI-M16101

Senior Member

- International Association of Computer Science and Information Technology (IACSIT)
Member NO: 80347977

Member

- International Association of Engineers (IAENG)
Member NO: 137474
- International Journal of Engineering Trends and Technology
Member ID: SSRG - IJETT-1500 . SVEC.

Member of Societies

- IAENG Society of Computer Science
- IAENG Society of Data Mining
- IAENG Society of Software Engineering

National Conference Organized

- Fourth National Conference on Knowledge Based Scientific Research and Communication Engineering - 2014 (NCKSRCE'14), held on 15th March 2014”, K.S.R. College of Engineering, (Autonomous).

Guest Lecturing

- Act as a Resource person “One Week Faculty Development Programme on Advanced Tools for Data Analytics” 23th November, 2016, Under TEQIP-II, Conducted by Sree Vidyanikethan Engineering College (Autonomus),Tirupathi,on 24-25 October, 2016.
- Acut as a judge of CODE-A-THON “ Mantra- A National Level Techno – Cultural Fest” Conducted by Sree Vidyanikethan Engineering College (Autonomus),Tirupathi,on 6-7 October, 2016.
- Act as a Resource person on 11th Dec 2014 for Anna University Sponsored Faculty development Training Programme on “CS6402 Design and Analysis of Algorithms” organized at K.S.R College of Engineering.
- Act as a Resource person on 13th Dec 2014 for Anna University Sponsored Faculty development Training Programme on “CS6402 Design and Analysis of Algorithms” organized at Kongunadu College of Engineering and Technology

Technical Program Committees

- 7th IEEE International Advance Computing Conference (IACC-2017), Organized by IEEE Computer Society Chapter of India Council & VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India.
- First International Conference on Innovations in Electrical, Information and Communication Engineering (ICIEICE) to be conducted during March 24 and 25 of 2017, Kongunadu College of Engineering and Technology (KNCET), Namakkal - Trichy Main Road Tholurpatti, Thottiam, Trichy District, Tamilnadu, India.

List of R & D Project Work

S.No	Workshop / Seminar / Funded Projects	Name of the agency	Title of the Programme	Applied Date	Status
1.	Seminar	SERB Seminar Grant Proposal	Statistically Open Data Applications and Challenges	July 2019	Applied
2.	Funded Projects	SERB (Empowerment and Equity Opportunities for Excellence in Science)	Security Track: Bluetooth module with Smartphone Sensing Platform for Emergency Disaster Management	August 2019	Applied
3.	Workshop	DeitY Sponsored A Two Day National Seminar	Open Data Applications and Challenges	August 2019	Applied

List of Project work

S.no	Title of the Project	Purpose of the Project	Software used
1.	Improved Context Base Mobile data access	Mobile using to access All kind of data information with data format	JSP, Ms-Access, J2ME
2.	Location Identification	Mobile using identify the particular location and also nearest location with map	J2ME, JSP, SQL
3.	Mobile Billing System	Online Mobile Billing System	VB, Ms-Access
4.	Student Information	Each students Bio data and also mark statement	VB, Ms-Access

List of Patent

S.No	Title of the Patent	Application Number	Data of Published / eFiling	Status
1	Wireless mesh networks lifetime maximization for machine to Machine communication	201941052842	27/12/2019	Published
2	A novel Multiple-Access Edge Computing technique for ultra-reliable low-latency communication (URLLC), and massive Internet of Things (IoT) in	202041014796	15/05/2020	Published

	5G networks			
3	Automated vegetation mapping approach of crops through satellite image fusion and convolution neural networks-based classification	202041014696	15/05/2020	Published
4	A method to emotional component and Intrapersonal cognitive detection of a person using machine learning.	202041014970	22/05/2020	Published
5	Voice Assisted Neuro-Fuzzy Deep Learning Technique to Elderly and Disabled for Flexible and Secure Navigation	2020100866	27/05/2020	Published
6				

List of Book published

S.No	Title of the Book	Book ISBN	Year of publication	Publisher
1	WEB CONTENT MINING AND NOISE FREE WEB PAGES	978-81-932882-0-7	2016 November	IRA PUBLICATIONS

Programming Knowledge

Language : C, C++, Visual Basic and Java

Database : Oracle 8, My SQL, Ms-Access

Web Design : HTML, DHTML, Scripting, Style Sheet, ASP,PHP.

Title of Ph.D Thesis

Noise Free Information Retrieval Using Web Content Mining on Web Pages

Seminar / Workshop / Faculty Development Programme Attended

1. The webinar on "Identification of Internet Suspect Criminals using Forensic Field True Traveller Kit" by Dr.R.Ravi, Professor - IT, FXEC, Organized by Department of Information Technology, Francis Xavier Engineering College, Tirunelveli, Tamil Nadu on 27th May, 2020.
2. The webinar on "A Kaleidoscopic view of AI" organized by Department of Computer Science and Engineering, Panimalar Institute of Technology on 24.05.2020.
3. The Live Webinar PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY, Organized By CSE Dept in association with Computer Society of India VVIT chapter Held On 27.05.2020 .
4. "One-Day Online FDP on Data Science Using Machine Learning Algorithms" on 26th May 2020.
5. The one week Faculty Development Program on Advances in " Python(Django and Flask), Python for Data Science and Cyber Security" in association with IIT, organized by the Department of Computer Science and Engineering, Chadalawada Ramanamma Engineering College, Tirupati Bombay during 21st to 27th May 2020.
6. The Research Structuring and Writing Process', Organized By Department of Commerce IV, Rathinam College of Arts and Science, Coimbatore, May 27, 2020.
7. The CMOS Transceiver Design for 5G Communication" Organized By Department of Commerce Dhanalakshmi Srinivasan Institute of Technology on May 26, 2020.
8. The webinar on virtual class Room Teacher Organized By Skillnet on May 27, 2020.

9. The Five Day Faculty Development Programme (FDP) on “Cyber Security”, Conducted by the Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College in association with Supraja Technologies & Computer Society of India Vijayawada Chapter, from 23-05-2020 to 27-05-2020.
10. The NUPRO’2020 Round 1 and participated NUPRO’2020 Round 2 from 21/05/2020 to 25/05/2020 organized by Department of Information Technology, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam .
11. The Faculty Development Programme on Python Programming and Machine Learning Techniques, Department of Computer science and Engineering , K.S.R College of Engineering , Namakkal on 18-05 2020 to 29-05-2020.
12. The Faculty Development Programme on "Web Application Security", Jeppiaar Institute of Technology on 27-05-2020 to 28-05-2020.
13. The “NUPRO’2020 – NURTURE THE PROGRAMMING CONTEST ROUND - 1” organized by Department of Information Technology, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam – 611 002 from 11/05/2020 to 20/05/2020
14. Three Day Online Workshop on "Source Code Management and Technical Documentation" hosted by Sree Vidyanikethan Engineering College in association with APSSDC on 20/05/2020 to 22/05/2020.
15. The Research & Development (R&D) Cell and Institution’s Innovation Council (IIC) of Vivekanandha College of Engineering for Women (Autonomous) are organizing from 13th May 2020 to 20th May 2020.
16. The Eight Days Online Java Programming Course, Conducted by AARON Technology, Salem Tamilnadu on 20th April to 27th April 2020.
17. The One Day Online Webinar on Levers of Digital Industry Presented, Dr.S.D.Sударасan, Group Manager, ABB Corporate Research organized by Chennai Institute of Technology on 01 May 2020.
18. The One Day Online National Workshop on “ Blockchain Technology , conducted by Dr. Kalpesh Parikh on 2nd May, 2020.
19. The Online International Level COVID-19 Awareness Quiz held in May 2020 organized by students of National Service Scheme (NSS) unit of Ashoka Center for Business and Computer Studies, Chndsi, Nashik.
20. The online EQuiz Exam for Data Structure Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 6th May 2020.
21. The online EQuiz Exam for DBMS Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 7th May 2020.
22. The online EQuiz Exam for Compiler Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 8th May 2020.
23. The online Faculty Development Program on "RESEARCH, FUNDING & IPR" jointly organized by Department of Electronics & Telecommunication, IQAC AND R & D Cell, K. C. COLLEGE OF ENGINEERING & MANAGEMENT STUDIES AND RESEARCH, THANE (EAST) in association with under the banner of IETE and Institution's Innovation Cell (IIC) on 7th May-10th May, 2020.
24. The online WEBINAR on Opportunities for Start Ups in current Situation”, organized by Chennai Institute of Technology for registering on 8th may 2020.
25. The online Python Webinar hosted” by Sarada College for Women and Aaron Technologies on "Enhance your coding skills through Python" on 8th may 2020.
26. The 5 Day Online Faculty Development Programme on Python Programming Organized” by Madanapalle Institute of Technology & Science in association with IIT BOMBAY SPOKEN TUTORIAL - to be held during 4th May to 8th May,2020.
27. The 5 Day Online Faculty Development Programme on R Programming” Organized by St.Joseph's College,(Autonomous), Irinjalakuda in association with IIT BOMBAY SPOKEN TUTORIAL - to be held during 4th May to 8th May,2020.
28. The 2 day online Webinar for How to write a Research Proposal”, Organized By: Research and Development Cell, Excel Engineering College, Komarapalayam - 637303, TamilNadu on 04 May to 05 May 2020.
29. The Seven Days Online Faculty Development Program on "Scope of Artificial Intelligence and Machine Learning in Automation" from 11th May 2020 to 17th May 2020.
30. The Introduction to image quality measures”, organized by Chennai Institute of Technology for registering on 13th may 2020.
31. The Star Ethical Hacking Expert (EHE)”, organized by star certification, United States on May 14, 2020.

32. The Ethical Hacking Webinar” Conducted by IT Dept of Sengunthar College of Engineering, on 13 May 2020.
33. A one Week Faculty Development Programme on “Advances in Python Programming” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 27th - 28th November, 2016.
34. One week Faculty Development Programme on “Advanced Tools for Data Analytics” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 21st - 25th November, 2016.
35. A Two Day Research Oriented Faculty Development Programme on “Open Source Technologies”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 26-27 September, 2016.
36. DST-SERB Sponsored Two Day National Seminar on “Internet of Things(IoT) : Scope for Future Research and Business”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 24-25 October, 2016.
37. A Three Day Faculty Development Programme on “IBM Certified Application Developer – Cloud Platform”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 14-16 November, 2016.
38. DST-SERB Sponsored Two Day National Seminar on “Recent Advances in Bioinformatics and Medical Image Analysis” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 18-19 November, 2016.
39. National Workshop on “Blooms Taxonomy and its Assessments”, Conducted at K.S.R College of Engineering, on 20th March 2015.
40. Two Week ISTE STTP on “Introduction to Design of Algorithms” conducted by Indian Institute of Technology Kharagpur from 27th April to 30th May 2015.
41. International Level Workshop on “Journal Paper Writing and Preparation of Winner Research proposal”, Conducted at K.S.R college of Engineering, 2015.
42. The SERB Sponsored National Level Seminar on “Data Mining trends & development for Geospatial technology and its Applications” during 7th January 2015 to 9th January 2015.
43. ISTE – SRM Short Term training Programme on “Big Data Analytics and its Applications” organized by K S R Institute for Engineering and technology and sponsored by Indian Society for Technical Education, New Delhi and SRM University, Chennai, during 5th May 2014 to 10th May 2014.
44. Two week ISTE Workshop on Cyber Security conducted by Indian Institute of Technology Bombay from 10th July to 20th July 2014.
45. AICTE sponsored Two Weeks Faculty Development Programme on “Security Issues in Utility Computing” from 17th May 2013 to 30th May 2013, Organized by K.S.R college of Engineering.
46. AICTE sponsored Staff Development Programme on “Research initiatives in Data Mining for web intelligence” , from 22nd June to 03rd July 2012, Organized by K.S.R college of Engineering.
47. Two Days hands on Training on “Enterprise Computing Lab” held on 2nd and 3rd December 2011, K.S.R. College of Engineering.

48. Workshop on Hardware and Networking from 23^{ed} August 2011 to 25st August 2011 at K.S.R College of Engineering .
49. One Day Workshop on “Data Mining: Challenges and Issues” held on 26th August 2011 at Anna university of Technology Tiruchirappalli.
50. Workshop in “Java and struts frame work” from 23^{ed} April to 24th April 2010 at Annai Mathammal Sheela Engineering College, Namakkal, India.
51. One day orientation programme on Microsoft Corporation on Advanced technology, during 31st July 2009, Gnanamani College of Technology, Namakkal, India.
52. Staff Development Programme in Computer network Design Security and Management, Organized by Vivekanadha College of Engineering For Women, Elayampalam, Namakkal, from 22nd June to 4th July, 2009, Sponsored by AICTE.
53. Faculty Development Programme in Data Warehousing and Data Mining, Organized by Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 16th June to 20th June, 2008, Sponsored by AICTE.
54. Faculty Development Programme in Data Mining and Data Warehousing, Organized by Anna university, Chennai, from 25th May to 1st June, 2008, Sponsored by AICTE.
55. Staff Development Programme in Computer R & D Division of ECE , Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 19th May to 23^{ed} May, 2008, Sponsored by AICTE.
56. Faculty Development Programme in Principles of compiler design, Organized by PSNA Engineering College, Dindigal, from 26th November to 8st December, 2007, Sponsored by AICTE.
57. Faculty Development Programme in Theory of computation, Organized by SSN Engineering College, Chennai, from 21th May to 2nd June, 2007, Sponsored by AICTE.
58. Tutorials on Effective teaching-learning management and student personnel management at Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 7th December to 9th December, 2005, Sponsored by AICTE.

GOOGLE SCHOLAR PAGE

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FOLLOWING

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scopus id: 57202595661

EDUCATION AND ACADEMIC QUALIFICATIONS

SL. NO	QUALIFICATION	SPECIALIZATION	Year	CLASS	UNIVERSITY/BOARD
1	Ph.D.	Computer Science and Engineering	2016	-	VIT University, Vellore, TN.
2	M.Tech.	Information Technology	2009	First Class with distinction	JNTUH College of Engineering. Kukatpally, Hyderabad, A.P
3	B.Tech.	Computer Science & Information Technology	2005	First Class	AITS, Rajampet.
4	D.EC.E	Diploma in Electronics and Communication	2002	First Class	S.V.Govt.Polytechnic College, Tirupati.
5	S.S.C	-	1999	First Class	Z.P.HighSchool,Tiruchanoor, Tirupati

Experience

SL. NO	DESIGNATION	DEPARTMENT AND COLLEGE /UNIVERSITY	FROM	TO
1.	Associate Professor	Department of CSE, Sreevidyanikethan Engineering College, Autonomous, Tirupati, AP.	2019	Tilldate
2.	Professor	SCSE, Galgotias University, Greater Noida	2017	2019
3.	Associate Professor	Computer Science and Engineering, AITS, Autonomous, Rajampet, AP	2016	2017
4.	Assistant Professor	Information Technology, AITS, Autonomous, Rajampet, AP, India	2011.	2016
5.	Foreign Faculty	Software College, EAST CHINA TECHNICAL UNIVERSITY, P.R.CHINA	2010	2011
6.	Visiting Faculty	Jiangxi Normal University, Nanchang, Jiangxi 330022, P.R.CHINA.	2010	2011
7.	Assistant Professor	Information Technology, AITS, Autonomous, Rajampet, AP, India	2009.	2010
8.	ASSISTANT PROFESSOR	Information Technology, AITS, Autonomous, Rajampet, AP, India	2005.	2007

SPECIALIZATION

Internet of Things (IoT), Cyber-physical system, intelligent systems, smart environments and Health care using IoT.


PUBLICATIONS

1. M S, Mekala; DHIMAN, GAURAV; Patan, Rizwan; Kallam, Suresh; Ramana, Kadiyala; Yadav, Kusum; Alharbi, Ali O, "Deep Learning-influenced Joint V2I and V2V Communication Approach for Internet of Vehicles (IoV) "Expert Systems, Willy Publications, Accepted, June, 2021.
2. **Kallam Suresh**, Rizwan Patan, Tathapudi V. Ramana, Amir H. Gandomi "Linear Weighted Regression and Energy-Aware Greedy Scheduling for Heterogeneous Big Data" Journal Electronics, MDPI Publisher, SCI, Manuscript ID:

Electronics-1066832, https://www.mdpi.com/journal/electronics/special_issues/ML_BDA.
[Accepted Feb.2021](#).

3. Subhashini Peneti, M. Sunil Kumar, **Suresh Kallam**, Rizwan Patan, Vidhyacharan Bhaskar, Manikandan Ramachandran” BDN-GWMNN: Internet of Things (IoT) enabled secure smart city applications” *Wireless Personal Communications*, Springer, Accepted FEB,2021.
4. V. Mydukuri, Rathnamma; **Kallam, Suresh**; Patan, Rizwan; Al-Turjman, Fadi; Ramachandran, Manikandan ” Deming Least Square Regressed Feature Selection and Gaussian Neuro-Fuzzy Multi-Layered Data Classifier for Early Covid Prediction ”, *Expert Systems, Wiley*, FEB 2021, Accepted. **SCI**, Impact factor : 1.546. Manuscript ID EXSY-Dec-20-854.
5. Ramesh.S, **Suresh Kallam**, Rizwan Patan , Ramachandran Manikandan and *Fadi Al-Turjman*,” 5G Integrated Spectrum Selection and Spectrum Access Using AI-Based Framework for IoT Based Sensor Networks ”, *Computer Networks, Elsevier*, **Volume 186, 26 February 2021, 107649, SCI**, Impact factor :3.1.
6. Sunil kumar Malchi, **Suresh Kallam**, *Fadi Al-Turjman* Rizwan Patan ,” A trust-based fuzzy neural network for smart data fusion in Internet of Things ”, *Computers and Electrical Engineering, Elsevier*, Jan 2021, Published. **SCI**, vol.89, Impact factor :2.6 <https://doi.org/10.1016/j.compeleceng.2020.106901>.
7. Nalliyanna V. Kousik, Yuvaraj Natarajan, R. Arshath Raja, **Suresh Kallam**, Rizwan Patan and Amir H. Gandomi,” Improved salient object detection using hybrid Convolution Recurrent Neural Network ”, *Expert Systems with Applications, Elsevier*, 15 March (2021), Vol 166, pp: 114064. **SCI**, Impact factor :5. 4, doi.org/10.1016/j.eswa.2020.114064.
8. Nalliyanna Goundar Veerappan Kousik , Yuvaraj Natarajan, **Kallam Suresh** , Rizwan Patan and Amir H. Gandomi,”Improving Power and Resource Management in Heterogeneous Downlink OFDMA Networks”, *Information journal, MDPI Publication*, 10 April (2020). *Web of Science*, Impact factor :1.88, *Information* 2020, 11(4), 203; [doi:10.3390/info11040203](https://doi.org/10.3390/info11040203).
9. *Venkata Subbaraju Dommaraju, Karthik Nathani, Usman Tariq, Fadi Al-Turjman, Suresh Kallam, Praveen Kumar Reddy M, Rizwan Patan*, ”ECMCRR-MPDNL for Cellular Network Traffic Prediction with Big Data”, **IEEE Access**, published 27 May 2020. Vol:8 (SCI IF-4), [10.1109/ACCESS.2020.3002380](https://doi.org/10.1109/ACCESS.2020.3002380).
10. Dr.O.Obulesu, **Dr.K.Suresh**, and B.VenkataRamudu ” Diabetes Prediction using Machine Learning Techniques”, *Helix journal*, 30 April (2020). *Web of Science*, 2020, Volume and Issue: 10 (2):Page: 136-142; [doi:https://doi.org/10.29042/2020-10-2-136-142](https://doi.org/10.29042/2020-10-2-136-142).
11. Haftu Tasew Reda, Abebe Diro, Naveen Chilamkurti, **Suresh Kallam** ” Firefly-inspired stochastic resonance for spectrum sensing in CR-based IoT communications ”, *Neural Computing and Applications*, 10 November (2019), **32**, pages 16011–16023. Springer , **SCI**, Impact factor 4, <https://doi.org/10.1007/s00521-019-04584-0>.
12. *kaushik.sekaran, a.h.gandomi, parimalavk, S., P.Rizwan and Suresh Kallam*, ”Improving the Response Time of M-Learning and Cloud Computing Environments Using a Dominant Firefly Approach”, **IEEE Access**, 2019. vol.7 Page number, 30203 - 30212 (**SCI IF-4**), [10.1109/ACCESS.2019.2896253](https://doi.org/10.1109/ACCESS.2019.2896253).
13. Ravi Kumar Poluru, M Praveen Kumar Reddy, Syed Muzamil Basha, Rizwan Patan and **Suresh Kallam** “Enhanced Adaptive Distributed Energy-Efficient Clustering (EADEEC) for Wireless Sensor Networks”, *Recent Advances in Computer Science and Communications, Formerly Recent Patents on Computer Science (2019)*, Volume: 13., Issue 2., DOI: 10.2174/2213275912666190404162447. (**Scopus**)

14. *S. Vijaykumar, P. Rizwan, S. Khanand, Suresh Kallam, "Reliable and Energy-Efficient Emergency Transmission in Wireless Sensor Networks", Internet Technology Letters, Wiley Publications, 2019, doi: 10.1002/itl2.91(SCI), VOLUME 2 ISSUE 2. PP 1-6.*
15. *O. Obulesu, Kallam Suresh, M Mahendra and M. Rajasekhara Babu, "Energy Saving using Green Computing Approach for Internet of Thing (IoT) based Tiny Level Computational Devices", Recent Advances in Computer Science and Communications Formerly Recent Patents on Computer Science (2020) 13: 6. <https://doi.org/10.2174/2213275911666181030110313>.(Scopus)*
16. *Suresh Kallam, Rajasekhara Babu Madda, Chi-Yuan Chen, Rizwan Patan, Dhanaraj Cheelu "Low energy aware communication process in IoT using the green computing approach", IET Networks, 2018, Volume: 7, Issue: 4 Pages: 258 - 264, doi: 10.1049/iet-net.2017.0105.(ESCI)*
17. *Rizwan Patan, K.Suresh and Dr.M.RajasekharaBabu "Design and development of low investment smart hospital using internet of things through innovative approaches. "Biomedical Research 2017; 28 (10):ISSN:0970-938X.(SCI)*
18. *K.Suresh and Dr.M.RajasekharaBabu "SOSIoT: SOS Optimization to leverage the Energy Efficient Internet of Things(IoT) based on Route Search Optimization "International Journal of Computer Aided Engineering and Technology, 2018 Vol.10 No.5, pp.530 – 542, published by Inderscience Publishers. (Scopus indexed).DOI:10.1504/IJCAET.2018.094331.*
19. *K.Suresh and Dr.M.RajasekharaBabu "Emerging Biomedical Health Care System by Using Internet of Things "JBBB, Journal of Biomimetics, Biomaterials and Biomedical Engineering (JBBBE), Vol.27, (2016), pp103-112. (Scopus Indexed journal, Published).ISSN:2296-9845. doi:10.40228/www.scientific.net/JBBB.27.103*
20. *K.Suresh and Dr.M.RajasekharaBabu "Towards Effective Communication Technique for Energy Efficient Internet of Things "International Journal of Engineering Research in Africa Vol. 21 (2016) pp 184-190 JERA, Trans Tech Publications, Switzerland(Scopus indexed)doi:10.4028/www.scientific.net/JERA.21.184*
21. *K.Suresh, Elizabeth Isaac and Dr.M.RajasekharaBabu "High Performance Computing on Heterogeneous/ Multiprocessors System Energy-Aware Design "International Journal of Applied Engineering Research IJAER ISSN: 0973-4562 Volume: 72 No.01 | 10 Feb-2015, Volume 10, Number 3 (2015) pp. 8841-8853 (Scopus indexed)http://www.ripublication.com/ijaer10/ijaerv10n4_41.pdf*
22. *K.Suresh, Dr.M.RajasekharaBabu, "Power-Aware System Design For Multiprocessors And Voltage Scaling/Frequency " Journal of theoretical and applied information technology JATIT ISSN: 1992-8645 | eISSN: 1817-3195 Volume: 72 No.01 | 10 Feb-2015, page 149-154, Available @ <http://www.jatit.org>(Scopus indexed)<http://www.jatit.org/volumes/Vol72No1/18Vol72No1.pdf>*
23. *K.Suresh, L.Gangadhar and M.Vidya "Medical Imaging Computing Based On Graphical Processing Units For High Performance Computing "IJRET: International Journal of Research in Engineering and Technology eISSN: 2319-1163 | pISSN: 2321-7308 Volume: 03 Special Issue: 05 | May-2014 | NCEITCS-2014, Available @ <http://www.ijret.org>.*
24. *O.Obulesu, Dr.A.Rama Mohan Reddy and K.Suresh "Finding Maximal Periodic Patterns and Pruning Strategy in Spatiotemporal Databases "International Journal of Advanced Research in Computer Science and Software Engineering IJARCSSE Volume 2 Issue 4 april 2012 ISSN: 2277 128Xhttp://www.ijarcsse.com/docs/papers/April2012/Volume_2_issue_4/V2I40038.pdf*

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25. K.Ramana,Dr.A.Subramanyam and **K.Suresh**“A Survey on Cloud Computing and Service Oriented Architecture”VSRD International Journal of Computer science and Information technology ,VSRD-IJCSIT, Vol. 1 (9), 2011, 656-665,ISSN NO:2231-2471http://www.vsrjournals.com/CSIT/Issue/2011_11_Nov/Web/2011_11_Nov.html.
 26. K.Ramana, ,Dr.A.RamamohanReddy,M.Subba Rao ,**K.Suresh** and S.Fahimuddin”Performance Analysis of Load Balancing Algorithms using Qualitative Parameters: A Review ” CiiT International Journal of Networking and Communication Engineering,September 2011,Volume 3 ,Issue 4, ,Print: ISSN 0974 – 9713 & Online: ISSN 0974 – 9616.
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 28. **K.Suresh**,R.MadanaMohana and Dr.A.RamaMohan Reddy “Improved FCM algorithm for Clustering on Web Usage Mining”, **IJCSI International Journal of Computer Science Issues**, Vol.8 Issue 1, January 2011,ISSN(Online):1694-0814. <http://www.ijcsi.org/papers/IJCSI-8-1-42-45.pdf>
 29. **K.Suresh**,R.MadanaMohana and Dr.A.RamaMohan Reddy “Improved FCM algorithm for Clusteringthe IRIS data”, **IJCSE International Journal on Computer Science and Engineering**, Vol.3,No 1, January 2011, pp 323-326 ,ISSN 0975-3397. <http://www.enggjournals.com/ijcse/doc/IJCSE11-03-01-088.pdf>
 30. R.MadanaMohana, **K.Suresh** and Dr.A.RamaMohan Reddy “crime analysis using data mining”, **IJEECT International Journal of Electrical ,Electronics and Computing Technology**, Vol.1(2), Jan-April, 2011, pp 58-63 ,ISSN 2229-3027.
 31. **K.Suresh** “a Closed Sequence Pattern Mining without Candidate Maintenance on Time Series Data”, **IJENGG International journal of Engineering and Technology**, Volume 2, Number 4, December 2009.pp 51-57,ISSN: **0974-5246**. <http://eashwarpublications.com/doc/suresh1.pdf>

Paper Submitted/Underreview/Revision

1. Mekala M.S , , Rizwan Patan, *Fadi Al-Turjman*, **Kallam Suresh**, korhancengiz, jaroslav.frnda” RFTRS: Reinforcement Learning based Flexible Task and Resource Scheduling Approach for Heterogeneous Fog Environment” Manuscript ID Access-2020-58212, IEEE Access, Dec,2020.
2. Sathish K, Narayana Y.V ,Mekala M.S, Rizwan Patan **Suresh Kallam**, ” Efficient Tumor Volume Measurement and Segmentation Approach for CT Image based on Twin Support Vector Machines” Manuscript ID Access-2020-58212, Neural Computing and Applications, Springer, Dec,2020.
3. K. Deeba, , Amutha Balakrishnan,kadiyala Ramana, Vidhyacharan Bhaskar, **Suresh Kallam**, ” Deep learning and IOT based system for Leaf disease classification in Smart Agriculture” Wireless Personal Communications, Springer, Sep.,2020
4. G. Senthil Kumar, Kadiyala Ramana,Manikandan Ramachandran, Vidhyacharan Bhaskar, **Suresh Kallam**, Rizwan Patan ” A Trigram Oriented Bootstrapping Framework for Effective Web Services Discovery” Wireless Personal Communications, Springer, Aug.,2020

5. Amutha Balakrishnan, Kadiyala Ramana, Karthick Nanmaran, Manikandan Ramachandran, Vidhyacharan Bhaskar, **Suresh Kallam**” RSSI based Localization and Tracking in a Spatial Network System using Wireless Sensor Networks” Wireless Personal Communications, Springer, Aug.,2020

Ph.D Thesis Evaluation

- “AN EFFICIENT OPINION BASED RECOMMENDER SYSTEM WITH QUICK ACCESS MEMORY AND COLLABORATIVE FILTERING”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “An Efficient Intrusion Detection System with Feature Selection, Classification and Optimized Rule Generation Algorithms for Network Security”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “EARLY DETECTION OF AUTISM SPECTRUM DISORDER USING RECURRENT NETWORK CLASSIFIERS FROM GENOME SEQUENCE” BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “ Design of Geographical Zone based Traffic Aware Routing Algorithms for Efficient Data Transmission in Vehicular Ad Hoc Network”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.

Editorship

- **Science Publishing Group**, USA, *Engineering and Applied Sciences* journal ,Special Issue Guest Editor for *Engineering Projects and Studies Using Raspberry Pi*.
- **Indersciencejournal**(World Review of Science, Technology and Sustainable Development ,Special Issue on: "The Emergence of Sustainable Development and Technology for Innovation Using Green Computing")(Free Scopus Journal).
- **Benthamsience**(Recent Patents on Computer Science ,Special Issue on: "Recent advances in Internet of Things using Computing Intelligence") (Free Scopus Journal).

Copyright Register

1. “NEURAL NETWORKS FOR SMART DATA STORAGE USAGE IN INTERNET OF THINGS” 29 April 2020 Registration Number :L-90786/2020.
2. “Performance Improvement of Internet of Things Applications for Smart Cities through Real-Time Big Data Computing” 18 June 2021, **Registered Number** :L-11191/2021-CO/L.
3. “INTERNET OF THINGS (IOT) ENABLED SECURE SMART CITY APPLICATION” ,**Registered 6 June 2021**,3097/2021-CO/L
4. “Blockchain Defined Network (BDN) based secure transaction in IOT environment” March 2021,Diary no. is 6954/2021-CO/L.
- 5.



Patent filled

1. “Computer Implemented method for detection text based cyber stalking in data transmission using machine learning”,patent application number 202041028541, Patent published on 17.07.2020.
2. “System for walking Assistance device for visually impaired person using machine learning”,patent application number 202041007351, Patent published on 28.02.2020.
3. “IOT Sensors based multi functional and intelligent walk guiding stick for visual disabled person”,patent application number 201941051603, Patent published on 20.12.2019.
4. “Method of lung cancer detection using machine learning based CT-SCAN image processing”,patent application number 201941050453, Patent published on 13.12.2019.
5. “Method of Load Distribution Balancing For Fog Cloud Computing In IoT Environment”,patent application number 201941044511, Patent published on 15.11.2019.
6. “System and Method for data security using DNA cryptography based encryption”, patent application number 201941039845, Patent published on 01.10.2019.
7. “Method for maximum energy utilization in Internet of Things”, patent application number 201941040703, Patent published on 09.10.2019.
8. “System of Intelligent parking management using cloud computing”, patent application number 201911026316, Patent published on 12.07.2019.
9. “Fuzzy Neural Network Based PID control system and method thereof for industrial process control” patent application number 201941024479, published on 28.06.2019
10. “Computer Implemented system for Optimizing placement and routing in very largescale integrated circuit design”,201941021599,published on 09.08.2019.
11. “Patient Monitoring System“Application number 201811027264, applied on 20.07.2018.

Patent Grant/Accepted (International)

1. “QUANTUM MACHINE LEARNING BASED SENSOR CONSOLIDATION APPRAOCH FOR IIOT” ”,patent application number 2020102437, Patent Granted on 28.10.2020.
2. “EARLY COVID PREDICTION: NEURO FUZZY MULTI-LAYERED DATA CLASSIFIER” ”,patent application number 2020102448, Patent Granted on 28.10.2020.
3. “SPATIO-TEMPORAL MODELLING TECHNIQUES FOR PREDICTING COVID-19 INFECTION RISKTHROUGH WEARABLE” ”,patent application number 2020102363, Patent Granted on 21.10.2020.
4. “**Smart COVID Mask: AI-based mask with attachment to auto-detect and kill the COVID-19 virus** ”,patent application number 2020102080, Patent grant on 30.09.2020.
5. “**Smart COVID Scanner: Portable and Affordable Scanner to Detect COVID-19 Virus**”,patent application number 2020101728, Patent Granted on 02.09.2020.
6. “**INDUSTRIAL DIGITAL ASSISTANTS (IDA): DESIGNING AND REORGANIZING THE WORKPLACE LAYOUT FOR THE INDUSTRIES THROUGH AI TECHNIQUES DURING LARGE**

- SCALE PANDEMICS**”,patent application number 2020101596, Patent Granted on 26.08.2020.
7. **“Customized Identity Management Systems (CIMS) for Smart City Infrastructure Platform through Blockchain”**,patent application number 2020101845, Patent Accepted on 15.08.2020.
 8. **“SMART QUARANTINE SHELTERS FOR POTENTIAL RISK PATIENTS USING IOT”**,patent application number 2020101145, Patent Granted on 30.07.2020.
 9. **“ADVANCE METERING INFRASTRUCTURE SYSTEM FOR LARGE SCALE IOT NETWORKS DATA COLLECTION BY STREAMING”**,patent application number 2020101173, Patent Granted on 22.07.2020.
 10. **“LARGE SCALE IoT PILOT STRUCTURE FOR SMART CITY PLAN AND DEVELOPMENT”**,patent application number 2020101211, Patent Granted on 22.07.2020.

Reviewer

- IEEE Access
- IET Networks(Scopus,Web of Science)
- Wireless Personal Communication
- Ambient and humanoid journal
- Computer Communication, Elsevier
- Inderscience Journal (Scopus)
- IGI Global(ESCI)
- IET Communication
- Betham Science Journal(Scopus)
- Elsevier Journal(Scopus)
- Journal of Ambient Intelligence and Humanized Computing
- The Computer Journal, The Oxford Academic,SCIE and Scopus journal.

AWARDS AND RECOGNITION

i) Academic and Research Awards

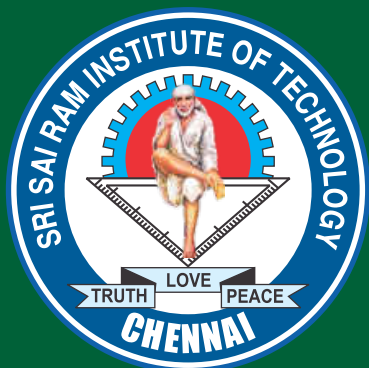
2018**“Best Faculty Award -2018”** by the Academic Brilliant Awards ,28 January 2018, at Noida, Uttar Pradesh, India.

2017 **“Young Scientist Award -2017”** by the CERG ,8 December 2017, at Delhi, India.

2017 **“Young Faculty Award in Computer Science and Engineering-2017”** by the. “Venus International Foundation”,8 July 2017, at Chennai, India

2016 **Got who is who award, 2000 Outstanding Intellectuals of the 21st Century from The International Biographical Centre, of Cambridge, England. 12, August 2016.**

2016 Got Research Award from VIT University in the year 2016 for highest contribution of paper published at SCOPE, VIT University ,Vellore, Tamilnadu.



Sri

SAI RAM INSTITUTE OF TECHNOLOGY

Sai Leo Nagar, West Tambaram, Chennai - 44



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - II

HOD ROOM

DOOR

MOBILE APPLICATION LAB / SECURITY LAB



CASE TOOL LAB / OS LAB / GRAPHICS LAB



DOOR

COMPILER LAB / INTERNET PROGRAMMING LAB



COMPUTER NETWORK LAB / GRID AND CLOUD COMPUTING LAB



DOOR

UPS ROOM

Network Rack



6 KV



10 KV



10 KV



6 KV



10 KV



DOOR





Sri

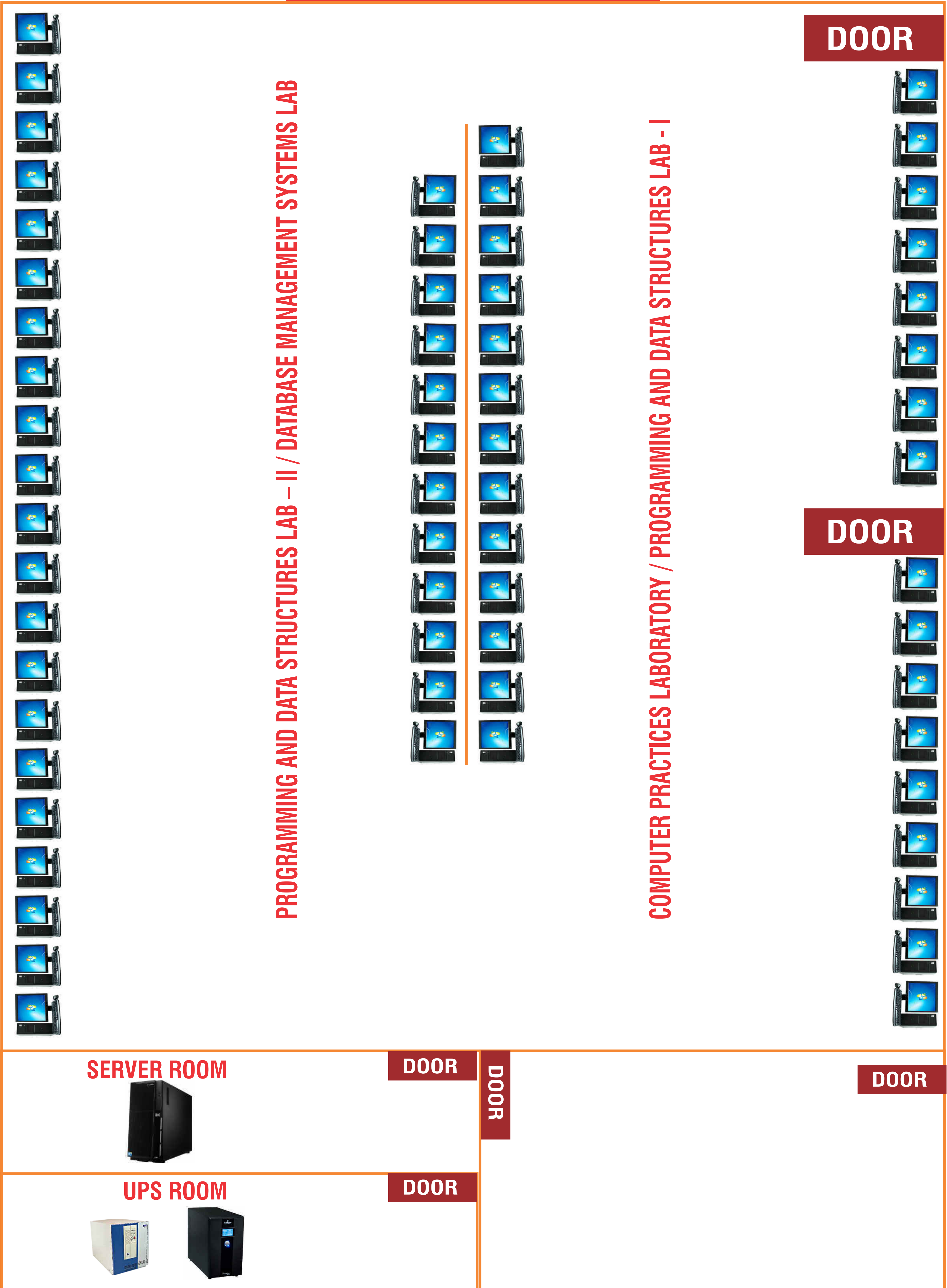
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - I



PROGRAMMING AND DATA STRUCTURES LAB - II / DATABASE MANAGEMENT SYSTEMS LAB

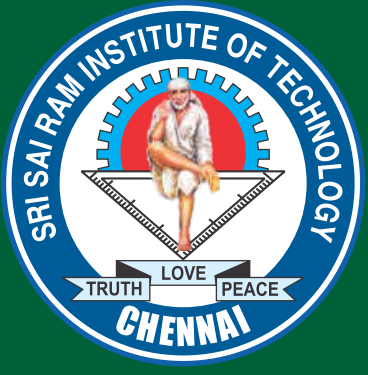
COMPUTER PRACTICES LABORATORY / PROGRAMMING AND DATA STRUCTURES LAB - I

SERVER ROOM



UPS ROOM





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Sai Leo Nagar, West Tambaram, Chennai - 44



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - III



SERVER



COMMUNICATION SKILLS LAB



DOOR





To,

The Principal
Sri Sairam institute of technology
West Tambaram
Chennai-600044

We are pleased to know that Sri Sairam Institute of Technology is submitting a proposal with SERB (Scientific Engineering and Research board) under the title “**An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer’s Disease Progression and Intervention**” to facilitate Research and Development in the campus.

Vectra Technosoft Pvt. Ltd is herewith agreed to support this initiative by providing technical software requirements.

Sri Sairam Institute of Technology is solely responsible for the safety and insurance measures to safeguard against any loss incurred.

Vectra Technosoft Pvt Ltd.


Ranjit Sengupta
Director





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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
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2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
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Head of the Institute

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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai



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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
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Date:




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Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

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4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
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8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai

Undertaking by the Principal Investigator

To

The Secretary
SERB, New Delhi

Sir

I Dr K.Palanikumar hereby certify that the research proposal titled *An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention* submitted for possible funding by SERB, New Delhi is my original idea and has not been copied/taken verbatim from anyone or from any other sources. I further certify that this proposal has been checked for plagiarism through a plagiarism detection tool i.e. TURNITIN approved by the Institute and the contents are original and not copied/taken from any one or many other sources. I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grant Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulation, 2018. I also declare that there are no plagiarism charges established or pending against me in the last five years. If the funding agency notices any plagiarism or any other discrepancies in the above proposal of mine, I would abide by whatsoever action taken against me by SERB, as deemed necessary.



Signature of PI with date

Name / designation

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
5. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
6. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
7. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research objectives.
8. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
9. The University/ Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of the SERB.
10. University/ Institute agrees to undertake the financial and other management responsibilities of the project as per SERB guidelines.
11. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:




Signature

Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai



Developing powerful and effective hybrid model for obtaining high precision rainfall predictions using intelligent algorithms in India.

Reference No. : 182022009203

Saved By : Dr. S VIDYA

Saved Date : 19-Apr-2022

PROPOSAL DETAILS

Dr. S VIDYA

vidya.lkshmi@gmail.com

Assistant Professor (Computer Science and Engineering)

Sri Sairam Institute of Technology

Sairam college rd, sai leo nagar, west tambaram, chennai, tamil nadu ,
Chennai, Tamil nadu-600044

Technical Details :

Scheme :	Core Research Grant		
Research Area :	Electrical Electronics & Computer Engineering (Engineering Sciences)		
Duration :	24 Months	Contact No :	+917358218015
Date of Birth :	21-Dec-1988		
Nationality :	INDIAN	Total Cost (INR) :	10,96,989
Is PI from National Laboratory/Research Institution ?	No		

Project Summary :

- Accurate rainfall prediction is imperative in planning and management of water resources because it can convey valuable information to mitigate natural hazards.
- Forecasting rainfall is still a challenging task due to the complex atmospheric phenomenon so far.
- Many methods have been already attempted for forecasting rainfall, but it achieves low prediction accuracy for long-term and short-term rainfall forecasting.
- Several existing literatures proposed for rainfall prediction to improve the prediction accuracy. Still, the accuracy is the main issues in the rain fall prediction schemes.
- Normally, the monsoon forecasting is very necessary in India in which two categories of prediction are used that is short and long term forecasting.
- Here, long-term forecasting is stated the prediction of rainfall over several weeks or months as well as the short-term prediction involves the prediction of rainfall over several days in a particular location.
- In this research, Long-term and Short-term Rainfall forecasting using Deep Neural Network Optimized (DNN) with Selfish Herd Optimization (SHO) are proposed for accurate rainfall forecasting.
- Initially, the long-term rain fall data and short-term rain fall data are taken from meteorological station.
- Then the collected long-term and short-term rainfall data are pre-processed using hybrid decomposition method that is Morphological filtering and Extended Empirical wavelet transformation to retrieve the missing values.
- Then the pre-processed data is given to Deep Neural Network for classify the category of rainfall prediction.
- But Deep Neural Network does not reveal any acceptance of optimization techniques for calculating accurate classification of rainfall.
- Hence Selfish Herd Optimization (SHO) is proposed for optimizing the weights parameters of Deep Neural Network.
- Finally, Deep Neural Network Optimized with Selfish Herd Optimization (SHO) accurately predict the rain fall as very low rainfall, low rain fall, medium rainfall, high and very high rainfall.
- The proposed method is implemented in Python tool and the efficiency of the proposed MFEEWT-SHO-DNN based rainfall prediction framework with long-term and short-term.
- Finally, the proposed MFEEWT-SHO-DNN based rainfall prediction framework is compared with existing methods such as MapReduce based Exponential Smoothing Technology for rainfall prediction (MR-EST-RP), modular artificial neural networks with support vector regression for rainfall prediction (MANN-SVR-RP), and biogeography-based extreme learning machine (BBO-ELM) (BBO-ELM-RP).
- The hybrid methodology combines decomposition technique, optimization technique and deep neural networks by which the prediction is highly accurate.
- To predict the amount of rainfall in an upcoming season is the most significant thing.
- In olden days people observed weather conditions and predict climate according to past weather occurrence.

Objectives :

- The destruction of agriculture due to heavy and irregular rainfall can be avoided by accurately predicting the rainfall.
- Here, the occurrence of rainfall is highly related to atmospheric parameters.
- Thus, a highly accurate model for rainfall prediction is needed so that the risks can be minimized in the agricultural farms.
- Weather changes are one of the complex disasters in cultivation.
- Nowadays climate change is irregular so that the disasters can happen at any time, thus the rainfall prediction is done by hybrid methodology.
- Rainfall forecasting is necessary for the hydrologic series and agriculture.
- The dataset involves average rainfall from the year 1951 to 2000 for each district in India for every month.
- Here, the entire data is separated into training and testing for predicting rainfall rate.
- Additionally, to analyze the efficiency of the proposed model five locations are randomly selected from the dataset for rainfall prediction.
- Here, the rainfall data of the selected locations are applied to the proposed MFEEWT-SHO-DNN for forecasting the long-term and short-term rainfalls.
- Also, the selected five locations are Kerala-cannur, Tamil Nadu- Theni, Gujarat-Surat, Assam-Barpeta, and Himachal-Kullu.
- Destruction of crops and farms can be reduced by this rainfall forecasting.
- The main disaster happens in cultivation due to change in weather.
- Rainfall depends upon atmospheric parameters.

Keywords :

Deep Neural Network, wavelet transformation, Morphological filtering, Rainfall forecasting, Long-term, Short-term rainfall.

Expected Output and Outcome of the proposal :

- The size of damage can be predicted before the actual occurrence of damage through the implemented model.
- The damage caused by heavy rain can be reduced by establishing measures priorly which is of great benefit.
- If the emergency system and countermeasures are implemented combinely, the damage which is expected can be reduced.
- By using short and long term rainfall prediction, cultivation of crops in agriculture can be planned in advance.

Suitability of the proposed work in major national initiatives of the Government:

Digital India

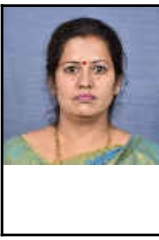

Theme of Proposed Work:

Environment, Climate Change

Collaboration Details for last 5 Years :

Planned Collaboration for the proposed work with any foreign scientist/ institution ?

No

SNNo.	CO-PI Details
1	 <p>B SREEDEVI hodcse@sairamit.edu.in Professor(Computer Science and Engineering)</p> <p>Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu , TAMIL NADU, CHENNAI D.O.B : 26 Sep, 1978</p>
2	 <p>Palanikumar K palanikumar@sairamit.edu.in Professor and Principal(Mechanical Engineering)</p> <p>Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu , TAMIL NADU, CHENNAI D.O.B : 10 May, 1968</p>

Other Technical Details

Developing powerful and effective hybrid model for obtaining high precision rainfall predictions using intelligent algorithms in India.

1. Origin of the Proposal:

- The destruction of agriculture due to heavy and irregular rainfall can be avoided by accurately predicting the rainfall.
- Here, the occurrence of rainfall is highly related to atmospheric parameters.
- Thus, a highly accurate model for rainfall prediction is needed so that the risks can be minimized in the agricultural farms.
- Weather changes are one of the complex disasters in cultivation.
- Nowadays climate change is irregular so that the disasters can happen at any time, thus the rainfall prediction is done by hybrid methodology.
- Rainfall forecasting is necessary for the hydrologic series and agriculture.

2. Review of status of Research and Development in the subject

2.1 International Status:

- [1] Diba, F.D., Samad, M.A. and Choi, D.Y., 2021. The Effects of Rain on Terrestrial Links at K, Ka and E-Bands in South Korea: Based on Supervised Learning. IEEE Access, 9, pp.9345-9355.
- The rainfall data of slant and terrestrial areas of South Korea were collected.
 - Artificial Neural Networks was applied to this area for highly accurate rainfall prediction.
 - The high-volume data is transmitted over the wireless network.
 - Millimeter-wave frequency helps in transferring a huge amount of data.
- [2] Chengcheng Chen, Qian Zhang, Mahsa H. Kashani, Changyun Jun, Sayed M. Bateni, Shahab S. Band, Sonam Sandeep Dash & Kwok-Wing Chau (2022) Forecast of rainfall distribution based on fixed sliding window long short-term memory, Engineering Applications of Computational Fluid Mechanics, 16:1, 248-261, DOI: [10.1080/19942060.2021.2009374](https://doi.org/10.1080/19942060.2021.2009374)
- The data mining techniques decreases the accuracy of rainfall prediction because of a lack of sufficient memory components.
 - Dry conditions prevail in a part of Turkey due to less rainfall.
 - The rainfall has to be predicted accurately in this specific region.
 - In this paper, a deep-learning-based long short-term memory (LSTM) model was developed and compared with Random Forest data driven model.
 - The prediction is measured with statistical measures such as root mean square error

(RMSE), RMSE-observations standard deviation ratio (RSR), Legate and McCabe's index (LMI), correlation coefficient (R).

- [3] Adam A. Scaife, Laura Ferranti, Oscar Alves, Panos Athanasiadis, Johanna Baehr, Michel Dequé, Tina Dippe, Nick Dunstone, David Fereday, Richard G. Gudgel, Richard J. Greatbatch, Leon Hermanson, Yukiko Imada, Shipra Jain, Arun Kumar, Craig MacLachlan, William Merryfield, Wolfgang A. Müller, Hong-Li Ren, Doug Smith, Yuhei Takaya, Gabriel Vecchi, Xiaosong Yang (2018) Tropical rainfall predictions from multiple seasonal forecast systems, *International Journal of Climatology*, 39:2, 974-988, DOI: <https://doi.org/10.1002/joc.5855>

- In multiple seasonal prediction systems, the tropical rainfall is predicted to document the variation across different tropical regions.
- The relationship between the magnitude of mean state errors (i.e., forecast drift) and seasonal forecast skill is investigated.
- This tropical rainfall forecasts prediction leads to accurate rainfall prediction of extra-tropical inter-annual variability in the winter Pacific North American pattern and the North Atlantic Oscillation.
- The range of most predictable region starts from East Pacific, West Pacific, and Atlantic and Indian region.

- [4] Nor Samsiah Sani, Abdul Hadi Abd Rahman, Afzan Adam, Israa Shlash, Mohd Aliff (2020) Ensemble Learning for Rainfall Prediction, (*IJACSA*) *International Journal of Advanced Computer Science and Applications*, 11:11, DOI: [10.1002/joc.5855](https://doi.org/10.1002/joc.5855)

- Rainfall prediction depends on the parameters such as wind, humidity, temperature and so on.
- Using machine learning techniques, short term and long term rainfall forecasting can be done.
- In this paper, ensemble learning is proposed to increase the effectiveness of rainfall prediction.
- The machine learning classifiers are combined and compared with individual classifier for rainfall forecasting in Malaysian area.

2.2 National Status:

- [1] Thakur, Nisha & Karmakar, Sanjeev & Soni, Sunita. (2021). Rainfall Forecasting Using Various Artificial Neural Network Techniques - A Review. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*. 506-526. [10.32628/CSEIT2173159](https://doi.org/10.32628/CSEIT2173159).

- In this paper Artificial Neural Network, Back-Propagation, Auto-Regressive Moving Average (ARIMA), ANN, K- Nearest Neighbourhood (K-NN), Hybrid model (WaveletANN), Hybrid Wavelet-NARX model, Rainfall-runoff models, (Two-stage optimization technique),

Adaptive Basis Function Neural Network (ABFNN), Multilayer perceptron are the techniques applied and reviewed for rainfall forecasting.

- On comparing these techniques Artificial Neural Network was highly accurate for rainfall prediction.
 - In India, most of the farmers depend on rain for agriculture.
 - Accurate rainfall prediction is needed for drinking water supply also.
- [2] Praveen, B., Talukdar, S., Shahfahad *et al.* Analyzing trend and forecasting of rainfall changes in India using non-parametrical and machine learning approaches. *Sci Rep* **10**, 10342 (2020). <https://doi.org/10.1038/s41598-020-67228-7>.
- Long term forecasting of rainfall in India is done by using the data from 1901-2015.
 - Artificial Neural Network with Multi Layer Perceptron is implemented and 15 years ahead rainfall is forecasted.
 - The rainfall has increased during the period 1901-1950 and decline in the rainfall happens after 1950.
 - The prediction results show that upcoming 15 years also have decline in rainfall.
- [3] Mohini Darji (2020), Rainfall Forecasting Using Neural Networks, International Journal of Research and Analytical Reviews.
- Long-term rainfall predictions cannot be done by using statistical measures as the climate changes dynamically.
 - The Navasari and Anand region's daily dataset were collected and converted as yearly and monthly datasets for implementation.
 - Auto Regressive Integrated Moving Average (ARIMA), Feed Forward Neural Network (FFNN), Radial Basis Function Neural Network (RBFNN), and Time Delay Neural Network (TDNN) are the techniques used for rainfall forecasting.
 - Evaporation, wind speed, maximum temperature, minimum temperature, and relative humidity are the parameters used as input parameters.
- [4] Saroj Kr. Biswas; Leniency Marbaniang; Biswajit Purkayastha; Manomita Chakraborty; Heisnam Rohen Singh; Monali Bordoloi (2016), Rainfall forecasting by relevant attributes using artificial neural networks - a comparative study, International Journal of Big Data Intelligence, 3:2, pp.111 – 121.
- A feature selection algorithm is proposed for rainfall forecasting using neural network and the performance of ANN methods such as multi-layer feed forward neural network

(MLFNN), radial basis function neural network (RBFNN), focused time delay neural network (FTDNN) and nonlinear autoregressive exogenous input neural network (NARXNN) are reviewed.

- NARXNN higher predicted accuracy compared with others.
- The proposed model works better than earlier rainfall forecasting model.
- To get higher accuracy of rainfall prediction only the relevant attributes have to be considered so that feature selection is employed to select the relevant attributes for rainfall prediction.

[5] K.Varada Rajkumar, K. Subrahmanyam (2021), A Novel Method for Rainfall Prediction and Classification using Neural Networks, (IJACSA) International Journal of Advanced Computer Science and Applications, 12:7,DOI: [10.14569/IJACSA.2021.0120760](https://doi.org/10.14569/IJACSA.2021.0120760).

- In order to increase the food production and to decrease floods, rainfall prediction should be highly accurate.
- Hybrid methodology is implemented by combining neural networks and the Ant Colony Optimization Algorithm (ACO).
- The collected data is pre-processed and normalized and given to classifiers to evaluate performance.
- The data is collected from meteorological department which is tested and verified.

2.3 Importance of the proposed project in the context of current status

- The hybrid methodology combines decomposition technique, optimization technique and deep neural networks by which the prediction is highly accurate.
- To predict the amount of rainfall in an upcoming season is the most significant thing.
- In olden days people observed weather conditions and predict climate according to past weather occurrence.
- There are many tools and techniques available currently for rainfall prediction.
- Mathematical, statistical, and artificial intelligence techniques are used for forecasting weather conditions.
- Mathematical modeling needs atmospheric dynamics and it includes calculation with huge datasets.
- To estimate the time series examination and regression examination, Statistical weather forecasting technique is used.
- But nowadays so many researches are conducted about these techniques in rainfall prediction.

- Also, ANN plays a vital role in accurate forecasting and it can handle problematical data well.
- Accurate rainfall prediction is imperative in planning and management of water resources because it can convey valuable information to mitigate natural hazards.
- Forecasting rainfall is still a challenging task due to the complex atmospheric phenomenon so far.
- Many methods have been already attempted for forecasting rainfall, but it achieves low prediction accuracy for long-term and short-term rainfall forecasting.
- Several existing literatures proposed for rainfall prediction to improve the prediction accuracy. Still, the accuracy is the main issues in the rain fall prediction schemes.
- Normally, the monsoon forecasting is very necessary in India in which two categories of prediction are used that is short and long term forecasting.
- Here, long-term forecasting is stated the prediction of rainfall over several weeks or months as well as the short-term prediction involves the prediction of rainfall over several days in a particular location.
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- Then the pre-processed data is given to Deep Neural Network for classify the category of rainfall prediction.
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- Hence Selfish Herd Optimization (SHO) is proposed for optimizing the weights parameters of Deep Neural Network.
- Finally, Deep Neural Network Optimized with Selfish Herd Optimization (SHO) accurately predict the rain fall as very low rainfall, low rain fall, medium rainfall, high and very high rainfall.
- The proposed method is implemented in Python tool and the efficiency of the proposed MFEEWT-SHO-DNN based rainfall prediction framework with long-term and short-term.
- Finally, the proposed MFEEWT-SHO-DNN based rainfall prediction framework is compared with existing methods such as MapReduce based Exponential Smoothing Technology for rainfall prediction (MR-EST-RP), modular artificial neural networks with support vector regression for rainfall prediction (MANN-SVR-RP), and biogeography-based extreme learning machine (BBO-ELM) (BBO-ELM-RP).

2.4 If the project is location specific, basis for selection of location be highlighted:

- The dataset involves average rainfall from the year 1951 to 2000 for each district in India for every month.
- Here, the entire data is separated into training and testing for predicting rainfall rate.
- Additionally, to analyze the efficiency of the proposed model five locations are randomly selected from the dataset for rainfall prediction.
- Here, the rainfall data of the selected locations are applied to the proposed MFEEWT-SHO-DNN for forecasting the long-term and short-term rainfalls.
- Also, the selected five locations are Kerala-cannur, Tamil Nadu- Theni, Gujarat-Surat, Assam-Barpeta, and Himachal-Kullu.

3 Work Plan:

3.1 Methodology:

ALGORITHM 1: Multivariate Empirical Mode Decomposition (MEMD)

1. Select an appropriate point series for sampling a $q-1$ sphere;

2. Formulate a projection $h_{\theta_s}(d)$, of N -channel input signals $a^N(d)$ ($N=4$) along the direction vector b_{θ_s} for all S (series of direction vector completely), providing

$$h_{\theta_s}(d)_{s=1}^S \text{ as projection series;}$$

3. Search the time instant $d_{\theta_s}(d)_{s=1}^S$, relating to the maxima of projected signal series

$$h_{\theta_s}(d)_{s=1}^S;$$

4. To determine the multivariate envelope curve $en_{\theta_s}(d)_{s=1}^S$ by interpolating

$$[d_{\theta_s}(d)a^N(d_{\theta_s})];$$

5. For a series of S direction vectors, the mean $Y(d)$ of the envelope curve is formulated as

$$Y(d) = \frac{1}{S} \left(\sum_{s=1}^S en_{\theta_s}(d) \right);$$

6. Let $f^N(d) = a^N(d) - Y(d)$. If $f^N(d)$ satisfies the terminating criterion for a multivariate IMFs then apply the aforementioned process $a^N(d) - Y(d)$; or else apply it to $f^N(d)$.

ALGORITHM 2: EEWT by Morphological Filtering

1. Inputs: 1Dist N -point time series $w(n)$;

2. To determine the Fourier transform spectrum $\bar{r}(\omega)$,

$$\bar{r}(\omega) = Z \left[r(n) = \sum_{k=0}^{n-1} |r(n)| e^{-ktn} \right];$$

3. Formulate every local maxima of $\bar{r}(\omega)$, the significance of structural feature is fixed as

G , $G = y \times \text{Dist}$, Dist is the smallest distance between two consecutive maxima;

4. Morphological Filtering, determines the simplified $\bar{r}(\omega)$;

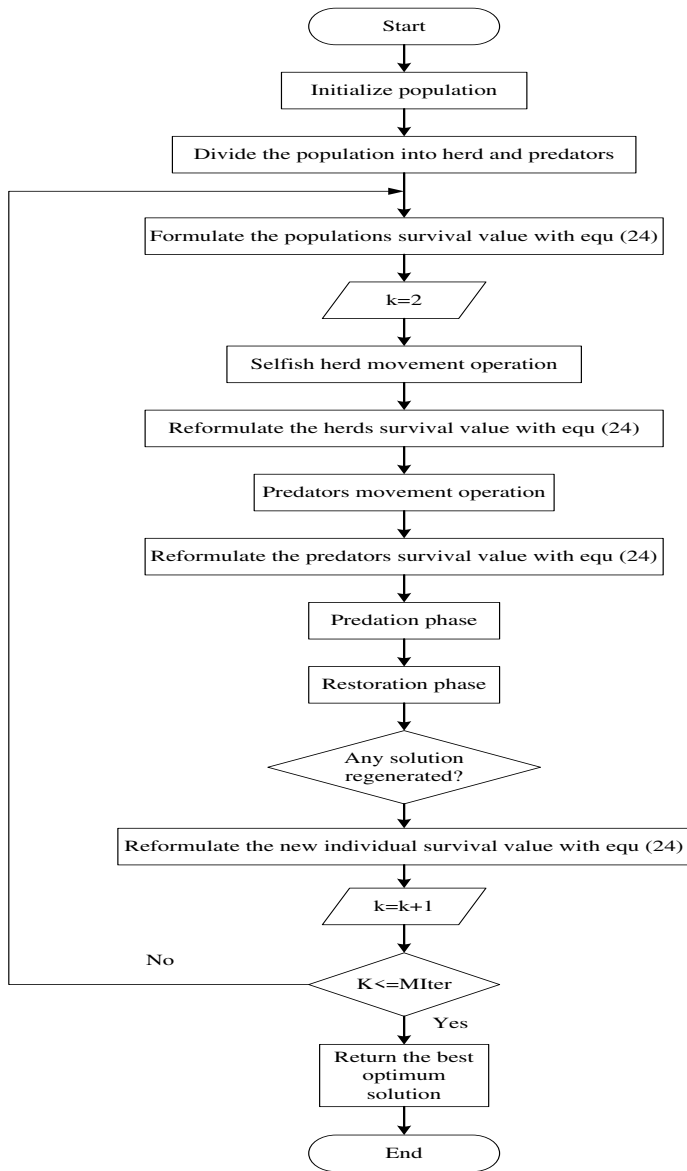
5. Formulate every local maxima of $\bar{r}(\omega)$, the segmentation limit ω^k are termed as the

lowest minima of $\bar{r}(\omega)$;

6. Empirical wavelet decomposition;

7. Output: A set of modes $H(l), l = 1, 2, 3, \dots, x$.

Selfish Herd Optimization (SHO)



3.2 Time Schedule of activities giving milestones through BAR diagram.

Activity	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	Wk 17	Wk 18	Wk 19		
Requirements Baseline																					
Design Completion																					
Coding Completion																					
Testing Completion																					

3.3 Suggested Plan of action for utilization of research outcome expected from the project.

- The size of damage can be predicted before the actual occurrence of damage through the implemented model.
- The damage caused by heavy rain can be reduced by establishing measures priorly which is of great benefit.
- If the emergency system and countermeasures are implemented combinely, the damage which is expected can be reduced.
- By using short and long term rainfall prediction, cultivation of crops in agriculture can be planned in advance.

3.4 Environmental impact assessment and risk analysis.

- Destruction of crops and farms can be reduced by this rainfall forecasting.
- The main disaster happens in cultivation due to change in weather.
- Rainfall depends upon atmospheric parameters.
- Hybrid approach is developed for short term and long term rainfall prediction to improve the accuracy.

4 Expertise:

4.1 Summary of roles/responsibilities for all Investigators:

S. No.	Name of the Investigators	Roles/Responsibilities
1.	Dr. K. Palanikumar	Data Collection
2.	Dr.B.Sreedevi	Implementing short term rainfall forecasting
3.	Dr.S.Vidya	Implementing long term rainfall forecasting

4.2 Key publications published by the Investigators pertaining to the theme of the proposal during the last 5 years

- Vidya, S & Srie Vidhya Janani, E 2020, 'Tabu search algorithm based general regression neural network for long term wind speed predictions', **Automatika: Journal for Control, Measurement, Electronics, Computing and Communications**, vol. 61, no. 4, pp. 657-669, **Impact Factor: 0.764**
- Vidya, S & Srie Vidhya Janani, E 2021, 'Wind speed multi-step forecasting model using a hybrid decomposition technique and a selfish herd optimizer based deep neural network', **Soft Computing, Springer**, DOI:<https://doi.org/10.1007/s00500-021-05608-5>, **Impact Factor: 3.050**.
- Paper published in the "Lecture notes and Network systems" in "Risk Prediction of Lung Disease using Deep learning approach", vol.300, **Springer, Cham**. https://doi.org/10.1007/978-3-030-84760-9_40, Sep 2021.

- Paper Published in the “International Journal of Scientific and Technology Research” in “A Review on the Hybrid Approaches for wind speed forecasting”, ISSN-2277-8616, Vol-8, Issue 9, Sep-2019.
- B. Sreedevi and P. M. Pachaiammal, "Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms," 2018 International Conference on Communication, Computing and Internet of Things (IC3IoT), 2018, pp. 6-11, doi: 10.1109/IC3IoT.2018.8668205.
- B. Sreedevi, Disaster Management Using Blockchain and Cloud Services, Journal of Green Engineering (JGE) Volume-10, Issue-10, October 2020.
- Rajasekaran, T., Palanikumar, K. & Latha, B. Investigation and analysis of surface roughness in machining carbon fiber reinforced polymer composites using artificial intelligence techniques. *Carbon Lett.* **32**, 615–627 (2022). <https://doi.org/10.1007/s42823-021-00298-3>
- Tamilarasan, A., Rajmohan, T., Rajamani, D., Palanikumar, K. (2022). Optimization of Process Parameters in AWJ Cutting of Pineapple Fiber Reinforced Polymer Composites: Hybrid SCCSA Algorithm. In: Palanikumar, K., Thiagarajan, R., Latha, B. (eds) Bio-Fiber Reinforced Composite Materials. Composites Science and Technology . Springer, Singapore. https://doi.org/10.1007/978-981-16-8899-7_7

4.3 Bibliography

5 List of Projects submitted/implemented by the Investigators

5.1 Details of Projects submitted to various funding agencies:

S. No	Title	Cost in Lakh	Month of submission	Role as PI/Co-PI	Agency	Status
1	"Developing powerful and effective hybrid model for obtaining high precision wind speed predictions using intelligent algorithms in India."	1630989	29/12/21	PI	DST	Under Review

5.2 Details of Projects under implementation:

S. No	Title	Cost in Lakh	Start Date	End Date	Role as PI/Co-PI	Agency
NIL						

5.3 Details of Projects completed during the last 5 years:

S. No	Title	Cost in Lakh	Start Date	End Date	Role as PI/Co-PI	Agency
1	Processing and Characterization of composite materials including natural fiber reinforced composites	6.0	18/03/2015	31/03/2015	PI	AICTE
2	Staff Development Programme on Artificial Intelligence with AI	7.0	15/09/2011	27/09/2011	PI	AICTE

6 List of facilities being extended by parent institution(s) for the project implementation.

6.1 Infrastructural Facilities

Sr. No.	Infrastructural Facility	Yes/No/ Not required Full or sharing basis
1.	Workshop Facility	yes
2.	Water & Electricity	yes
3.	Laboratory Space/ Furniture	yes
4.	Power Generator	yes
5.	AC Room or AC	yes
6.	Telecommunication including e-mail & fax	yes
7.	Transportation	yes
8.	Administrative/ Secretarial support	yes
9.	Information facilities like Internet/Library	yes
10.	Computational facilities	yes
11.	Animal/Glass House	yes
12.	Any other special facility being provided	yes

6.2 Equipment available with the Institute/ Group/ Department/Other Institutes for the project:

Equipment available with	Generic Name of Equipment	Model, Make & year of purchase	Remarks including accessories available and current usage of equipment
PI & his group	Rain gauge	http://aws.imd.gov.in:8091/	Rainfall data can be downloaded

7 Name and address of experts/ institution interested in the subject / outcome of the project.

- Dr.P.Deepalakshmi,
Dean/SOC,
Kalasalingam Academy of Research and Education,
Virudhunagar District.
- Dr.R.Murugeswari,
Assistant Professor,
Computer Science and Engineering,
Vellore Institute of Technology,
Bhopal.

Budget Details

Institution wise Budget Breakup :

Budget Head	Sri Sairam Institute of Technology	Total
Research Personnel	6,00,000	6,00,000
Consumables	2,46,989	2,46,989
Travel	1,00,000	1,00,000
Contingencies	1,50,000	1,50,000
Total	10,96,989	10,96,989

Institute Name : *Sri Sairam Institute of Technology*

Year Wise Budget Summary (Amount in INR) :

Budget Head	Year-1	Year-2	Total
Research Personnel	3,00,000	3,00,000	6,00,000
Consumables	1,55,000	91,989	2,46,989
Travel	50,000	50,000	1,00,000
Contingencies	1,00,000	50,000	1,50,000
Grand Total	6,05,000	4,91,989	10,96,989

Research Personnel Budget Detail (Amount in INR) :

Designation	Year-1	Year-2	Total
Junior Research Fellow <i>To provide short-term and long-term rainfall forecast and develop highly accurate prediction model for real time data</i>	3,00,000	3,00,000	6,00,000

Consumable Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Total
<i>photocopying, printing, pencils, pens, pads of paper, markers, postage, computer supplies, Desktop, Printer, Server</i>	1,55,000	91,989	2,46,989

Travel Budget Detail (Amount in INR) :

Justification (Inland Travel)	Year-1	Year-2	Total
<i>Food and stay</i>	50,000	50,000	1,00,000

Contingency Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Total
<i>Power BI, Printer</i>	1,00,000	50,000	1,50,000

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address

Dr.S.Vidya,
Assistant Professor-I,
Department of Computer Science and Engineering,
Sri Sairam Institute of Technology,
Chennai-44.

2. Email(s) and contact number(s) vidya.cse@sairamit.edu.in, 7358218015

3. Institution

Sri Sairam Institute of Technology

4. Date of Birth 21/12/1988

5. Gender (M/F/T) F

6. Category Gen/SC/ST/OBC Gen

7. Whether differently abled (Yes/No) No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.E.	2010	CSE	ANNA	85
2.	M.E.	2014	CSE	ANNA	8.78
3.	Ph.d.	2021	CSE	ANNA	9.25

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Ph.D thesis title: Hybrid approaches for long term and short term wind speed forecasting in India.

Guide Name: Dr.E.SrieVidhyaJanani
Assistant Professor & HOD,
Madurai Regional Campus,
Anna University,
Madurai.

Year of award: 10-11-21

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor -I	Sri Sairam Institute of Technology	9-9-21	Till now	15500-30600

2	Assistant Professor -III	Kalasalingam Institute of Technology	1-6-2017	27-8-21	15500-30600
3	Assistant Professor -III	St.Joseph's Institute of Technology	16-6-2014	31-3-2017	15500-30600
4	Programmer Analyst	Cognizant Technology Solutions (CTS)	30-8-2010	6-4-2012	23000

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1	Best Young Faculty award	Novel Research Academy	2021-22
2	"Travelers Star Program Award"	Cognizant Technology Solutions (CTS)	2011
3	Ilantamilarignar award	Bharathiar Maanavar Tamil Mandram	2001

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Vidya, S & Srie Vidhya Janani, E	'Tabu search algorithm based general regression neural network for long term wind speed predictions',	Automatika: Journal for Control, Measurement, Electronics, Computing and Communications,	61	657-669	2020
2	Vidya, S & Srie Vidhya Janani, E 2021,	'Wind speed multi-step forecasting model using a hybrid decomposition technique and a selfish herd optimizer based deep neural network',	Soft Computing, Springer,	25	6237-6270	2021

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1	IOT BASED NOZZLE AND SHELL JUNCTION FOR FEED WATER HEATER	1)Dr.JJAYAPRIYA 2)P.CHANDRASEKAR 3)Dr. C.RAMESH BABU DURAI 4)J THIRUNAVUKKARASU 5)Dr. S. VIDYA 6)MERLIN LINDA G 7)Dr. BASANTA KUMAR PALAI, 8)MALATHI G 9)KAVINILAVU A 10)B.UMAMAHESWARI,	202141059532 A	28/01/22	India	Published - Awaiting Request for Examination

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	Hybrid Approaches for Wind Speed Forecasting in India	Dr.S.Vidya	LAP LAMBERT Academic Publishing	2022-01-25 ISBN-13: 978-620-4-73737-9

15. Any other Information (maximum 500 words)

- Reviewer of Journal “Bulletin of Electrical Engineering and Informatics” (BEEI) from January 2020.
- Member of IEEE and NITTR
- Secured 27th rank in M.E. among 4098 candidates.
- Awarded as “Best student of the Week” and hoisted the National Flag in X std.

BIO-DATA

1. Name and full correspondence address

Dr.K.PALANIKUMAR

Professor & Principal

Sri Sai Ram Institute of Technology

West tambaram, Chennai- 600044

2. Email(s) and contact number(s)

E-mail : palanikumar@sairamit.edu.in

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Mobile: 91-9677053338

Ph : 91-44-22512444, 2251 2111 (O)

3. Institution

: **Sri Sai Ram Institute of Technology, Sai
Leo Nagar, Chennai – 600 044.**

4. Date of Birth

: 10-05-1968

5. Gender(M/F/T)

: Male

6. Category Gen/SC/ST/OBC

: OBC

7. Whether differently abled(Yes/No)

: NO

8. Academic Qualification (Undergraduate Onwards)

Sl no	Degree	Year	Subject	University/Institution	% of marks
1.	Post Ph.D work	2008	Machining of Composites	University of Aveiro, Portugal.	NA
2.	Ph.D	2004	Mechanical Engineering - Composites	Anna University	NA
3.	M.E	1996	Production Engineering	Annamalai University	84 University First Rank
4.	A.M.I.E	1994	Mechanical Engineering	Institution of Engineers (India).	58

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title: “Studies on machining characteristics of glass fiber reinforced polymer composites”

Guide: Dr. Karunamoorthy, L , College of Engineering Guindy , Anna University , Chennai

Year of Award: 2004

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Professor and Principal	Sri Sai Ram Institute of Technology	01-09-2008	Till Date	66,986 + DA + HRA 1,39,220/-
2	Professor and Principal	S.R.R. Engineering College	20-10-2004	13-06-2008	75, 000
3	Lecturer, Asst. Professor and Professor	Sathyabama University	20-06-1992	01-06-2004	40, 000

11. Professional Recognition/Award/Prize/Certificate, Fellowship received.

S.No	Name of Award	Awarding Agency	Year
1	World Top 2 % Scientist in Materials Engineering award	Stanford university	2021
2	Chairman	The Institution of Engineers (India)- Kanchepuram Local Centre	2020
3	National Executive Member	Indian Society for Technical Education	2020
4	Executive Committee Member	Computer Society of India - Kanchepuram Local Centre	2020
5	Teaching awards in best research work in Mechanical Engineering	Education Matters	2019
6	Best Faculty of the Year Published Research	Computer Society of India (CSI)	2019
7	President	MOE's Institution Innovation Council (IIC)	2018
8	Coordinator	DST Sponsored IEDC	2015
9	Fellow Member	The Institution of Engineers	2012
10	Chartered Engineer (India),	The Institution of Engineers	2012
11	Fellow Member	Indian Institution of Production Engineers (IIPE)	2004
12	Best Research work in Engineering and Technology	Indian Society for Technical Education	2019
13	Best Principal Award	The Society for Educational and Entrepreneurship Development (SEED)	2017
14	Publons peer review Awards - Top 1% of peer reviewers in Engineering.	Publons from Web of Science	2017

15	Certified Sentinel of Science Award Recipient - As one of the Top 10 percent of Researchers Contributing to the peer review of the field of Engineering	Publons from Web of Science	2016
16	Outstanding Reviewer Award	Elsevier Journal - Measurement In cooperation with International Measurement Confederation	2016
17	Maharashtra State National Award for Best Research work in Engineering and Technology	Indian Society for Technical Education	2014
18	Special paper presentation by National Board of Accreditation	National Board of Accreditation	2013
19	Best Academic Researcher Award	ASDF Global Awards, Techno Forum Group, Pondicherry, India.	2013
20	Best Researcher Award	Association of Scientist, Developer and Faculties	2012
21	Received Best paper award	YMCA University, Faridabad	2012
22	Best Faculty Award	Nehru Group of Institutions	2012
23	Best Teacher award	Sathyabama University	2008
24	Best Teacher award	Sathyabama University	2004
25	Best Technical paper in R&D	Journal of Non-Destructive Testing	2003
26	Best Teacher award	Sathyabama University	2002
27	Best Teacher award	Sathyabama Engineering college	1999
28	University First Rank in M.E (Production Engineering)	Annamalai University	1996
29	Certificate of Excellence in Annamalai University Golden Jubilee Exhibition	Annamalai University	1995

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No	Authors	Title	Name of Journal	Volume	Page	Year
134	Palani Kumar, K., Shadrach Jeya Sekaran, A., Dinesh, L., Hari Prasad, D., Deepak kumar, K.	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	Progress in Rubber, Plastics and Recycling Technology	37(1)	32-48	2021
133	Palani Kumar, K., Keshavan, D., Natarajan, E., Deepak, M., Freitas, L.I.	Evaluation of mechanical properties of coconut flower cover fibre-reinforced polymer composites for industrial applications	Progress in Rubber, Plastics and Recycling Technology,	37(1)	3-18	2021
132	Velavan, K., Palanikumar, K., Natarajan, E., Lim, W.H.	Implications on the influence of mica on the mechanical properties of cast hybrid (Al+10%B4C+Mica) metal matrix composite	International Journal of Materials Research and Technology	10	99-109	2021
131	Chakravarthy, V.V.K., Rajmohan, T., Vijayan, D., Palanikumar, K.	Sustainable Drilling of Nano SiC Reinforced Al Matrix Composites Using MQL and Cryogenic Cooling for Achieving the Better Surface Integrity	Silicon,	In Press		2021
130	Siva, R., Valarmathi, T.N., Palanikumar, K.	Effects of magnesium carbonate concentration and lignin presence on properties of natural cellulosic Cissus quadrangularis fiber composites	International Journal of Biological Macromolecules	164	3611-3620	2020
129	Siva, R., Valarmathi, T.N., Palanikumar, K., Samrot, A.V.	Study on a Novel natural cellulosic fiber from Kigelia africana fruit: Characterization and analysis	Carbohydrate Polymers	244	116494	2020
128	Kalyan Chakaravarthy, V.V., Rajmohan, T., Vijayan, D., Palanikumar, K., Latha, B.	Sustainable drilling performance optimization for Nano SiC reinforced Al matrix composites	Materials and Manufacturing Processes,	35(12)	1304-1312	2020
127	Palanikumar, K., Mudhukrishnan, M., P., Soorya Prabha.	Technologies in additive manufacturing for fiber reinforced composite materials: a review	Current Opinion in Chemical Engineering	28	51-59	2020

126	Natarajan, E., Razif, M.R.M., Faudzi, A.A.M., Palanikumar , K.	Evaluation of a suitable material for soft actuator through experiments and FE simulations	International Journal of Manufacturing, Materials, and Mechanical Engineering	10(2)	64-76	2020
125	Valarmathi, T.N., Palanikumar , K., Sekar, S., Latha, B.	Investigation of the effect of process parameters on surface roughness in drilling of particleboard composite panels using adaptive neuro fuzzy inference system	Materials and Manufacturing Processes	35(4)	469-477	2020
124	Eaben Rajkumar, S., Palanikumar , K., Pitchandi, K., Latha, B.	Subsurface integrity studies on the drilling of Al/B4C/mica hybrid metal matrix composites	Materials and Manufacturing Processes	35(1)	52-60	2020
123	Mudhukrishnan, M., Hariharan, P., Palanikumar , K.	Measurement and analysis of thrust force and delamination in drilling glass fiber reinforced polypropylene composites using different drills	Measurement: Journal of the International Measurement Confederation	14	910-926	2020
122	Velavan, K., Palanikumar, K.	Analysis on sliding wear behavior of Al + B4 C + mica hybrid metal matrix composites	Materials Express	10(7)	986-997	2020
121	Mudhukrishnan, M., Hariharan, P., Palanikumar , K., Latha, B.	Optimization and sensitivity analysis of drilling parameters for sustainable machining of carbon fiber–reinforced polypropylene composites	Journal of Thermoplastic Composite Materials	32(11)	1485-1508	2019
120	Palanikumar , K., Eaben Rajkumar, S., Pitchandi, K.	Influence of Primary B4C Particles and Secondary Mica Particles on the Wear Performance of Al6061/B4C/Mica Hybrid Composites	Journal of Bio- and Tribo-Corrosion	5(3)	77-97	2019
119	Radhakrishnan, E., Kumaraswamidhas, L.A., Palanikumar, K., Muruganandam, D.	Strength and hardness studies of C44300 tube to AA7075-T651 tube plate threaded and unthreaded dissimilar joints fabricated by friction welding process	Journal of Materials Research and Technology	8(4)	3424-3433	2019
118	Rajkumar, S.E., Palanikumar, K., Kasiviswanathan,	Influence of mica particles as secondary reinforcement on the mechanical and wear	Materials Express	9(4)	299-309	2019

	P.	properties of al/b4c/mica composites				
117	Palanikumar, K., Subbiah, V.	Bio Caryota Fiber Reinforced Polymer Composites: Mechanical Properties and Vibration Behavior Analysis	Journal of Bionic Engineering	16(3)	480-491	2019
116	Padmavathi, K.R., Ramakrishnan, R., Palanikumar, K.	Wear properties of sicp and tio2p reinforced aluminium metal matrix composites	Indian Journal of Engineering and Materials Sciences	26(1)	51-58	2019
115	Das, S., Chandrasekaran, M., Samanta, S., Kayaroganam, P., Paulo Davim, J.	Fabrication and tribological study of AA6061 hybrid metal matrix composites reinforced with SiC/B4C nanoparticles	Industrial Lubrication and Tribology	71(1)	83-93	2019
114	NP Kumar, N Mani, K Palanikumar	Influence of Rutile Nano TiO2 on Thrust Force, Mechanical, Wear and Microstructural Behavior of Al-SiC Composites	Nanoscience and Nanotechnology Letters	11	1502-1512	2019
113	Ramya Devi, G., Palanikumar, K.	Analysis on drilling of woven glass fibre reinforced aluminium sandwich laminates	Journal of Materials Research and Technology	8(1)	1024-1035	2019
112	Raja, V.K.B., Palanikumar, K., Sai, A.S., Goud, B.V.	Pitting corrosion studies on Ti6Al4V alloy weldments in marine environment	Indian Journal of Geo-Marine Sciences	48(8)	1179-1182	2019
111	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Experimental investigation and analysis on the wear properties of glass fiber and CNT reinforced hybrid polymer composites	Science and Engineering of Composite materials	25(5)	963-974	2018
110	Anand, G., Alagumurthi, N., Palanikumar, K., Venkateshwaran, N., Elansezhain, R.	Influence of drilling process parameters on hybrid vinyl ester composite	Materials and Manufacturing Processes	35(12)	1299-1305	2018
109	Devi, G.R., Palanikumar, K.	Mechanical Properties Evaluation of Unidirectional Glass Fibre Reinforced Aluminium Sandwich Laminate	Silicon	10(5)	2329-2340	2018

108	Natrayan, L., Senthil Kumar, M., Palanikumar, K.	Optimization of squeeze cast process parameters on mechanical properties of Al ₂ O ₃ /SiC reinforced hybrid metal matrix composites using taguchi technique	Materials Research Express	5(6)	66516	2018
107	R. Anbusagar, N.R., Palanikumar, K.	Nanoclay Addition and Core Materials Effect on Impact and Damage Tolerance Capability of Glass Fiber Skin Sandwich Laminates	Silicon	10(3)	769-779	2018
106	Selvamani, S.T., Vigneshwar, M., Palanikumar, K., Jayaperumal, D.	The corrosion behavior of fully deformed zone of friction welded low chromium plain carbon steel joints in optimized condition	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(5)	246	2018
105	Anand, G., Alagumurthi, N., Elansezhian, R., Palanikumar, K., Venkateshwaran, N.	Investigation of drilling parameters on hybrid polymer composites using grey relational analysis, regression, fuzzy logic, and ANN models	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(4)	214-234	2018
104	Umanath, K., Palanikumar, K.	Evaluation of mechanical performance of friction welded AISI304L grade stainless steel joints	International Journal of Heavy Vehicle Systems	25(3-4)	419-429	2018
103	Kathirvel, M., Kumar, K.P., Diaz, P.M.	Experimental analysis on surface roughness in turning hybrid metal matrix (6061Al+SiC+Gr) composites	Mechanics and Mechanical Engineering	22(1)	341-356	2018
102	Selvamani, S.T., Premkumar, S., Vigneshwar, M., Hariprasath, P., Palanikumar, K.	Influence of carbon nano tubes on mechanical, metallurgical and tribological behavior of magnesium nanocomposites	Journal of Magnesium and Alloys	5(3)	326-335	2017
101	Mudhukrishnan, M., Hariharan, P., Palanikumar, K., Latha, B.	Tool materials influence on surface roughness and oversize in machining glass fiber reinforced polypropylene (GFR-PP) composites	Materials and Manufacturing Processes	32(9)	988-997	2017
100	Rajmohan, T., Sathishkumar, S.D., Palanikumar, K.	Effect of a nanoparticle-filled lubricant in turning of AISI 316L stainless steel (SS)	Particulate Science and Technology	35(2)	201-208	2017

99	Palani Kumar, K., Shadrach Jeya Sekaran, A., Pitchandi, K.	Investigation on mechanical properties of woven alovera/sisal/kenaf fibres and their hybrid composites	Bulletin of Materials Science	40(1)	117-128	2017
98	Srinivasan, T., Palanikumar, K., Rajagopal, K., Latha, B.	Optimization of delamination factor in drilling GFR–polypropylene composites	Materials and Manufacturing Processes	32(2)	226-233	2017
97	Ramesh, M., Palanikumar, K., Reddy, K.H.	Plant fibre based bio-composites: Sustainable and renewable green materials	Renewable and Sustainable Energy Reviews	79	558-584	2017
96	Ramesh, M., Palanikumar, K., Hemachandra Reddy, K.	Evaluation of Mechanical and Interfacial Properties of Sisal/Jute/Glass Hybrid Fiber Reinforced Polymer Composites	Transactions of the Indian Institute of Metals	69(10)	1851-1859	2016
95	Jeyasekaran, A.S., Kumar, K.P., Rajarajan, S.	Numerical and experimental analysis on tensile properties of banana and glass fibers reinforced epoxy composites	Sadhana - Academy Proceedings in Engineering Sciences	41(11)	1357-1367	2016
94	Palanikumar, K., Ramesh, M., Hemachandra Reddy, K.	Experimental investigation on the mechanical properties of green hybrid sisal and glass fiber reinforced polymer composites	Journal of Natural Fibers	13(3)	321-331	2016
93	Dhandapani, S., Rajmohan, T., Palanikumar, K., Charan, M.	Synthesis and characterization of dual particle (MWCT+B4C) reinforced sintered hybrid aluminum matrix composites	Particulate Science and Technology	34(3)	255-262	2016
92	Palanikumar, K., Srinivasan, T., Rajagopal, K., Latha, B.	Thrust Force Analysis in Drilling Glass Fiber Reinforced/Polypropylene (GFR/PP) Composites	Materials and Manufacturing Processes	31(5)	581-586	2016
91	Ramesh, M., Palanikumar, K., Reddy, K.H.	Influence of fiber orientation and fiber content on properties of sisal-jute-glass fiber-reinforced polyester composites	Journal of Applied Polymer Science	133(6)	42968	2016
90	Palanikumar, K., Valarmathi, T.N.	Experimental Investigation and Analysis on Thrust Force in Drilling of Wood Composite Medium Density Fiberboard Panels	Experimental Techniques	40(1)	391-400	2016

89	Rajmohan, T., Palanikumar, K., Davim, J.P., Premnath, A.A.	Modeling and optimization in tribological parameters of polyether ether ketone matrix composites using D-optimal design	Journal of Thermoplastic Composite Materials	29(2)	161-188	2016
88	Palanikumar, K., Rajasekaran, T., Latha, B.	Fuzzy rule-based modeling of machining parameters for surface roughness in turning carbon particle-reinforced polyamide	Journal of Thermoplastic Composite Materials	28(10)	1387-1405	2015
87	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Comparison of the Wear Properties of Polymer Composites Having CNT With and Without Glass Fiber Reinforcement	Transactions of the Indian Institute of Metals	68	91-97	2015
86	Anbusagar, N.R.R., Palanikumar, K., Giridharan, P.K.	Study of sandwich effect on nanoclay modified polyester resin GFR face sheet laminates	Composite Structures	125	336-342	2015
85	Tamilarasan, U., Karunamoorthy, L., Palanikumar, K.	Mechanical properties evaluation of the carbon fibre reinforced aluminium sandwich composites	Materials Research	18(5)	1029-1037	2015
84	Shadrach Jeya Sekaran, A., Palani Kumar, K., Pitchandi, K.	Evaluation on mechanical properties of woven aloe vera and sisal fibre hybrid reinforced epoxy composites	Bulletin of Materials Science	38(5)	1183-1193	2015
83	Bosco, M.A.J., Palanikumar, K., Prasad, B.D., Velayudham, A.	Analysis on influence of machining parameters on thrust force in drilling GFRP-armor steel sandwich composites	Journal of Composite Materials	49(3)	1539-1551	2015
82	Selvamani, S.T., Palanikumar, K., Umanath, K., Jayaperumal, D.	Analysis of friction welding parameters on the mechanical metallurgical and chemical properties of AISI 1035 steel joints	Materials and Design	65	652-661	2015
81	Rajmohan, T., Palanikumar, K., Arumugam, S.	Synthesis and characterization of sintered hybrid aluminium matrix composites reinforced with nanocopper oxide particles and microsilicon carbide particles	Composites Part B: Engineering	59	43-49	2014
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79	Kumar, K.P., Sekaran, A.S.J.	Some natural fibers used in polymer composites and their extraction processes: A review	Journal of Reinforced Plastics and Composites	33(20)	1879-1892	2014
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64	Ramesh, M., Palanikumar, K., Reddy, K.H.	Mechanical property evaluation of sisal-jute-glass fiber reinforced polyester composites	Composites Part B: Engineering	48	19	2013
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54	Prakash, S., Palanikumar, K., Krishnamoorthy, A.	Thrust force evaluation in drilling medium density fibre (MDF) panels using design of experiments	International Journal of Manufacturing Technology and Management	25(1-3)	95-112	2012
53	Rajmohan, T., Palanikumar, K., Kathirvel, M.	Optimization of machining parameters in drilling hybrid aluminium metal matrix composites	Transactions of Nonferrous Metals Society of China (English Edition)	22(6)	1286-1297	2012
52	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Measurement and analysis of surface roughness in turning of aerospace titanium alloy (gr5)	Measurement: Journal of the International Measurement Confederation	45(5)	1266-1276	2012
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50	Rajmohan, T., Palanikumar, K.	Optimization of machining parameters for multi-performance characteristics in drilling hybrid metal matrix composites	Journal of Composite Materials	46(7)	869-878	2012

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46	Somasundaram, G., Rajendra Boopathy, S., Palanikumar, K.	Modeling and analysis of roundness error in friction drilling of aluminum silicon carbide metal matrix composite	Journal of Composite Materials	46(2)	169-181	2012
45	Palanikumar, K.	Experimental investigation and optimisation in drilling of GFRP composites	Measurement: Journal of the International Measurement Confederation	44(10)	2138-2148	2011
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42	Prakash, S., Palanikumar, K.	Modeling for prediction of surface roughness in drilling MDF panels using response surface methodology	Journal of Composite Materials	45(16)	1639-1646	2011
41	Rajmohan, T., Palanikumar, K.	Experimental investigation and analysis of thrust force in drilling hybrid metal matrix composites by coated carbide drills	Materials and Manufacturing Processes	26(8)	961-968	2011
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38	Latha, B., Senthilkumar, V.S., Palanikumar, K.	Modeling and optimization of process parameters for delamination in drilling glass fiber reinforced plastic (GFRP) composites	Machining Science and Technology	15(2)	172-191	2011
37	Latha, B., Senthilkumar, V.S., Palanikumar, K.	Influence of drill geometry on thrust force in drilling GFRP composites	Journal of Reinforced Plastics and Composites	30(6)	463-472	2011
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35	Palanikumar, K.	Modeling and analysis of delamination factor and surface roughness in drilling GFRP composites	Materials and Manufacturing Processes	25(10)	1059-1067	2010
34	Hussain, S.A., Pandurangadu, V., Palanikumar, K.	Surface roughness analysis in machining of GFRP composites by carbide tool (K20)	European Journal of Scientific Research	41(1)	84-98	2010
33	Palanikumar, K., Prakash, S., Manoharan, N.	Experimental investigation and analysis on delamination in drilling of wood composite medium density fiber boards	Materials and Manufacturing Processes	24(12)	1341-1348	2009
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30	Palanikumar, K.	Surface roughness model for machining glass fiber reinforced plastics by pcd tool using fuzzy logics	Journal of Reinforced Plastics and Composites	28(18)	2273-2286	2009
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18	Palanikumar, K., Karthikeyan, R.	Modeling of machining parameters to predict surface roughness in machining Al/SiC particulate composites by carbide insert	Multidiscipline Modeling in Materials and Structures	4(4)	345-358	2008
17	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Sivaraj, P.	Influence of process parameters on electric discharge machining of WC/30%Co composites	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	222(7)	807-815	2008
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6	Palanikumar, K., Paulo Davim, J.	Mathematical model to predict tool wear on the machining of glass fibre reinforced plastic composites	Materials and Design	28(7)	2008-2014	2007
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3	Palanikumar, K.	Cutting parameters optimization for surface roughness in machining of GFRP composites using Taguchi's method	Journal of Reinforced Plastics and Composites	25(16)	1739-1751	2006
2	Palanikumar, K., Karunamoorthy, L., Manoharan, N.	Mathematical model to predict the surface roughness on the machining of glass fiber reinforced polymer composites	Journal of Reinforced Plastics and Composites	25(4)	407-419	2006

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134	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Parametric optimization to minimise the surface roughness on the machining of GFRP composites	Journal of Materials Science and Technology	22(1)	66-72	2006
133	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R., Latha, B.	Optimization of machining parameters in turning GFRP composites using a carbide (K10) tool based on the taguchi method with fuzzy logics	Metals and Materials International	12(6)	483-491	2006
132	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Optimizing the machining parameters for minimum surface roughness in turning of GFRP composites using the design of experiments	Journal of Materials Science and Technology	20(4)	373-378	2004

13. Detail of Patents.

S. No.	Patent Title	Name of The Applicants	Patent No	Award Date	Agency/ Country	Status
20	Protective Head Wear for Autism Patients with LED light	Dr.K.Palanikumar	337058-001	31-12-2020	INDIA	Granted
19	Protective Head Wear for Autism Patients	Dr.K.Palanikumar	337200-001	05-01-2021	INDIA	Granted
18	A device and method for assisting in self-learning of the braille language to visually impaired end users	1 . Vijayaraja L 2 . Dhanasekar r 3 . K. Palanikumar 4 . Dhinakaran m s 5 . Dinesh kumar r 6 . Joahnas mathew saji 7 . Vijay s	202041045084	16-10-2020	INDIA	Published

17	An automatized load carrying electric vehicle with custom path navigation	1 . G. Shanmugasundar	202041044652	14-10-2020	INDIA	Published
		2 . K. Palanikumar				
		3 . Anooj. M				
		4 . Maniponraja.H				
		5 . Jayant.M				
		6 . Yokeshkrishna.P				
16	E-glove	1 . G.saravanan	202041042710	01-10-2020	INDIA	Published
		2 . K.Palanikumar				
		3 . Hrini Karthik				
		4 . M.Unashalini				
		5 . V.Janani				
		6 . B.Uivashini				
15	Wireless security camera for stalker and threat identification	1 . Dr. K.Palanikumar	201941012141	28-03-2019	INDIA	Published & FER Replied
		2 . Dr. V.Brindha Devi				
		3 . P.Sharmila				
		4 . Neeraja.S				
		5 . Pavitra.P				
		6 . Queency Leena Sawyer				
14	An authentication slip procurement system for a public transport vehicle	1 . Dr. K. Palanikumar	201941008408	05-03-2019	INDIA	Published & FER Replied
		2 . Sharmila p				
		3 . Skanda gurunathan				
		4 . S. Vivekanandan				
		5 . Shankar t				
		6 . Aravind g				
13	A sign language translator	1 . K.Palanikumar	201841026260	13-07-2018	INDIA	Published

	glove	2 . K.C.Suresh				& FER Replied
		3 . B. Krishna moorthy				
12	An exoarm frame structure utilizing electrical actuators for arm rehabilitation and effortless load	1 . K. Palanikumar	201841025468	09-07-2018	INDIA	Published & FER Received
		2 . G. Shanmugasundar				
		3 . Tanush.h.bhaskar				
		4 . N.kishore				
		5 . S.a.vetri ganesh				
		6 . Anissh khaan.i				
11	Mind controlled gaming for the differently abled	1 . K. Palanikumar	201841016343	01-05-2018	INDIA	Published
		2 . B. Sreedevi				
		3 . P. Navaneeth				
		4 . H. Akshay				
		5 . M. Nirmalraj				
		6 . S. Athreya				
10	Exo Skeleton Arm using Block and Tackle Mechanism	1 . Dr. K. Palanikumar	201741042997	30-11-2017	INDIA	Published & FER Replied
		2 . G.shanmugasundar				
		3 . Tanush.'h.bhaskar				
		4 . N. Kishore				
		5 . Anissh khaan.i				
		6 . S.a.vetri ganesh				
9	An automatic system and method for the detecting and arresting of the LPG spillage from the gas stov	1 . K. Palanikumar	201741028002	07-08-2017	INDIA	Published & FER Replied
		2 . T. Srinivasan				
		3 . E. Thamizhmaran				
		4 . S. Rahavendhor				
		5 . B. Abhijeeth				
		6 . S. Solomon jaisingh				
8	A system and a method for toggling the operating state of electrical	1 . K.Palanikumar	201741027560	03-08-2017	INDIA	Published & FER Replied
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	appliances through user gesture	3 . V.kayalvizhi 4 . S.mythili 5 . S.malathy 6 . S.rajarajan				
7	A fibre reinforced hybrid polymer composite protective mechanism for the head	1 . Dr.K.Palanikumar 2 . K.R.Bharat	201741016072	08-05-2017	INDIA	Published & FER Replied
6	Phoneme encryptor	1 . K.Palanikumar, 2 . J. Ilakkiya, 3 . A. Subathra, 4 . S. Ragavi,	201741012896	11-04-2017	INDIA	Published & FER Replied
5	Egensor	1 . K.Palanikumar 2 . Arvindh.r 3 . Shubham shekhar 4 . Venkatesan.m 5 . Vignesh.a 6 . L.vijayaraja	201741011384	30-03-2017	INDIA	Published & FER Replied
4	A cattail fiber activated charcoal cartridge for the filtration and removal of the pah from the aque	1 . K.Palanikumar 2 . T. Gowshik 3 . S. Balaji 4 . R.satish 5 . Grandhe Venkata Karthik 6 . S.Aiswarya Devi 7 . R.M.Asha	201741010893	28-03-2017	INDIA	Granted
3	A durable multi-layered protective cover enclosing the head and neck of the firefighters	1 . K.Palanikumar 2 . K.R.Bharat	201641044018	23-12-2016	INDIA	Published & FER Replied
2	Woven Aloe vera/Sisal/Kenaf Fibre Epoxy composites	1 . A. Shadrach jeya sekaran 2 . K Palani kumar	201641012809	01.06.2016	INDIA	Yet to be Granted

	for Corrugated Roof sheet					
1	A multi-layered natural fiber reinforced composite sheet laminate	1. K. Palani kumar 2 . S. Dilip kumar 3 . C. Amarnath 4 . C. Rakesh	201641036636	26-10-2016	INDIA	Published & FER Replied

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
17	Mechanical Properties of Flax-Cotton Fiber Reinforced Polymer Composites	A Sailesh , K Palanikumar	Green Composites Published by Springer, 393-411	2020
16	Influence of fibre arrangement on mechanical properties of glass fibre-reinforced aluminium sandwich laminates Glass Fibre-Reinforced Polymer Composites: Materials	K Palanikumar, GR Devi	Manufacturing and Engineering Walter de Gruyter GmbH & Co KG, 12, 17	2020
15	Preparation and properties of nanopolymer advanced composites: A review	NRR Anbusagar, K. PalaniKumar, A Ponshanmugakumar	Polymer-based Nanocomposites for Energy and Environmental Applications, 27-73	2018
14	Glass Fiber Reinforced Composite materials: Book Chapter in “ Composites in Helicopter industry”	K.Palanikumar	Published by Wood head Publications, UK –In Press.	2016
13	Development and Characterization of Nano Clay Reinforced Three-Phase Sandwich Composite Laminates.	N. R. R. Anbu Sagar, K.Palanikumar	Nanoclay Reinforced Polymer Composites 01/2016: pages 357-391; ISBN: 978-981-10-1952-4, DOI:10.1007/978-981-10-1953-1_16	2016
12	Machinability of Fibre-Reinforced Plastics. Machinability of Fibre-Reinforced Plastics	K. Palanikumar, T. Srinivasan, K. Rajagopal, J.P. Davim	chapter Drilling of high impact Polystrene Materials,	2015

11	Application of response surface method and desirability function for the optimization of machining parameters of hybrid metal matrix (Al/SiC/Al ₂ O ₃) composites. Metal Matrix Composites	Kayaroganam Palanikumar	Walter de Gruyter GmbH & Co KG, ISBN: 9783110315448	2014
10	Application of artificial neural network for the prediction of surface roughness in drilling GFRP composites	K.Palanikumar, B.Latha, V.S.Senthilkumar J.PauloDavim	Materials Science Forum, Trans Tech publications, DOI: 10.4028/www.scientific.net/MSF.766.21.	2013
9	Electrical discharge machining: Study on machining characteristics of WC/Co composites. Machining and Machine-Tools	K. Palanikumar, J. Paulo Davim	chapter Electrical discharge machining: study on machining characteristics of WC/Co composites,DOI:10.1533/9780857092199.135	2013
8	Application of Taguchi method with Grey fuzzy logic for the optimization of machining parameters in machining composites, Computational Methods for Optimizing Manufacturing Technology	K.Palanikumar, B.Latha, J.PauloDavim	Models and Techniques. IGI-GLOBAL Publishers,DOI: 10.4018/978-1-4666-0128-4.ch009.	2012
7	Analyzing surface quality in machined composites. Machining Technology for Composite Materials	Kayaroganam Palanikumar	chapter Analyzing surface quality in machined composites: pages 154-182; Wood Head,	2012
6	Surface Roughness Evaluation in Drilling Hybrid Metal Matrix Composites. Emerging Trends in Science, Engineering and Technology	T. Rajmohan, K. Palanikumar, G. Harish	,DOI:10.1007/978-81-322-1007-8_29	2012
5	Investigation of optimum parameters for multiple performance characteristics in drilling wood composites (MDF) using Grey-Taguchi method. Wood and Wood Products,	K. Palanikumar, S. Prakash, J. Paulo Davim	chapter Chapter 4: pages 87-108; NOVA,ISBN: 978-1-62081-973-9	2012
4	Optimization of machining parameters for multiple performances in drilling hybrid composites using	K. Palanikumar, T.Rajmohan, J. Paulo Davim	Chapter 8 (in press), in Davim, J.P (Ed.), Metal Matrix Composites, NOVA Publishers, New York,ISBN: 978-1-61209-771-8.	2011

	desirability-based approach			
3	Modelling and analysis on wear behaviour of metal matrix composites	K. Palanikumar, T.Rajasekaran, J. Paulo Davim	Chapter 7, (157-174) in Davim, J.P. (Ed.), Tribology of Composite Materials, NOVA Publishers, New York, ISBN: 978-1-61668-319-1	2010
2	Application of fuzzy logic in manufacturing: a study on modelling of cutting force in turning GRFP composites	K. Palanikumar, J. Paulo Davim	Chapter 7, (111-128) in Davim, J.P. (Ed.), Artificial Intelligence in Manufacturing: Research, NOVA Publishers, New York, ISBN: 978-1-60876-214-9	2010
1	Analysis of delamination in drilling wood composite medium density fibre boards. Drilling of Composite Materials	Kayaroganam Palanikumar, S. Prakash, C.V.Jayakumar, J. Paulo Davim	chapter 7: pages 121-136; Nova, ISBN: 978-1-60741-163-5	2009

15. Any other Information :

1. Published more than 100 papers in SCI journals and received the citation of over 8000 having google Scholar h-index: 48.
2. Received best researcher Award 2 times from Indian Society for Technical Education.
3. Coordinated 12 numbers of AICTE sponsored FDPs, STTPs in the recent past.
4. Coordinated DST – NIMAT Sponsored Entrepreneurship Programs (EAC, FDP & TEDP).
5. Received grant for setting up of Innovation and Entrepreneurship Development Centre from DSt-NSTEDB (47 lakhs)
6. Acted as resource person for more than 150 FDP, webinars under various Technical, Research and Administrative topics.
7. Guided, Motivated and actively involved in the following Community Development Activities Through Institute: 1. National Service Scheme (NSS) 2. Swachh Bharat mission Activities 3. Unnath Bharath Abhiyan (UBA) activities for Adopted villages. 4. Lions Club Activities. 5. Skill Development Programs For Unemployed youth coordinating through the PMKVY and other schemes. 6. Entrepreneurship development Activities for Village people and also the S&T institutions.
8. Guided 21 research scholars, out of that 18 were successfully completed the research in the area of composite materials, Friction welding, environmental friendly processes, etc..

Dr B.Sreedevi

Professor & HOD, Department of Computer Science and Engineering
Sri Sairam Institute Technology Anna University
Chennai India 600045
Mobile: +91 9444245253 email: hodcse@sairamit.edu.in
Citizenship: India

Research Interests

My research interests revolve around the problem of Medical Image Processing and, more recently, Stem Cells. Much of my recent work focuses on image segmentation isolation and prediction using Machine learning algorithms. I've compared various Machine Learning Algorithms and proposed a model for predicting Accuracy. My interest in multiscale, parts-based shape representations, and their common abstraction as hierarchical graphs, has motivated my research in inexact graph indexing and matching – key problems in object recognition, another broad focus of my research. My research has also explored many problems related to object recognition, including object tracking, vision-based navigation, content based image retrieval, language-vision integration, and image/model abstraction.

Education

- Ph.D., Computer Science and Engineering Anna University, Chennai, India, Aug 2017 - Sub-specialization: Machine Learning and Image Processing
- Master of Technology in Computer Science and Engineering, SRM University Chennai, India, April 2007
- Bachelor of Engineering in Computer Science and Engineering, University of Madras April 1999

Professional Experience

- **Head of the Department & Professor**, Department of Computer Science and Engineering, Sri Sai Ram Institute of Technology, Anna University. June 2010 to Present
- **Assistant Professor** Department of Computer Science and Engineering Rajalakshmi Engineering College, Thandalam, Chennai, India. July 2019 to May 2010
- **Lecturer** Department of Computer Science and Engineering, SRM University, Chennai, India. Jan 2001 to March 2007

Technical Skills

- Programming in C, Python, Java with JDBC, PHP
- Web Technologies: HTML, CSS, AJAX, Java Script, XML and Web Services
- Extensive knowledge of RDBMS like Oracle and MYSQL.
- Familiarity in OS like Fedora, Windows and Linux.
- Work Experience in IDE like Net beans and Eclipse.
- Application of Data Mining Algorithms with WEKA tool.

Achievements

- Development of Visible Light Communication for Smart Museums, Bangkok University, Centre of Research in Optoelectronics, Bangkok, Thailand-May 2019
- Longest Continuous Student Branch Counsellor 2019
- Academic Excellence Award 2018
- Best faculty advisor Award by Institution of Engineers (India) 2019
- “Uttama Acharya Puraskar”-A National Award for Impact Creators-Lions Club of Vijayawada

Certifications

Certified EMC Academic Associate in Data Science and Big Data Analytics by DELL EMC2 during March 2018.

NPTEL-IIT certification in Data Mining, Database Management Systems, Python for Machine Learning and Internet of Things.

Certified from AICTE NITTTR for Module 8-Institutional Management and Administrative Procedures

Certified ATL tinkerprenuer Mentor by AICTE

Professional Affiliations

Inventive Research Organization (IRO)	Feb 2017-Present
International Association of Engineers (IAENG)	Dec 2017-Present
Computer Society of India –Student Branch Counsellor	May 2011 – Present
Indian Society for Technical Education (ISTE)	May 2014 – Present
Institution of Engineers (India)(IEI)	Nov 2018- Present
National Digital Library (NDL)	May 2016 – Present
The Society of Innovative Educationalist and Research (FSIERP)	Mar 2019-Present

Books Published

- Internet Programming in Sahara Publications, India with ISBN 9789386636157 – 2017
- Book Chapter in “Machine Learning and Applications” on the topic Machine Learning based Credit Card based Fraud Detection(CNN Algorithm)
- Book Chapter in Advanced Aspects of Engineering Research Vol. 5 “Study on Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled”

Patents

- Mind Controlled Gaming for Differently Abled Indian Provisional (**Patent No201841016343**) in the field of Bio Medical Engineering – May 2018

- Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems(No. 202041031869-July 2020)
- VLC TRANSCIEVERS FOR SMART MUSEUMS(Patent No 202141029314)- June 2021

Grants

- Dr.B.Sreedevi, 2017, Department of Science and Technology, Government of India granted Rs.100000/- for the project titled “Mind Controlled Gaming for Differently Abled”.
- AICTE Sponsored STTP for Rs.300000/- in Predictive Modelling And Data Analysis Using Python Based Machine Learning Technique
- AICTE Sponsored ATAL FDP for Rs.93000/- in Data Sciences.

Publications

- **Sreedevi, B & Rajagopalan, SP, ‘Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques’, SCI, Annexure-I, ISSN: 1537-744X, Article: ID 405974**
- **Sreedevi. B ,’Disaster Management Using Blockchain and Cloud Services’ Journal of Green Engineering (JGE) 10 (10)**
- Dr.B.Sreedevi, P.Rayavel,” Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled’,AIP Publications,Scopus Indexed 2019.
- Sreedevi. B, Pachhiammal@Priya M, T.Ragunthar, ‘Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’, International Journal of Pure and Applied Mathematics,Vol.117,no.21,2017.
- **Dr.B.Sreedevi, Pachhiammal @Priya. M ,’Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’,IEEE Digital Library and Scopus Indexed,Publication Year: 2018, Page(s):6 – 11**
- Sreedevi, B ,’Analysis of Performance Metrics with Mesenchymal Stem cell Classification and Optimization Algorithms’ ,International Journal of Creative Research Thoughts (IJCRT) 5 (4), 2613-2618,2017
- Sreedevi, B & Rajagopalan, SP 2015, ‘Examine and Extraction of Optimized Stem Cells Using Image Processing’, Australian Journal of Basic and Applied Sciences, vol. 9, no. 10, Special 2015, pp. 1-5.
- Sreedevi. B, Abheek Kumar Srivastava, Ashwin Venkataraman,’ Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm’, International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 10, October 2013, ISSN: 2277 128X

- B.Sreedevi, Dr.S.P.Rajagopalan,' Analysing Stem Cells Using Transformed Stem Cell Algorithm ', International Journal of Applied Engineering Research (IJAER), Volume 10, Number 75 (2015) .
- Pradeep Kumar Sahoo, S. P. Rajagopalan, Sreedevi B, Pachhaimmal@Priya.M,' Web Content Mining Based Relevant Text Data Extraction', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.186-193.
- Pachhaimmal@Priya M, S.P.Rajagopalan, B.Sreedevi and Pradeep Kumar Sahoo,' Analysis methods and mining of brain functional connectivity for detection of brain disorders', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.258-262.

International & National Conferences

- **Dr.B.Sreedevi, 'Decentralized Application for managing the Disaster with Block chain, Cloud &IOT',International Conference on Computer and Information Sciences at University of PETRONAS, Malaysia during JULY 13-15,2021.**
- Dr.B.Sreedevi, P.Rayavel Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled', NATIONAL CONFERENCE ON MATHEMATICAL TECHNIQUES AND ITS APPLICATIONS (NCMTA – 2019) AT SRM UNIVERSITY FROM 11-12 JANUARY 2019.
- Dr.B.Sreedevi, Pachhaimmal @Priya. M ,'Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms ',International Conference on Communication, Computing & Internet of Things, held at Sri Sai Ram Engineering College, Chennai, India from 15-17 February 2018.
- Dr.B.Sreedevi,P.Rayavel, National Conference on Mathematical Techniques and its Applications(NCMTA) held at SRM University, Chennai, India from 11-12 January 2019.
- B.Sreedevi, Dr.S.P.Rajagopalan, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm 'International Conference On Computing And Information Technology (ICCIT '15)
- Sreedevi, B, Abeek Kumar Srivastava & Ashwin Venkataraman 2013,'Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm', Proceedings of the International Conference on Recent Trends in Computing(ICRTC 2013) ,4th &5th October 2013, pp. 32-27.
- Sreedevi, B & Rajagopalan, SP 2015, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm', Proceedings of the International Conference on Computing and Information Technology (ICCIT'15), 13th &14th August 2015, pp. 96-100.
- Sreedevi, B & Rajagopalan, SP 2015, 'Examine and Extraction of Optimized Stem Cells Using Image Processing', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'15' On 27th March, 2015.

- B.Sreedevi, E.Madhumitha, M.Kalaiselvi, 'Automatic Classification Of Intracardiac Tumor And Thrombi In Echocardiogram Using Adaptive Co-Segmentation', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'16'

Workshop & Conferences

- Coordinator for TEDX-SriSairamIT and Hackathon Events.
- Organized first International Conference on Computing and Information Technology (ICCIT'15) during 2015.
- Organized a Staff development programme on "Soft Computing with AI" sponsored by AICTE for Rs.700000/- during 2011.
- Organized National Conferences on "Information & Communication Engineering Systems"-NICE '11, NICE'17 and NICE'18.
- International Seminar on "Recent Trends in Computer Technology" by Dr.Emerson Raja Joseph, Multimedia University, Malaysia during 2014.
- National Event on" CSI Golden Tech Bridge Programme" by Computer Society of India during 2014.
- FDP on Python Programming by ICTACT of Tamilnadu during 2018.
- Attended a seminar on "Stem Cell and Regenerative Medicine" during Nov 2016 at Anna University
- Delivered a session in FDP on "Internet Programming" at Loyola ICAM Institute of Technology, Chennai
- Attended STTP in Pondicherry Engineering College during 2016 on "Recent trends in optimization techniques".
- Attended FDP on "Hadoop" conducted by ICTACT at Sri Sai Ram Institute of Technology during 2016.



Sri SAI RAM INSTITUTE OF TECHNOLOGY

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Founder Chairman : M.J.F. Ln. Leo Muthu



Dr.K.Palanikumar,M.E.,Ph.D.,
Principal

Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Dr.S.Vidya, AP/CSE, Dr.B.Sreedevi, ASP&HOD/CSE, Dr.K.Palanikumar, Principal/Sri Sairam Institute of Technology, as the Principal Investigator for the project titled "Developing powerful and effective hybrid model for obtaining high precision rainfall predictions using intelligent algorithms in India".
2. The PI Dr.S.Vidya, Dr.B.Sreedevi, Dr.K.Palanikumar is a permanent or regular employee of this Institute.
3. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
4. The investigator will be governed by the rules and regulations of University/ Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
5. The grant-in-aid by the SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as mentioned in the sanction order.
6. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi at the end of the project.
7. The University/Institute/Organization/College will provide basic infrastructure and other required facilities to the investigator for undertaking the research project.
8. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
9. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.



PRINCIPAL
PRINCIPAL

SRI SAI RAM INSTITUTE OF TECHNOLOGY
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Certificate from the
Investigator

Project Title:

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support.
2. We undertake that spare time on equipment procured in the project will be made available to other users.
3. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, GOI would be followed in toto.
4. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trails/experiments/exchange of specimens, human & animal materials etc.
5. The research work proposed in the scheme/project does not in any way duplicate the work already done or being carried out elsewhere on the subject.
6. We agree to abide by the terms and conditions of SERB grant.

S. Vidya (Dr. S. Vidya)
Name and signature of Principal Investigator:
Date: 27/4/22
Place: Chennai

Name and signature of Co-PI :
Date: 27/4/22
Place: Chennai

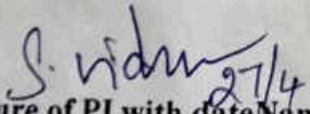
1. Dr. B. Sreedevi *B. Sreedevi*
2. Dr. K. Palanikumar *K. Palanikumar*

Undertaking by the Principal Investigator

To
The Secretary
SERB, New Delhi

Sir

I Dr.S.Vidya, hereby certify that the research proposal titled "Developing powerful and effective hybrid model for obtaining high precision rainfall predictions using intelligent algorithms in India" submitted for possible funding by SERB, New Delhi is our original idea and has not been copied/taken verbatim from anyone or from any other sources. I am further certify that this proposal has been checked for plagiarism through a plagiarism detection tool i.e Turnitin approved by the Institute and the contents are original and not copied/taken from any one or many other sources. I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grant Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulation, 2018. We also declare that there are no plagiarism charges established or pending against me in the last five years. If the funding agency notices any plagiarism or any other discrepancies in the above proposal of mine, I would abide by whatsoever action taken against me by SERB, as deemed necessary.

 27/4 (Dr. S. Vidya / AP / CSE)
Signature of PI with date Name / designation



Development of Powerful and Effective Hybrid Model for obtaining High Precision Solid Waste Predictions in Chennai using Optimization Algorithms

Reference No. : 162022002302

Saved By : Dr. B SREEDEVI

[SERB Qualified Unique Identification Document: SQUID-1978-BS-7285]

Saved Date : 08-Oct-2022

PROPOSAL DETAILS

Dr. B SREEDEVI

hodcse@sairamit.edu.in

Professor(Computer Science and Engineering)

Sri Sairam Institute of Technology

Sairam college rd, sai leo nagar, west tambaram, chennai, tamil nadu ,
Chennai, Tamil nadu-600044

Technical Details :

Scheme :	SERB-POWER Grant	Contact No :	+919444245253
Research Area :	Electrical Electronics & Computer Engineering (Engineering Sciences)		
Duration :	36 Months	Total Cost (INR) :	20,24,800
Date of Birth :	26-Sep-1978		
Nationality :	INDIAN		
Is PI from National Laboratory/Research Institution ?	No		

Project Summary :

Solid waste management (SWM) has become a comprehensive delinquent due to urban population evolution and transformation in consumption patterns. Municipal Solid Waste (MSW) comprehends domiciliary, marketable, institutional, street sweeping, construction and annihilation, and cleanliness left-over. Operative assortment and appropriate removal of MSW be contingent profoundly on precise prediction of solid waste generation. MSW prediction cannot be done unswervingly and be contingent on many qualitative and reckonable influences. Machine learning methods are found to be advantageous owing to ambiguity and unsatisfactory data obtainability. Numerous Machine learning methods have been already attempted for predicting Solid Waste, but it achieves low prediction accuracy and it increases computation time for Solid Waste Prediction.

Objectives :

The hybrid methodology combines decomposition technique, optimization technique and deep neural networks by which the prediction is highly accurate.

- In this research, Deep Neural Network Optimized (DNN) with Selfish Herd Optimization (SHO) is proposed for accurate solid waste prediction.
- Then the collected data are pre-processed using hybrid decomposition method that is Morphological filtering and Extended Empirical wavelet transformation to retrieve the missing values.
- Then the pre-processed data is given to Deep Neural Network for classifying the category of solid waste.
- But Deep Neural Network does not reveal any acceptance of optimization techniques for calculating accurate classification of waste.
- Hence Selfish Herd Optimization (SHO) is proposed for optimizing the weights parameters of Deep Neural Network.
- Finally, Deep Neural Network Optimized with Selfish Herd Optimization (SHO) accurately predicts the solid waste as Wet waste, Dry waste, Horticulture waste, and dumping yard.
- Finally, the proposed MFEEWT-SHO-DNN based solid waste prediction framework is compared with existing methods such as Map Reduce based Exponential Smoothing Technology for solid waste prediction (MR-EST-RP), modular artificial neural networks with support vector regression for solid waste prediction (MANN-SVR-RP), and biogeography-based extreme learning machine (BBO-ELM) (BBO-ELM-RP).

Keywords :

Deep Neural Network, wavelet transformation, Flamingo Search Optimization, Morphological filtering, solid waste prediction, Selfish Herd Optimization

Expected Output and Outcome of the proposal :



- Initially the real time solid waste prediction data are taken from Quantity of MCC, Landfill, Gardan Garbage & Coconut Shell Report in Tamilnadu (Chennai) such as Zone- 9 (Nungambakkam), Zone 10 (Kodambakkam) and Zone 13 (Adyar).
- Here, the real time data of the selected locations are applied to the proposed MFEEWT-SHO-DNN for forecasting the solid waste for 2022-2032 years.
- The calculation time for solid waste prediction is decreased by using this hybrid methodology.
- Effective forecasting of a solid waste supervision system depends negatively on the prediction accuracy of solid waste generation.
- Given that urban regions like Chennai are constantly swamped with solid waste, reliable prediction of solid waste generation is necessary for operational assortment and suitable evacuation of MSW.
- Environmentally acceptable disposal facility can be developed by the accurate prediction of solid waste.
- Municipal Solid Waste Management has long been a key challenge for Urban Local Bodies (ULBs) in India (MSWM).
- The majority of Indian cities use an inefficient system of solid waste management (SWM).
- Tools and equipment used are obsolete and insufficient, and manpower is basic.
- The final disposal of garbage involves minimum processing and treatment.
- Unscientific disposal sites that cause air pollution, water poisoning, and soil contamination.
- These issues can be handled by the accurate prediction of solid waste.

Suitability of the proposed work in major national initiatives of the Government:

Swachh Bharat, Smart Cities, Innovate India

Theme of Proposed Work:

Environment, Cyber Physical Systems including AI, IOT and Cyber Security

SNo.	CO-PI Details
1	 <p>S vidya.lkshmi@gmail.com Associate Professor(Computer Science and Engineering)</p> <p>Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu , TAMIL NADU, CHENNAI D.O.B : 21 Dec, 1988</p>
2	 <p>Rajalakshmi D rajalakshmi.cse@sairamit.edu.in Associate Professor(Computer Science and Engineering)</p> <p>Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu , TAMIL NADU, CHENNAI D.O.B : 28 May, 1984</p>

Other Technical Details

Development of Powerful and Effective Hybrid Model for obtaining High Precision Solid Waste Predictions in Chennai using Optimization Algorithms

1. Origin of the Proposal:

- Solid waste management (SWM) has become a comprehensive delinquent due to urban population evolution and transformation in consumption patterns.
- Municipal Solid Waste (MSW) comprehends domiciliary, marketable, institutional, street sweeping, construction and annihilation, and cleanliness left-over.
- Operative assortment and appropriate removal of MSW be contingent profoundly on precise prediction of solid waste generation.
- MSW prediction cannot be done unswervingly and be contingent on many qualitative and reckonable influences.
- Machine learning methods are found to be advantageous owing to ambiguity and unsatisfactory data obtainability.
- Numerous Machine learning methods have been already attempted for predicting Solid Waste, but it achieves low prediction accuracy and it increases computation time for Solid Waste Prediction.

2. Review of status of Research and Development in the subject

2.1 International Status:

- [1] Nguyen, X.C., Nguyen, T.T.H., La, D.D., Kumar, G., Rene, E.R., Nguyen, D.D., Chang, S.W., Chung, W.J., Nguyen, X.H. and Nguyen, V.K., 2021. Development of machine learning based models to forecast solid waste generation in residential areas: A case study from Vietnam. Resources, Conservation and Recycling, 167, p.105381.

- This study's major objective was to assess six ML-based models for predicting the production of municipal solid waste (MSW) from a sample of Vietnam's residential regions.
- Eight factors that include the study area's economy, population, consumption patterns, and waste generation are included in the input data.
- According to the model simulation results, the urban population, average monthly consumption expenditure, and overall retail sales were the factors that had the greatest influence on the formation of MSW.
- The variability of the dataset, such as the absence of information from the country's smaller administrative entities, may be one of this work's drawbacks.

- [2] Guo, H.N., Wu, S.B., Tian, Y.J., Zhang, J. and Liu, H.T., 2021. Application of machine learning methods for the prediction of organic solid waste treatment and recycling processes: A review. *Bioresource technology*, 319, p.124114.
- Organic solid waste is treated and recycled conventionally, however these processes have inherent problems such low efficiency, poor precision, high expense, and severe environmental hazards.
 - Machine learning has slowly gained popularity over the past decade as a means of resolving the challenging issues associated with the treatment of organic solid waste.
 - Municipal solid waste management was the main topic of research, which was then followed by anaerobic digestion, thermal treatment, composting, and landfilling.
 - The artificial neural network is the most popular model that has been successfully used to solve a variety of challenging non-linear organic solid waste-related challenges.
- [3] Ayeleru, O.O., Fajimi, L.I., Oboirien, B.O. and Olubambi, P.A., 2021. Forecasting municipal solid waste quantity using artificial neural network and supported vector machine techniques: A case study of Johannesburg, South Africa. *Journal of Cleaner Production*, 289, p.125671.
- Planning and managing municipal solid waste (MSW) in a sustainable way heavily depends on accurate estimation of the volumes of MSW.
 - Artificial neural networks (ANN) and supported vector machines (SVM), two machine learning algorithms, were used to predict how much MSW would be produced in the CoJ.
 - The forecast was generated up to 2050 and was based on historical data that was acquired from Statistics South Africa (STATS SA).
 - The creation of forecasting models for MSW benefits from machine learning algorithms.
- [4] Yang, L., Nguyen, H., Bui, X.N., Nguyen-Thoi, T., Zhou, J. and Huang, J., 2021. Prediction of gas yield generated by energy recovery from municipal solid waste using deep neural network and moth-flame optimization algorithm. *Journal of Cleaner Production*, 311, p.127672.
- Recent years have seen a considerable increase in environmental pollution problems, particularly SW, because to the rapid population rise and heavy urbanisation.
 - Municipal solid waste (MSW) is the one that waste treatment plants are most concerned with.
 - MSW is now handled and recycled to recover energy because to advances in science and technology.
 - For waste treatment plants, however, the problem of energy recovery and optimization from MSW still presents a barrier.
 - As a result, a unique artificial intelligence method was suggested in this work for accurately forecasting the gas yield (GY) produced by energy recovery from MSW.

2.2 National Status:

[1] Golbaz, S., Nabizadeh, R. and Sajadi, H.S., 2019. Comparative study of predicting hospital solid waste generation using multiple linear regression and artificial intelligence. *Journal of Environmental Health Science and Engineering*, 17(1), pp.41-51.

- Municipal solid waste (MSW) is the one that waste treatment plants are most concerned with.
- MSW is now handled and recycled to recover energy because to advances in science and technology.
- For waste treatment plants, however, the problem of energy recovery and optimization from MSW still presents a barrier.
- As a result, a unique artificial intelligence method was suggested in this work for accurately forecasting the gas yield (GY) produced by energy recovery from MSW.

[2] Abdallah, M., Talib, M.A., Feroz, S., Nasir, Q., Abdalla, H. and Mahfood, B., 2020. Artificial intelligence applications in solid waste management: A systematic research review. *Waste Management*, 109, pp.231-246.

- Solid waste management (SWM) issues can now be solved using alternative computational methods such as artificial intelligence (AI) capabilities.
- AI has shown effective in handling ambiguity and missing or partial data, learning from experience, and taking on complex challenges.
- Analyzing the use of AI in many SWM areas, such as forecasting waste characteristics, detecting waste bin levels, predicting process parameters, truck routing, and SWM planning.
- The many AI models and approaches utilised in SWM, application domains, reported performance metrics, and the software platforms that these models are implemented on are all thoroughly analyzed in this review.

[3] Kulkarni, B.N. and Anantharama, V., 2020. Repercussions of COVID-19 pandemic on municipal solid waste management: Challenges and opportunities. *Science of the Total Environment*, 743, p.140693.

- The COVID-19 epidemic has sparked a global crisis and raised social and economic challenges that will eventually affect the environment.
- The current study assesses current municipal solid waste (MSW) management techniques in the context of this natural experiment, with a focus on MSW treatment and disposal facilities.
- The criteria of disease transmission through solid waste handling are identified, as well as the effects of an increase in medical waste on the existing municipal waste treatment and disposal systems.
- The article addresses the future scope of effort to accomplish sustainable waste management

during and after the pandemics and suggests alternative techniques for MSW treatment and disposal.

[4] Vyas, S., Prajapati, P., Shah, A.V. and Varjani, S., 2022. Municipal solid waste management: Dynamics, risk assessment, ecological influence, advancements, constraints and perspectives. *Science of The Total Environment*, p.152802.

- Along with economic expansion, the world's energy consumption has been rising, placing strain on the availability of renewable energy sources.
- Municipal Solid Waste (MSW) has reportedly made significant improvements to renewable energy sources and a safe environment.
- The dynamics, risk assessment, ecological influence, advancements, restrictions, and perspectives in the field of municipal solid waste management and treatment were thoroughly summarized in this paper.
- Modern data has been presented regarding ecological influence and risk assessment in the treatment and transportation of municipal solid garbage.

2.3 Importance of the proposed project in the context of current status

- The hybrid methodology combines decomposition technique, optimization technique and deep neural networks by which the prediction is highly accurate.
- In this research, Deep Neural Network Optimized (DNN) with Selfish Herd Optimization (SHO) is proposed for accurate solid waste prediction.
- Then the collected data are pre-processed using hybrid decomposition method that is Morphological filtering and Extended Empirical wavelet transformation to retrieve the missing values.
- Then the pre-processed data is given to Deep Neural Network for classifying the category of solid waste.
- But Deep Neural Network does not reveal any acceptance of optimization techniques for calculating accurate classification of waste.
- Hence Selfish Herd Optimization (SHO) is proposed for optimizing the weights parameters of Deep Neural Network.
- Finally, Deep Neural Network Optimized with Selfish Herd Optimization (SHO) accurately predicts the solid waste as Wet waste, Dry waste, Horticulture waste, and dumping yard.
- The proposed method is implemented in Python tool and the efficiency of the proposed MFEEWT-SHO-DNN based solid waste prediction is measured.
- Finally, the proposed MFEEWT-SHO-DNN based solid waste prediction framework is compared with existing methods such as Map Reduce based

Exponential Smoothing Technology for solid waste prediction (MR-EST-RP), modular artificial neural networks with support vector regression for solid waste prediction (MANN-SVR-RP), and biogeography-based extreme learning machine (BBO-ELM) (BBO-ELM-RP).

- The accuracy, precision, specificity, F-score, sensitivity, error rate, and computing time are assessed to assess performance.
- The confusion matrix is used to scale performance indicators.
- The True Positive, True Negative, False Positive, and False Negative values are required to scale the confusion matrix.

2.4 If the project is location specific, basis for selection of location be highlighted:

- Initially the real time solid waste prediction data are taken from Quantity of MCC, Landfill, Gardan Garbage & Coconut Shell Report in Tamilnadu (Chennai) such as Zone- 9 (Nungambakkam), Zone 10 (Kodambakkam) and Zone 13 (Adyar).
- Here, the real time data of the selected locations are applied to the proposed MFEEWT-SHO-DNN for forecasting the solid waste for 2022-2032 years.

3 Work Plan:

3.1 Methodology:

ALGORITHM 1: Multivariate Empirical Mode Decomposition (MEMD)

1. Select an appropriate point series for sampling a $q-1$ sphere;

2. Formulate a projection $h_{\theta_s}(d)$, of N -channel input signals $a^N(d)$ ($N = 4$) along the direction vector b_{θ_s} for all S (series of direction vector completely), providing

$$h_{\theta_s}(d)_{s=1}^S \text{ as projection series;}$$

3. Search the time instant $d_{\theta_s}(d)_{s=1}^S$, relating to the maxima of projected signal series

$$h_{\theta_s}(d)_{s=1}^S;$$

4. To determine the multivariate envelope curve $en_{\theta_s}(d)_{s=1}^S$ by interpolating

$$[d_{\theta_s}(d)a^N(d_{\theta_s})];$$

5. For a series of S direction vectors, the mean $Y(d)$ of the envelope curve is formulated as

$$Y(d) = \frac{1}{S} \left(\sum_{s=1}^S en_{\theta_s}(d) \right);$$

6. Let $f^N(d) = a^N(d) - Y(d)$. If $f^N(d)$ satisfies the terminating criterion for a multivariate IMFs then apply the aforementioned process $a^N(d) - Y(d)$; or else apply it to $f^N(d)$.

ALGORITHM 2: EEWT by Morphological Filtering

1. *Inputs: 1Dist N-point time series $w(n)$;*

2. *To determine the Fourier transform spectrum $\bar{r}(\omega)$,*

$$\bar{r}(\omega) = Z \left[r(n) = \sum_{k=0}^{n-1} |r(n)| e^{-ktn} \right];$$

3. *Formulate every local maxima of $\bar{r}(\omega)$, the significance of structural feature is fixed as*

G , $G = y \times \text{Dist}$, Dist is the smallest distance between two consecutive maxima;

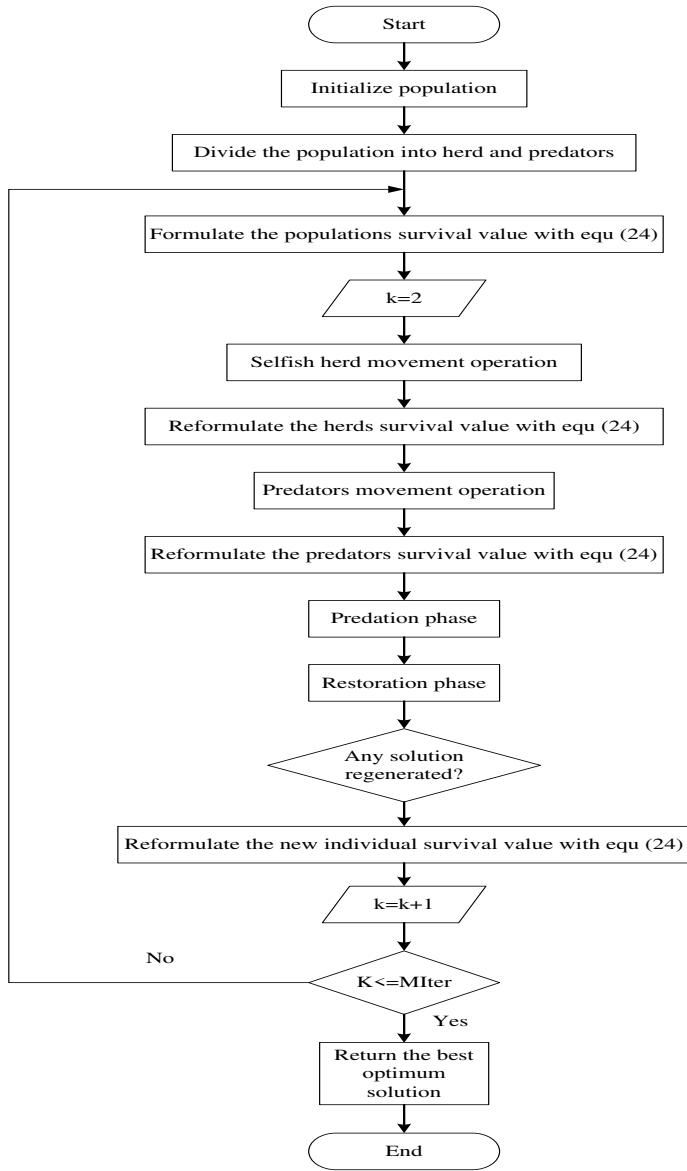
4. *Morphological Filtering, determines the simplified $\bar{r}(\omega)$;*

5. *Formulate every local maxima of $\bar{r}(\omega)$, the segmentation limit ω^k are termed as the lowest minima of $\bar{r}(\omega)$;*

6. *Empirical wavelet decomposition;*

7. *Output: A set of modes $H(l), l = 1, 2, 3, \dots, x$.*

Selfish Herd Optimization (SHO)



3.2 Time Schedule of activities giving milestones through BAR diagram.



3.3 Suggested Plan of action for utilization of research outcome expected from the project.

- The calculation time for solid waste prediction is decreased by using this hybrid methodology.
- Effective forecasting of a solid waste supervision system depends negatively on the prediction accuracy of solid waste generation.
- Given that urban regions like Chennai are constantly swamped with solid waste, reliable prediction of solid waste generation is necessary for operational assortment and suitable evacuation of MSW.

3.4 Environmental impact assessment and risk analysis.

- Environmentally acceptable disposal facility can be developed by the accurate prediction of solid waste.
- Municipal Solid Waste Management has long been a key challenge for Urban Local Bodies (ULBs) in India (MSWM).
- The majority of Indian cities use an inefficient system of solid waste management (SWM).
- Tools and equipment used are obsolete and insufficient, and manpower is basic.
- The final disposal of garbage involves minimum processing and treatment.
- Unscientific disposal sites that cause air pollution, water poisoning, and soil contamination.
- These issues can be handled by the accurate prediction of solid waste.

4 Expertise:

4.1 Expertise available with the investigators in executing the project:

- Sreedevi, B & Rajagopalan, SP, 'Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques', SCI, Annexure-I, ISSN:1537-744X, Article: ID 405974.
- Vidya, S & Srie Vidhya Janani, E 2021, 'Wind speed multi-step forecasting model using a hybrid decomposition technique and a selfish herd optimizer based deep neural network', Soft Computing, Springer, DOI:https://doi.org/10.1007/s00500-021-05608-5, Impact Factor: 3.050.
- G Uganya, D Rajalakshmi, Yuvaraja Teekaraman, Ramya Kuppusamy, Arun Radhakrishnan, "A Novel Strategy for Waste Prediction Using Machine Learning Algorithm with IoT Based Intelligent Waste Management System", Wireless Communications and Mobile Computing, 10.1155/2022/2063372, pp.1-15, 2022.

4.2 Summary of roles/responsibilities for all Investigators:

S. No.	Name of the Investigators	Roles/Responsibilities
1.	Dr.B.Sreedevi	Implementing Zone-9 Solid waste prediction
2.	Dr.S.Vidya	Implementing Zone-13, Zone-10, Solid waste prediction
3.	Dr.D.Rajalakshmi	Implementing Zone-10 Solid waste prediction

4.3 Key publications published by the Investigators pertaining to the theme of the proposal during the last 5 years

- Vidya, S & Srie Vidhya Janani, E 2020, 'Tabu search algorithm based general regression neural network for long term wind speed predictions', *Automatika: Journal for Control, Measurement, Electronics, Computing and Communications*, vol. 61, no. 4, pp. 657-669, Impact Factor: 0.764
- Vidya, S & Srie Vidhya Janani, E 2021, 'Wind speed multi-step forecasting model using a hybrid decomposition technique and a selfish herd optimizer based deep neural network', *Soft Computing*, Springer, DOI:<https://doi.org/10.1007/s00500-021-05608-5>, Impact Factor: 3.050.
- Paper published in the “Lecture notes and Network systems” in “Risk Prediction of Lung Disease using Deep learning approach”, vol.300, Springer, Cham. https://doi.org/10.1007/978-3-030-84760-9_40, Sep 2021.
- Paper Published in the “International Journal of Scientific and Technology Research” in “A Review on the Hybrid Approaches for wind speed forecasting”, ISSN-2277-8616, Vol-8, Issue 9, Sep-2019.
- B. Sreedevi and P. M. Pachaiammal, "Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms," 2018 International Conference on Communication, Computing and Internet of Things (IC3IoT), 2018, pp. 6-11, doi: 10.1109/IC3IoT.2018.8668205.
- B. Sreedevi, Disaster Management Using Blockchain and Cloud Services, *Journal of Green Engineering (JGE)* Volume-10, Issue-10, October 2020.

4.4 Bibliography

Dr B.Sreedevi

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Engineering Sri Sairam Institute Technology Anna University
Chennai India 600045

Mobile: +91 9444245253 email:
hodcse@sairamit.edu.in Citizenship: India

Books Published

- ⌋ Internet Programming in Sahara Publications, India with ISBN 9789386636157 – 2017
- ⌋ Book Chapter in “Machine Learning and Applications” on the topic Machine Learning based Credit Card based Fraud Detection(CNN Algorithm)
- ⌋ Book Chapter in Advanced Aspects of Engineering Research Vol. 5 “Study on Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled”

Patents

- ⌋ **Mind Controlled Gaming for Differently Abled Indian Provisional (PatentNo201841016343) in the field of Bio Medical Engineering – May 2018**
- ⌋ Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems(No. 202041031869-July 2020)
- ⌋ VLC TRANSCEIVERS FOR SMART MUSEUMS(Patent No 202141029314)-June 2021

Grants

- ⌋ Dr.B.Sreedevi, 2017, Department of Science and Technology, Government of India granted Rs.100000/- for the project titled “Mind Controlled Gaming for Differently Abled”.
- ⌋ AICTE Sponsored STTP for Rs.300000/- in Predictive Modelling And Data Analysis Using Python Based Machine Learning Technique
- ⌋ AICTE Sponsored ATAL FDP for Rs.93000/- in Data Sciences.

Publications

- ⌋ Sreedevi, B & Rajagopalan, SP, ‘Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques’, SCI, Annexure-I, ISSN: 1537-744X, Article: ID 405974
- ⌋ Sreedevi. B ,’Disaster Management Using Blockchain and Cloud Services’ Journal of Green Engineering (JGE) 10 (10)
- ⌋ Dr.B.Sreedevi, P.Rayavel,” Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled’,AIP Publications,Scopus Indexed 2019.
- ⌋ Sreedevi. B, Pachhaimmal@Priya M, T.Ragunthar, ‘Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’, International Journal of Pure and Applied Mathematics, Vol.117,no.21,2017.
- ⌋ Dr.B.Sreedevi, Pachhaimmal @Priya. M ,’Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms ‘,IEEE Digital Library and Scopus Indexed,Publication Year: 2018, Page(s):6 – 11
- ⌋ Sreedevi, B ,’Analysis of Performance Metrics with Mesenchymal Stem cell Classification and Optimization Algorithms’ ,International Journal of Creative Research Thoughts (IJCRT) 5 (4), 2613-2618,2017
- ⌋ Sreedevi, B & Rajagopalan, SP 2015, ‘Examine and Extraction of Optimized Stem Cells Using Image Processing’, Australian Journal of Basic and Applied Sciences, vol. 9, no. 10, Special 2015, pp. 1-5.
- ⌋ Sreedevi. B, Abheek Kumar Srivastava, Ashwin Venkataraman,’ Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm’, International Journal of

Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 10, October 2013, ISSN: 2277 128X

- ⌋ B.Sreedevi, Dr.S.P.Rajagopalan,' Analysing Stem Cells Using Transformed Stem Cell Algorithm ', International Journal of Applied Engineering Research (IJAER), Volume 10, Number 75 (2015) .
- ⌋ Pradeep Kumar Sahoo, S. P. Rajagopalan, Sreedevi B, Pachhaimmal@ Priya.M,' Web Content Mining Based Relevant Text Data Extraction', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.186-193.
- ⌋ Pachhaimmal@Priya M, S.P.Rajagopalan, B.Sreedevi and Pradeep Kumar Sahoo,' Analysis methods and mining of brain functional connectivity for detection of brain disorders', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.258-262.

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Citizenship: India

Book Published

- Dr.S.Vidya, "Hybrid Approaches For Wind Speed Forecasting In India", ISBN 978-620-4-73737-9, LAP Lambert Publishing, Germany, 25.1.2022.

Patent

- Published "Iot Based Nozzle And Shell Junction For Feed Water Heater" on 28/1/22.

Papers Published

- [1] Vidya, S & Srie Vidhya Janani, E 2020, 'Tabu search algorithm based general regression neural network for long term wind speed predictions', *Automatika: Journal for Control, Measurement, Electronics, Computing and Communications*, vol. 61, no. 4, pp. 657-669, Impact Factor: 0.764
- [2] Vidya, S & Srie Vidhya Janani, E 2021, 'Wind speed multi- step forecasting model using a hybrid decomposition technique and a selfish herd optimizer based deep neural network', *Soft Computing*, Springer, DOI:<https://doi.org/10.1007/s00500-021-05608-5>, Impact Factor: 3.050.
- [3] Paper published in the "Lecture notes and Network systems" in "Risk Prediction of Lung Disease using Deep learning approach", vol.300, Springer, Cham. https://doi.org/10.1007/978-3-030-84760-9_40, Sep 2021.

- [4] Paper published in the “International Journal of Recent Technology and Engineering (IJRTE)” in “Software Defect Estimation using Machine Learning Algorithms”, vol.10, issue 1, pg.204-208.
- [5] Paper Published in the “International Journal of Scientific and Technology Research” in “A Review on the Hybrid Approaches for wind speed forecasting”, ISSN-2277- 8616,Vol-8, Issue 9, Sep-2019.
- [6] Paper published in the “International Journal of Scientific Research in Computer Science Engineering and Information Technology” in “Cross Domain Sentiment Classification using Natural Language Processing” ISSN:2456-3307,Vol.3, Mar-2018.
- [7] Paper published in the “International Journal of Engineering Trends and Applications” in “Product Review Analysis with Filtering Vulgarity and Ranking System based on Transaction Id and OTP” ISSN:2393-9516,Vol.3,Nov-2016.
- [8] Paper published in the “International Journal of Advance Information Science and Technology” in “Dynamic XML Dissemination Supporting Twig Pattern Queries” ISSN: 2319- 2618, Vol.17, No.17, Sep-2013,1-4.
- [9] Paper published in the “Neuroquantology”, Performance Predictor: Predicting the future performance of students by Machine Learning approach,Vol.20, No.10, ISSN:1303-5150.

Dr.D.RAJALAKSHMI

Associate Professor,

Department of Computer Science & Engineering,

Sri Sai Ram Institute of Technology,

West Tambaram, Chennai – 600063

Papers Published

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	G. Uganya, D. Rajalakshmi, Yuvaraja Teekaraman , Ramya Kuppusamy , and Arun Radhakrishnan	A Novel Strategy for Waste Prediction Using Machine Learning Algorithm with IoT Based Intelligent Waste Management System	International Journal of Wireless Communications and Mobile Computing	10.1155/2022/2063372	1-15	2022
2.	D.Rajalakshmi, K.Meena	A Hybrid Intrusion Detection System for Mobile Adhoc Networks using FBID Protocol	Scalable Computing and Practice	10.12694/scpe.v21i1.1642	137-145	2020

5 List of Projects submitted/implemented by the Investigators

5.1 Details of Projects submitted to various funding agencies:

S. No	Title	Cost in Lakh	Month of submission	Role as PI/Co-PI	Agency	Status
1	Developing powerful and effective hybrid model for obtaining high precision rainfall predictions using intelligent algorithms in India.	10,96,989	April -2022	PI	SERB	Under evaluation

5.2 Details of Projects under implementation:

S. No	Title	Cost in Lakh	Start Date	End Date	Role as PI/Co-PI	Agency
NIL						

5.3 Details of Projects completed during the last 5 years:

S. No	Title	Cost in Lakh	Start Date	End Date	Role as PI/Co-PI	Agency
1	Processing and Characterization of composite materials including natural fiber reinforced composites	6.0	18/03/2015	31/03/2015	PI	AICTE
2	Staff Development Programme on Artificial Intelligence with AI	7.0	15/09/2011	27/09/2011	PI	AICTE

6 List of facilities being extended by parent institution(s) for the project implementation.

6.1 Infrastructural Facilities

Sr. No.	Infrastructural Facility	Yes/No/ Not required Full or sharing basis
1.	Workshop Facility	yes
2.	Water & Electricity	yes

3.	Laboratory Space/ Furniture	yes
4.	Power Generator	yes
5.	AC Room or AC	yes
6.	Telecommunication including e-mail & fax	yes
7.	Transportation	yes
8.	Administrative/ Secretarial support	yes
9.	Information facilities like Internet/Library	yes
10.	Computational facilities	yes
11.	Animal/Glass House	yes
12.	Any other special facility being provided	yes

6.2 Equipment available with the Institute/ Group/ Department/Other Institutes for the project:

Equipment available with	Generic Name of Equipment	Model, Make & year of purchase	Remarks including accessories available and current usage of equipment
PI & his group	NIL		

7 Name and address of experts/ institution interested in the subject / outcome of the project.

- Dr.P.Deepalakshmi,
Dean/SOC,
Kalasalingam Academy of Research and Education,
Virudhunagar District.
- Dr.R.Murugeswari,
Assistant Professor,
Computer Science and Engineering,
Vellore Institute of Technology,
Bhopal.

Budget Details

Institution wise Budget Breakup :

Budget Head	Sri Sairam Institute of Technology	Total
Research Personnel	8,44,800	8,44,800
Consumables	1,35,000	1,35,000
Travel	1,50,000	1,50,000
Equipment	25,000	25,000
Contingencies	75,000	75,000
Other cost	7,50,000	7,50,000
Overhead	45,000	45,000
Total	20,24,800	20,24,800

Institute Name : *Sri Sairam Institute of Technology*

Year Wise Budget Summary (Amount in INR) :

Budget Head	Year-1	Year-2	Year-3	Total
Research Personnel	4,84,800	1,80,000	1,80,000	8,44,800
Consumables	45,000	45,000	45,000	1,35,000
Travel	50,000	50,000	50,000	1,50,000
Equipments	25,000	0	0	25,000
Contingencies	25,000	25,000	25,000	75,000
Other cost	2,50,000	2,50,000	2,50,000	7,50,000
Overhead	15,000	15,000	15,000	45,000
Grand Total	8,94,800	5,65,000	5,65,000	20,24,800

Research Personnel Budget Detail (Amount in INR) :

Designation	Year-1	Year-2	Year-3	Total
Research Associate-I <i>This project requires well-trained, research associate who has completed Ph.D. and a technical assistant with Master Degree as qualification since this project deals with high priority area that is solid waste prediction and to develop and complete this project with utmost care and on-time delivery of the project</i>	4,84,800	1,80,000	1,80,000	8,44,800

Consumable Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Total
<i>photocopying, printing, pencils, pens, pads of paper, markers, postage, computer supplies, Desktop, Printer, Server</i>	45,000	45,000	45,000	1,35,000

Travel Budget Detail (Amount in INR) :

Justification (Inland Travel)	Year-1	Year-2	Year-3	Total
<i>Inland travel is necessary for the PI, Co-PI and the project assistant to attend workshops, present in conferences and develop open database therefore it could be useful for research community in India</i>	50,000	50,000	50,000	1,50,000

Equipment Budget Detail (Amount in INR) :

Generic Name ,Model No. , (Make)/ Justification	Quantity	Spare time	Estimated Cost
Power BI (Power BI) <i>contingency which are unexpected costs away from the budget is much needed for smooth completion of the project. here a contingency of 5 % is calculated per year of total cost and is equated for three years</i>	1	5 %	25,000

Contingency Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Total
<i>contingency which are unexpected costs away from the budget is much needed for smooth completion of the project. here a contingency of 5 % is calculated per year of total cost and is equated for three years</i>	25,000	25,000	25,000	75,000

Overhead Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Total
<i>Maintenance</i>	15,000	15,000	15,000	45,000

Other Budget Detail (Amount in INR) :

Description/Justification	Year-1	Year-2	Year-3	Total
Other Budget detail since the institution is providing space, electricity and other facility to do the project, the institutional overheads are to be considered at 15 % of annual cost	2,50,000	2,50,000	2,50,000	7,50,000

Dr B.Sreedevi

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Sri Sairam Institute Technology Anna University
Chennai India 600045
Mobile: +91 9444245253 email: hodcse@sairamit.edu.in
Citizenship: India

Research Interests

My research interests revolve around the problem of Medical Image Processing and, more recently, Stem Cells. Much of my recent work focuses on image segmentation isolation and prediction using Machine learning algorithms. I've compared various Machine Learning Algorithms and proposed a model for predicting Accuracy. My interest in multiscale, parts-based shape representations, and their common abstraction as hierarchical graphs, has motivated my research in inexact graph indexing and matching – key problems in object recognition, another broad focus of my research. My research has also explored many problems related to object recognition, including object tracking, vision-based navigation, content based image retrieval, language-vision integration, and image/model abstraction.

Education

- Ph.D., Computer Science and Engineering Anna University, Chennai, India, Aug 2017 - Sub-specialization: Machine Learning and Image Processing
- Master of Technology in Computer Science and Engineering, SRM University Chennai, India, April 2007
- Bachelor of Engineering in Computer Science and Engineering, University of Madras April 1999

Professional Experience

- **Head of the Department & Professor**, Department of Computer Science and Engineering, Sri Sai Ram Institute of Technology, Anna University. June 2010 to Present
- **Assistant Professor** Department of Computer Science and Engineering Rajalakshmi Engineering College, Thandalam, Chennai, India. July 2019 to May 2010
- **Lecturer** Department of Computer Science and Engineering, SRM University, Chennai, India. Jan 2001 to March 2007

Technical Skills

- Programming in C, Python, Java with JDBC, PHP
- Web Technologies: HTML, CSS, AJAX, Java Script, XML and Web Services
- Extensive knowledge of RDBMS like Oracle and MYSQL.
- Familiarity in OS like Fedora, Windows and Linux.
- Work Experience in IDE like Net beans and Eclipse.
- Application of Data Mining Algorithms with WEKA tool.

Achievements

- Development of Visible Light Communication for Smart Museums, Bangkok University, Centre of Research in Optoelectronics, Bangkok, Thailand-May 2019
- Longest Continuous Student Branch Counsellor 2019
- Academic Excellence Award 2018
- Best faculty advisor Award by Institution of Engineers (India) 2019
- “Uttama Acharya Puraskar”-A National Award for Impact Creators-Lions Club of Vijayawada

Certifications

Certified EMC Academic Associate in Data Science and Big Data Analytics by DELL EMC2 during March 2018.

NPTEL-IIT certification in Data Mining, Database Management Systems, Python for Machine Learning and Internet of Things.

Certified from AICTE NITTTR for Module 8-Institutional Management and Administrative Procedures

Certified ATL tinkerprenuer Mentor by AICTE

Professional Affiliations

Inventive Research Organization (IRO)	Feb 2017-Present
International Association of Engineers (IAENG)	Dec 2017-Present
Computer Society of India –Student Branch Counsellor	May 2011 – Present
Indian Society for Technical Education (ISTE)	May 2014 – Present
Institution of Engineers (India)(IEI)	Nov 2018- Present
National Digital Library (NDL)	May 2016 – Present
The Society of Innovative Educationalist and Research (FSIERP)	Mar 2019-Present

Books Published

- Internet Programming in Sahara Publications, India with ISBN 9789386636157 – 2017
- Book Chapter in “Machine Learning and Applications” on the topic Machine Learning based Credit Card based Fraud Detection(CNN Algorithm)
- Book Chapter in Advanced Aspects of Engineering Research Vol. 5 “Study on Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled”

Patents

- Mind Controlled Gaming for Differently Abled Indian Provisional (**Patent No201841016343**) in the field of Bio Medical Engineering – May 2018

- Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems(No. 202041031869-July 2020)
- VLC TRANSCIEVERS FOR SMART MUSEUMS(Patent No 202141029314)- June 2021

Grants

- Dr.B.Sreedevi, 2017, Department of Science and Technology, Government of India granted Rs.100000/- for the project titled “Mind Controlled Gaming for Differently Abled”.
- AICTE Sponsored STTP for Rs.300000/- in Predictive Modelling And Data Analysis Using Python Based Machine Learning Technique
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- **Sreedevi. B ,’Disaster Management Using Blockchain and Cloud Services’ Journal of Green Engineering (JGE) 10 (10)**
- Dr.B.Sreedevi, P.Rayavel,” Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled’,AIP Publications,Scopus Indexed 2019.
- Sreedevi. B, Pachhiammal@Priya M, T.Ragunthar, ‘Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’, International Journal of Pure and Applied Mathematics,Vol.117,no.21,2017.
- **Dr.B.Sreedevi, Pachhiammal @Priya. M ,’Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’,IEEE Digital Library and Scopus Indexed,Publication Year: 2018, Page(s):6 – 11**
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- Sreedevi, B & Rajagopalan, SP 2015, ‘Examine and Extraction of Optimized Stem Cells Using Image Processing’, Australian Journal of Basic and Applied Sciences, vol. 9, no. 10, Special 2015, pp. 1-5.
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- Pradeep Kumar Sahoo, S. P. Rajagopalan, Sreedevi B, Pachhaimmal@Priya.M,' Web Content Mining Based Relevant Text Data Extraction', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.186-193.
- Pachhaimmal@Priya M, S.P.Rajagopalan, B.Sreedevi and Pradeep Kumar Sahoo,' Analysis methods and mining of brain functional connectivity for detection of brain disorders', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.258-262.

International & National Conferences

- **Dr.B.Sreedevi, 'Decentralized Application for managing the Disaster with Block chain, Cloud &IOT',International Conference on Computer and Information Sciences at University of PETRONAS, Malaysia during JULY 13-15,2021.**
- Dr.B.Sreedevi, P.Rayavel Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled', NATIONAL CONFERENCE ON MATHEMATICAL TECHNIQUES AND ITS APPLICATIONS (NCMTA – 2019) AT SRM UNIVERSITY FROM 11-12 JANUARY 2019.
- Dr.B.Sreedevi, Pachhaimmal @Priya. M ,'Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms ',International Conference on Communication, Computing & Internet of Things, held at Sri Sai Ram Engineering College, Chennai, India from 15-17 February 2018.
- Dr.B.Sreedevi,P.Rayavel, National Conference on Mathematical Techniques and its Applications(NCMTA) held at SRM University, Chennai, India from 11-12 January 2019.
- B.Sreedevi, Dr.S.P.Rajagopalan, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm 'International Conference On Computing And Information Technology (ICCIT '15)
- Sreedevi, B, Abeek Kumar Srivastava & Ashwin Venkataraman 2013,'Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm', Proceedings of the International Conference on Recent Trends in Computing(ICRTC 2013) ,4th &5th October 2013, pp. 32-27.
- Sreedevi, B & Rajagopalan, SP 2015, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm', Proceedings of the International Conference on Computing and Information Technology (ICCIT'15), 13th &14th August 2015, pp. 96-100.
- Sreedevi, B & Rajagopalan, SP 2015, 'Examine and Extraction of Optimized Stem Cells Using Image Processing', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'15' On 27th March, 2015.

- B.Sreedevi, E.Madhumitha, M.Kalaiselvi, 'Automatic Classification Of Intracardiac Tumor And Thrombi In Echocardiogram Using Adaptive Co-Segmentation', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'16'

Workshop & Conferences

- Coordinator for TEDX-SriSairamIT and Hackathon Events.
- Organized first International Conference on Computing and Information Technology (ICCIT'15) during 2015.
- Organized a Staff development programme on "Soft Computing with AI" sponsored by AICTE for Rs.700000/- during 2011.
- Organized National Conferences on "Information & Communication Engineering Systems"-NICE '11, NICE'17 and NICE'18.
- International Seminar on "Recent Trends in Computer Technology" by Dr.Emerson Raja Joseph, Multimedia University, Malaysia during 2014.
- National Event on" CSI Golden Tech Bridge Programme" by Computer Society of India during 2014.
- FDP on Python Programming by ICTACT of Tamilnadu during 2018.
- Attended a seminar on "Stem Cell and Regenerative Medicine" during Nov 2016 at Anna University
- Delivered a session in FDP on "Internet Programming" at Loyola ICAM Institute of Technology, Chennai
- Attended STTP in Pondicherry Engineering College during 2016 on "Recent trends in optimization techniques".
- Attended FDP on "Hadoop" conducted by ICTACT at Sri Sai Ram Institute of Technology during 2016.

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address

Dr.S.Vidya,
Associate Professor,
Department of Computer Science and Engineering,
Sri Sairam Institute of Technology,
Chennai-44.

2. Email(s) and contact number(s) vidya.cse@sairamit.edu.in, 7358218015

3. Institution

Sri Sairam Institute of Technology

4. Date of Birth 21/12/1988

5. Gender (M/F/T) F

6. Category Gen/SC/ST/OBC Gen

7. Whether differently abled (Yes/No) No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.E.	2010	CSE	ANNA	85
2.	M.E.	2014	CSE	ANNA	8.78
3.	Ph.d.	2021	CSE	ANNA	9.25

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Ph.D thesis title: Hybrid approaches for long term and short term wind speed forecasting in India.

Guide Name: Dr.E.SrieVidhyaJanani
Assistant Professor & HOD,
Madurai Regional Campus,
Anna University,
Madurai.

Year of award: 10-11-21

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Associate Professor	Sri Sairam Institute of Technology	1-10-22	Till now	As per norms
2	Assistant Professor -I	Sri Sairam Institute of Technology	9-9-21	30-9-22	As per norms
3	Assistant Professor -III	Kalasalingam Institute of Technololgy	1-6-2017	27-8-21	As per norms
4	Assistant Professor -III	St.Joseph's Institute of Technology	16-6-2014	31-3-2017	As per norms
5	Programmer Analyst	Cognizant Technology Solutions (CTS)	30-8-2010	6-4-2012	As per norms

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1	Best Young Faculty award	Novel Research Academy	2021-22
2	"Travelers Star Program Award"	Cognizant Technology Solutions (CTS)	2011
3	Ilantamarignar award	Bharathiar Maanavar Tamil Mandram	2001

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Vidya, S & Srie Vidhya Janani, E	'Tabu search algorithm based general regression neural network for long term wind speed predictions',	Automatika: Journal for Control, Measurement, Electronics, Computing and Communications,	61	657-669	2020
2	Vidya, S & Srie Vidhya Janani, E 2021,	'Wind speed multi-step forecasting model using a hybrid decomposition technique and a selfish herd optimizer based deep neural network',	Soft Computing, Springer,	25	6237-6270	2021

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1	IOT BASED NOZZLE AND SHELL JUNCTION FOR FEED WATER	1)Dr.J.JAYAPRIYA 2)P.CHANDRASEKAR 3)Dr. C.RAMESH BABU DURAI 4)J THIRUNAVUKKARASU	202141059532 A	28/01/22	India	Published - Awaiting Request for Examination

	HEATER	5)Dr. S. VIDYA 6)MERLIN LINDA G 7)Dr. BASANTA KUMAR PALAI, 8)MALATHI G 9)KAVINILAVU A 10)B.UMAMAHESWARI,				
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14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	Hybrid Approaches for Wind Speed Forecasting in India	Dr.S.Vidya	LAP LAMBERT Academic Publishing	2022-01-25 ISBN-13: 978-620-4-73737-9

15. Any other Information (maximum 500 words)

- Reviewer of Journal “Bulletin of Electrical Engineering and Informatics” (BEEI) from January 2020.
- Member of IEEE and CSI.
- Secured 27th rank in M.E. among 4098 candidates.
- Awarded as “Best student of the Week” and hoisted the National Flag in X std.

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address: **Dr.D.RAJALAKSHMI**
Associate Professor,
Department of Computer Science & Engineering,
Sri Sai Ram Institute of Technology,
West Tambaram, Chennai - 600063
2. Email(s) and contact number(s) : rajalakshmi.cse@sairamit.edu.in, +919942258071
3. Institution : Sri Sai Ram Institute of Technology, Chennai
4. Date of Birth : 28-05-1984
5. Gender (M/F/T) : Female
6. Category Gen/SC/ST/OBC : OBC
7. Whether differently abled (Yes/No) : No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.Tech	2005	Information Technology	Anna University	74.4%
2.	M.E	2010	Computer Science & Engineering	Anna University	80.56%
3.	Ph.D	2022	CSE	Veltech Rangarajan Dr.Sagunthala R&D Institute of Technology	-

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Thesis Title: A Secured Intrusion Detection for Identifying Malicious Nodes In MANET Using Hybrid Fuzzy Based Protocol

Guide's Name: Dr.N.R.Rajalakshmi , Dr.K.Meena

Institute/Organization/University: Veltech Rangarajan Dr.Sagunthala R&D Institute of Technology

Year of Award: 2022

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	Associate Professor	Sri Sai Ram Institute of Technology	01-09-2022	Till Date	As Per Norms
2.	Assistant Professor	Sri Sai Ram Institute of Technology	14-06-2014	31-08-2022	As Per Norms
3.	Assistant Professor	Shri Angalamman College of Engineering & Technology	01-06-2010	27-05-2014	As Per Norms
4.	Lecturer	Shri Angalamman College of Engineering & Technology	22-07-2005	31-08-2008	As Per Norms

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1.	Certified Trainer for CCNA	CISCO	2021
2.	Best Faculty Award	Sri Sai Ram Institute of Technology	2020
3.	Best Women Faculty	DKIR Foundation	2019

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	G. Uganya, D. Rajalakshmi, Yuvaraja Teekaraman, Ramya Kuppusamy, and Arun Radhakrishnan	A Novel Strategy for Waste Prediction Using Machine Learning Algorithm with IoT Based Intelligent Waste Management System	International Journal of Wireless Communications and Mobile Computing	10.1155/2022/2063372	1-15	2022
2.	D.Rajalakshmi, K.Meena	A Hybrid Intrusion Detection System for Mobile Adhoc Networks using FBID Protocol	Scalable Computing and Practice	10.12694/scpe.v21i1.1642	137-145	2020

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1.	IoT based Smart Material for EV Segment using Wire Electrical Discharge Machining Thereof	J.Jayapriya, J.Thirunavukkarasu, D.Rajalakshmi, S.Rajeswari, R.Prabavathi, A.Kavinilavu	202241006784 A	11-02-2022	India	Published

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1.	An improved Faster and Novel Methodology for Diabetes Ulcer Classification Based on Customized CNN	Rajalakshmi D, Tharunya R	IEEE Xplore	2022
2.	Decision Trees to detect Malware in a Cloud Computing Environment	Vijayaraj, Sumathi, M.Rajkamal, M., Kamaleshwar, D.T. Rajalakshmi, D.	IEEE Xplore	2022
3.	A Novel LC-DEH Algorithm to Enhance Efficiency and Security for Reliable Data Transmission in Blockchain	Uganya G, Radhika Baskar, Balasaraswathi M, Vijayaraj N, Rajalakshmi D	CRC Press	2022

	with IoT-Based Healthcare Systems			
4.	An Efficient Selfishness Control mechanism for Mobile Adhoc Networks	Rajalakshmi D, Meena K	Research Innovations and Applications of AI, IoT and Cognitive Technologies, IGI Global Publisher of Timely Knowledge	2021
5.	IR image disruptor with Embedded Code Tracker	Rajalakshmi D, Anitha N	IEEE Xplore	2021
6.	Investigation and Analysis of Path Evaluation for Sustainable Communication using VANET	Rajalakshmi D, Meena K, Vijayaraj N, Uganya G	Springer: Lecture Notes on Data Engineering and Communications Technologies	2021
7.	A Novel based Fuzzy Cognitive Maps Protocol for Intrusion Discovery in Manets	Rajalakshmi D, Meena K	International Journal of Recent Technology and Engineering	2019
8.	An Efficient technique of Intrusion Detection for large number of malicious nodes in MANET using a tree classifier	Rajalakshmi D, Meena K	International Journal of Simulation Systems, Science & technology	2018
9.	A Survey of Intrusion detection with higher malicious misbehavior detection in MANET	Rajalakshmi D, Meena K	International Journal of Civil Engineering and Technology	2017
10.	Enhanced Scenario-Based Experiments to overcome Byzantine Attacks in Manet	G.Murugaboopathi, Rajalakshmi D, Jayanthan R	Journal of Theoretical and Applied Information Technology	2014
11.	Interactive Analyses in Marine Fisheries using Passive Optical Remote Sensing Techniques	G.Murugaboopathi, Rajalakshmi D, Jayanthan R	Biosciences Biotechnology Research Asia	2014
12.	Vision Approach of Human detection and Tracking using Focus Tracing Analysis	Sanoj C.S, Vijayaraj N, Rajalakshmi D	IEEE Xplore	2013
13.	Issues and Challenges of Scheduling and Protection Algorithms for Proficient Parallel Data Processing in Cloud	Vijayaraj N, Rajalakshmi D, Sanoj C.S	IEEE Xplore	2013
14.	Design and Optimization of Printed Dipole Antenna for Wireless Sensor Communication at 2.4GHz	Rajalakshmi D, Sanoj C.S, Vijayaraj N	IEEE Xplore	2013
15.	Ranking Sector Oriented Sense with Geographic Protocol	Rajalakshmi D, Sanoj C.S, Vijayaraj N	Springer: Lecture Notes in Electrical Engineering	2013
16.	DYCRASEN: A Dynamic Cryptographic Asymmetric Key Management for Sensor Network using Hash Function	Saravanan D. Rajalakshmi D, Maheswari D	International Journal of Computer Applications	2011

15. Any other Information (maximum 500 words)

Published a book titled “Grid and Cloud Computing” ISBN: 978-93- 80430-50- 8 in CBA Publisher in October 2017.



All India Council for Technical Education

(A Statutory body under Ministry of Education, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



APPROVAL PROCESS 2022-23

Extension of Approval (EoA)

F.No. Southern/1-10968620556/2022/EOA

Date: 03-Jul-2022

To,

The Principal Secretary
(Higher Education) Govt. of Tamil Nadu,
N. K. M. Bld. 6th Floor Secretariat,
Chennai-600009

Sub: Extension of Approval for the Academic Year 2022-23

Ref: Application of the Institution for Extension of Approval for the Academic Year 2022-23

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations, 2022 Notified on 4th February, 2022 and amended on 24th February 2022 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-2501960	Application Id	1-10968620556
Name of the Institution	SRI SAI RAM INSTITUTE OF TECHNOLOGY	Name of the Society/Trust	SAPTHAGIRI EDUCATIONAL TRUST
Institution Address	SAI LEO NAGAR, DHARKAST ROAD, WEST TAMBARAM, CHENNAI.600 044, CHENNAI., KANCHIPURAM, Tamil Nadu, 600044	Society/Trust Address	NO. 31, MADLEY ROAD, T. NAGAR, CHENNAI., CHENNAI, CHENNAI, Tamil Nadu, 600017
Institution Type	Private-Self Financing	Region	Southern
Year of Establishment	2008		

To conduct following Courses with the Intake indicated below for the Academic Year 2022-23

Level	Program	Course	Affiliating Body (University /Body)	Intake Approved for 2021-22	Intake Approved for 2022-23	NRI Approval Status	FN / Gulf quota/ OCI/ Approval Status
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE ✓	Anna University, Chennai	60	120 =	NA	NA
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	COMPUTER AND COMMUNICATION ENGINEERING ✓	Anna University, Chennai	60	60	NA	NA
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	COMPUTER SCIENCE AND ENGINEERING ✓	Anna University, Chennai	180	180	NA	NA

Level	Program	Course	Affiliating Body (University /Body)	Intake Approved for 2021-22	Intake Approved for 2022-23	NRI Approval Status	FN / Gulf quota/ OCI/ Approval Status
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)	Anna University, Chennai	0	60 ^{##} ✓	NA	NA
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	ELECTRICAL AND ELECTRONICS ENGINEERING	Anna University, Chennai	60	60 ✓	NA	NA
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	ELECTRONICS AND COMMUNICATIONS ENGINEERING	Anna University, Chennai	120	120 ✓	NA	NA
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	INFORMATION TECHNOLOGY	Anna University, Chennai	120	180 ^{\$\$} ✓	NA	NA
UNDER GRADUATE	ENGINEERING AND TECHNOLOGY	MECHANICAL ENGINEERING	Anna University, Chennai	60	60 ✓	NA	NA
POST GRADUATE	MANAGEMENT	MBA	Anna University, Chennai	60	60 ✓	NA	NA
POST GRADUATE	ENGINEERING AND TECHNOLOGY	BIG DATA ANALYTICS	Anna University, Chennai	18	18 ✓	NA	NA
POST GRADUATE	ENGINEERING AND TECHNOLOGY	INDUSTRIAL SAFETY AND ENGINEERING	Anna University, Chennai	18	18 ✓	NA	NA

Approved New Course(s)

\$\$ New Course(s)/Increase in Intake should be offered in Emerging Area

\$\$ New Course(s)/Increase in Intake should be offered in Emerging Area

It is mandatory to comply with all the essential requirements as given in APH 2022-23 (Appendix 6)

Important Instructions

1. The State Government/ UT/ Directorate of Technical Education/ Directorate of Medical Education shall ensure that 10% of reservation for Economically Weaker Section (EWS) as per the reservation policy for admission, operational from the Academic year 2019-20 is implemented without affecting the reservation percentages of SC/ ST/ OBC (NCL)/ General. However, this would not be applicable in the case of Minority Institutions referred to the Clause (1) of Article 30 of Constitution of India. Such Institution shall be permitted to increase in annual permitted strength over a maximum period of two years.
2. The Institution offering courses earlier in the Regular Shift, First Shift, Second Shift/Part Time are now amalgamated as total intake and shall have to fulfil all facilities such as Infrastructure, Faculty and other requirements as per the norms specified in the Approval Process Handbook 2022-23 for the Total Approved Intake. Further, the Institutions Deemed to be Universities/ Institutions having Accreditation/ Autonomy status shall have to maintain the Faculty: Student ratio as specified in the Approval Process Handbook. All such Institutions/ Universities shall have to create the necessary Faculty, Infrastructure and other facilities WITHIN 2 YEARS to fulfil the norms based on the Affidavit submitted to AICTE beginning with the Academic Year 2022-23
3. Strict compliance of Anti-Ragging Regulation, Establishment of Committee for SC/ ST, Establishment of Internal Complaint Committee (ICC), Establishment of Online Grievance Redressal Mechanism, Barrier Free Built Environment for disabled and elderly persons, Fire and Safety Certificate should be maintained as Approval Process Handbook and provisions made in AICTE Regulation notified from time to time.
4. In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Pharmacy Institute: In compliance with the order dated 05.03.2020 passed by the Hon'ble Supreme Court of India in Transferred Petitions (CIVIL) No 87-101 of 2014, for the existing institutions offering courses in Pharmacy Programme, approval of Pharmacy Council of India (PCI) is mandatory and AICTE approval is NOT required. The requirements for running the Programme (Diploma / UG / PG) such as Land & Build-up Area, Student-faculty ratio, Intake etc. will be as per the respective regulatory body (PCI). In case of any inconsistency in the course name and intake for EoA issued by AICTE and the approval by PCI, the approval of PCI shall prevail.

Architecture Institute: In compliance with the order dated 08.11.2019 passed by the Hon'ble Supreme Court of India in CA No.364/ 2005, for the existing Institutions offering Courses in Architecture Programme, approval by the Council of Architecture (CoA) is mandatory and AICTE approval is NOT required. The requirements for running the Programme (Diploma / UG / PG) such as Land & Build-up Area, Student-faculty ratio, Intake etc. will be as per respective regulatory body (CoA). In case of any inconsistency in the course name and intake for EoA issued by AICTE and the approval by CoA, the approval of CoA shall prevail.

Deemed to be University: Institutions Deemed to be Universities (Running Technical Education Programmes), it is mandatory to have AICTE approval from the Academic Year 2018-19 in compliance of the Hon'ble Supreme Court Order dated 03-11-2017 passed in CA No.17869- 17870 /2017.

Prof.Rajive Kumar
Member Secretary, AICTE

Copy to:

1. **The Director Of Technical Education**, Tamil Nadu**
2. **The Registrar**,
Anna University, Chennai**
3. **The Principal / Director,
SRI SAI RAM INSTITUTE OF TECHNOLOGY
Sai Leo Nagar, Dharkast Road,
West Tambaram,
Chennai.600 044,
Chennai.,Kanchipuram,
Tamil Nadu,600044**
4. **The Secretary / Chairman,
NO, 31, MADLEY ROAD, T. NAGAR, CHENNAI.
CHENNAI,CHENNAI
Tamil Nadu,600017**

5. **The Regional Officer,**
All India Council for Technical Education
Shastri Bhawan 26, Haddows Road
Chennai - 600 006, Tamil Nadu

6. **Guard File(AICTE)**

Note: Validity of the Course details may be verified at <http://www.aicte-india.org/>

** Individual Approval letter copy will not be communicated through Post/Email. However, consolidated list of Approved Institutions(bulk) will be shared through official Email Address to the concerned Authorities mentioned above.

This is a computer generated Statement. No signature Required



Sai SAI RAM INSTITUTE OF TECHNOLOGY

(Managed by Sathiyagi Educational Trust, Chennai - 17)

Accredited by NBA and NAAC 'A+' | An ISO 9001:2015 Certified and MHRD NIRF ranked institution
Sai Leo Nagar, West Tambaram, Chennai. Tel: 044 - 2251 2111 www.sairamit.edu.in

Founder Chairman : M.J. Ln. Leo Muthu



Certificate from the Investigator

Project Title: Development of Powerful and Effective Hybrid Model for obtaining High Precision Solid Waste Predictions in Chennai using Optimization Algorithms

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support.
2. We undertake that spare time on equipment procured in the project will be made available to other users.
3. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, GOI would be followed in to.
4. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trails/experiments/exchange of specimens, human & animal materials etc.
5. The research work proposed in the scheme/project does not in any way duplicate the work already done or being carried out elsewhere on the subject.
6. We agree to abide by the terms and conditions of SERB grant.

Name and signature of Principal Investigator: Dr. B. Sreedevi

Date: 15/10/22

Place: CHENNAI

Dr. B. Sreedevi

HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
SRI SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI - 600 044.



Name and signature of Co-PI: Dr. S. Vidya

Date: 15/10/22

Place: CHENNAI

Name and signature of Co-PI: Dr. D. Rajalakshmi

Date: 15/10/22

Place: CHENNAI



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
Tel: 044 - 4226 7777 e-mail : sairam@sairamgroup.in

/SairamInstitutions

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Sri SAI RAM INSTITUTE OF TECHNOLOGY

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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

Institute welcomes participation of Dr.B.Sreedevi, Prof &HOD/CSE as the Principal Investigator and Dr.S.Vidya, ASP/CSE, Dr.D.Rajalakshmi ASP/CSE as the Co-Investigators for the project titled "Development of Powerful and Effective Hybrid Model for obtaining High Precision Solid Waste Predictions in Chennai using Optimization Algorithms" and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigators will assume the responsibility of the fruitful completion of the project with the approval of SERB.

1. The PI Dr.B.Sreedevi is a permanent or regular employee of this Institute.
2. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
3. The investigator will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as mentioned in the sanction order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi at the end of the project.
6. The University/Institute/Organization/College will provide basic infrastructure and other required facilities to the investigator for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.

Seal of

University/Institute/Organization/College

Date: 15/10/22



Signature

Dr. K. PALANI KUMAR

Principal of College PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI - 600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

Institute welcomes participation of Dr.B.Sreedevi, Prof & HOD/CSE as the Principal Investigator and Dr.S.Vidya, ASP/CSE, Dr.D.Rajalakshmi ASP/CSE as the Co-Investigators for the project titled "Development of Powerful and Effective Hybrid Model for obtaining High Precision Solid Waste Predictions in Chennai using Optimization Algorithms" and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigators will assume the responsibility of the fruitful completion of the project with the approval of SERB.

1. The Co-PIs, Dr.S.Vidya, Dr.D.Rajalakshmi are a permanent or regular employee of this Institute.
2. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
3. The investigator will be governed by the rules and regulations of University/ Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as mentioned in the sanction order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi at the end of the project.
6. The University/Institute/Organization/College will provide basic infrastructure and other required facilities to the investigator for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.

Seal of

University/ Institute/Organization/College

Date: 15/10/22



Signature

Dr.K.PALANI KUMAR
PRINCIPAL

Principal of SAI RAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.

Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

/SairamInstitutions

+91 98848 45678



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Sri SAI RAM INSTITUTE OF TECHNOLOGY

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Founder Chairman : MJF, Ln. Leo Muthu



Undertaking by the Principal Investigator

To
The Secretary
SERB, New Delhi

Sir

I Dr.B.Sreedevi hereby certify that the research proposal titled "Development of Powerful and Effective Hybrid Model for obtaining High Precision Solid Waste Predictions in Chennai using Optimization Algorithms" submitted for possible funding by SERB, New Delhi is my original idea and has not been copied /taken verbatim from anyone or from any other sources. I further certify that this proposal has been checked for plagiarism through a plagiarism detection tool i.e Turnitin approved by the Institute and the contents are original and not copied/taken from any one or many other sources. I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grant Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulation, 2018. I also declare that there are no plagiarism charges established or pending against me in the last five years. If the funding agency notices any plagiarism or any other discrepancies in the above proposal of mine, I would abide by whatsoever action taken against me by SERB, as deemed necessary.

[Handwritten signature]
15/10/20

Signature of PI with dateName / Designation

Dr. B. SREEDEVI
HEAD OF THE DEPARTMENT
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SRI SAI RAM INSTITUTE OF TECHNOLOGY
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TNSCST



தமிழ்நாடு அறிவியல் தொழில்நுட்ப மாநில மன்றம்

**TAMILNADU STATE COUNCIL
FOR SCIENCE AND TECHNOLOGY**

(An Autonomous Body, under Govt. of Tamilnadu)
DOTE Campus, CHENNAI – 600 025

Project Proposals
STUDENT PROJECTS SCHEME 2022-2023

TITLE :AI AND PDS



Sci

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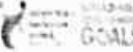
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RAISE FOMES





TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



1. Name of the Student (s)

S.No	Name of the Student	E-Mail ID	Phone No.
1	S Aditya Gurjale	sit20ad005@sairamtap.edu.in	6379106072
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3	Mithunesh Rajan A	sit20ad003@sairamtap.edu.in	7358409290

2. Name of the Guide : Dr.SU Suganthi
Department / Designation : Dept of AI-DS / Head of Department
Institutional Address : Sri Sairam Institute of Technology, West Tambaram,
Chennai - 44
Phone No. & Mobile No. 8760284186
3. Project Title : AI in PDS
4. Sector in which your Project proposal is to be Considered : Engineering Technology (Artificial Intelligence)

5. Project Details :

- i. Introduction iv. Budget
ii. Objectives
iii. Methodology
and Work Plan

6. Has a similar project been carried out in your college / elsewhere? If so, furnish details of the previous project and highlight the improvements suggested in the present one : NO

CERTIFICATE

This is to certify that Mr. S Aditya Gurjale, Mr. Hemanth Kumar C S, and Mr. Mithunesh Rajan A are a bonafide pre-final year of the U.G. Engineering course of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.

Signature of the Guide

Signature of the HOD

Signature of the Principal/
Head of the Institution
Dr.K.PALANI KUMAR
(With seal)
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAILEO NAGAR, CHENNAI-600 044.

N.B.: 2 copies of the proposals are to be submitted through the proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before

07th September 2022, 5 pm.

Introduction:

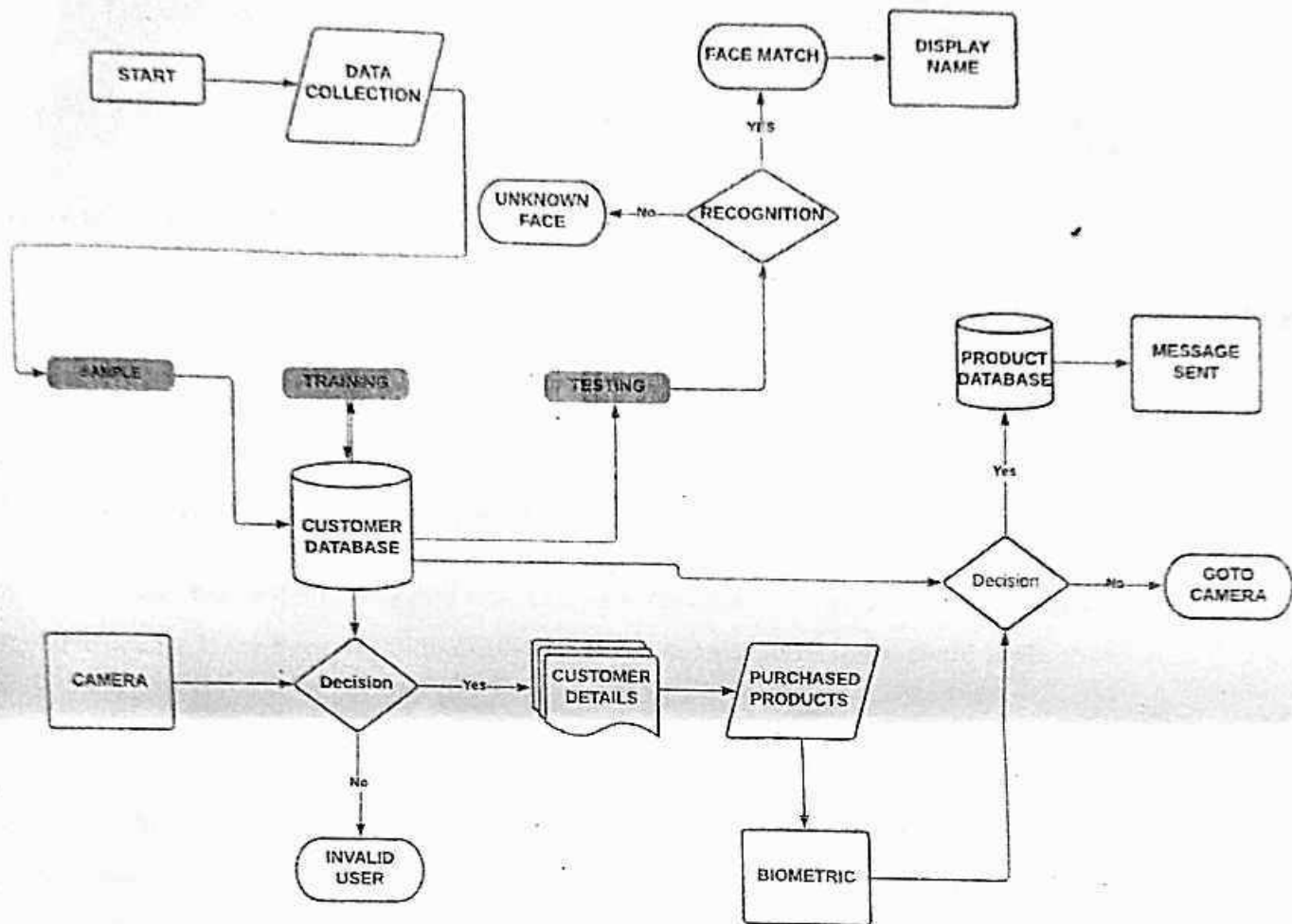
The public Distribution System is run by the government to provide subsidies to people belonging to the below poverty line (BPL) at a lesser cost. Though being a good initiative, common frauds happen in them. If people don't get their share, it'll be sold somewhere else for good profits. Most of the time, common people get cheated. Upon that, in most scenarios, people tend to receive messages stating that they've purchased so and so stuff that they haven't actually purchased. To overcome these mishaps, we bring in our proposed system of using Face recognition and biometrics. This is done by replacing the existing smart card method and inserting the Face recognition software for better results.

The proposed system brings in the technical use of Face recognition and biometric scanners in PDS using Artificial Intelligence and Machine Learning. The Face recognition software scans the Face and retrieves the data of that particular individual and a biometric scanner is deployed to confirm the purchase.

Objective:

PDS card maintenance is a tough job i.e., if it gets lost, the after-process is time-consuming. Upon that, even if people forget the card at home, we have our Face to register the stuff. If in case the card is misplaced, the Face recognition system will be the best substitute. In PDS shops, even if people don't buy a desired stuff/product, they still get a message stating that they had purchased the product, but in reality, they hadn't. In order to finalize the products that were originally bought, biometrics is used. The products and the info that people buy will be entered into the database only after scanning the finger. So, the power of control remains only with the respective people and not in the hands of government officials. The main objective of the project is to overcome the anomalous activities happening in the PDS.

Methodology and Work Plan:



Module 1: Exploring UI

For the Data Collection process, we've created an application in which we collect the consumer's details namely Aadhaar No, Name, Gender, and DOB to name a few. We collect the Face of consumers as data for training the model. We test the model with real-time Face for recognition.

Module 2: Data Generation and Algorithm development

Module 2 talks about the functions of 'Sample Collection', 'Training', and 'Testing'.

i. In the 'Sample Collection' process, we are using cv2 to capture the Face of the user. The images are captured in greyscale. The model detects the Face and stores the detected Face in a cropped form. The images of each individual are stored in a folder. It is stored as [user no. image no.], for example [1.1

1.10), [2.1 2.10] ... If we press the enter key, the capturing of images will stop abruptly without completing its 10-picture mark. If we get 10 pics of a person, the execution will automatically stop.

ii. In the 'Training' process, we train the model using 'Haar-Cascade: Frontal Face'.

iii. In the 'Testing' phase, the camera detects and recognizes Faces using trained pictures.

Module 3: Storage

In this module, a mini cloud database will be built in which data is stored that was collected earlier through the data collection applications (modules 1 and 2). This proposed cloud database system will be used to fetch the details of the user.

Module 4: Real-Time Recognition

In this module, the model detects and recognizes the real-time Face and checks with the cloud containing the user details. If the Face match, it displays the user details stored in the cloud application.

Module 5: Database and Confirmation message

In this module, the products bought by the buyer are stored in the database after a biometric scan. This ensures that the power remains in the hands of the people and not with the officials. The list of products bought by the customer cannot be altered by the officials. After this, a confirmation message is sent to the buyer's number to confirm the purchase of the products.

Budget:

1. Raspberry Pi 4B	-	11,500/-
2. Raspberry Pi HD camera with interchangeable lens base	-	5,000/-
3. AWS Cloud Platform	-	\$125

1.10]. [2.1 2.10] ... If we press the enter key, the capturing of images will stop abruptly without completing its 10-picture mark. If we get 10 pics of a person, the execution will automatically stop.

ii. In the 'Training' process, we train the model using 'HaarCascade Frontal Face'.

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3. AWS Cloud Platform	-	\$125



TNSCST



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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(An Autonomous Body, under Govt. of Tamilnadu)

DOTE Campus, CHENNAI – 600 025

Project Proposals

STUDENT PROJECTS SCHEME 2022-2023

TITLE :DESIGN AND FABRICATION OF AN ANIMATRONIC ARM



Sai

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Sai Ram
RAISE FOM'S





TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



1. Name of the Student (s) :

S.No	Name of the Student	E-Mail ID	Phone No.
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3	Teja S.U	sit20ad021@sairamtap.edu.in	9176554404

2. Name of the Guide :

Sathiya A

Department / Designation :

Dept AI-DS / Assitant Professor

Institutional Address :

Sri Sairam Institute of Technology, West Tambaram, Chennai-44

Phone No. & Mobile No. :

8760284186

3. Project Title :

Design and fabrication of an animatronic arm

4. Sector in which your Project proposal is to be Considered :

Engineering Technology (Electronics & communication)

5. Project Details

- i. Introduction
- ii. Objectives
- iii. Methodology

- iv. Work Plan
- v. Budget

6. Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one

No

CERTIFICATE

This is to certify that Mr./Miss.Pavithra.Y, Dharshini.K.R, Teja.S.U Is a bonafide Pre-final year students of the U.G. Engineering course of our college and it is also certified that two copies of the utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023

Signature of the Guide

Signature of the HOD

Signature of the Principal/
Head of the Institution
Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI-LEO NAGAR, CHENNAI-500 044.

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before

Introduction :

The role of an animatronic arm is to change the perception of remote controls for actuating manually operated Robotic-Hand. The project provides a way to eradicate the buttons, joysticks and replace them with some other more different techniques, that is, controlling the complete Robotic Hand by the users hand movement or motion or gesture. The robotic arm is the most widely used. It's used in a variety of manufacturing uses, including welding, material processing, and thermal spraying, among others. The project involves development of a robotic arm that essentially follows the motions of the hands and moves accordingly. The function that we do with our hands at one time can be followed by hundreds of robotic weapons, allowing us to save time and effort while still doing several tasks at once. The robotic device is made up of mounts and sections that are configured to keep motors in place such that desired movement can be achieved. The servo motor's components are moved by a servo motor that can spin up to 190 degrees approximately. Users' gloves have a flex sensor attached to them to track the bending of finger and a gyroscope on the top of the hand to track rotation and used for mimicing. This technology can also be helpful in very precise instrumentation workings like a doctor operating a patient by a robot without its own hands. This technology has its many useful applications in the field of robotics, surgical operations, humanoid robots, etc.

Objectives :

The key purpose of this project is to make a model that works in place of human. This model can be used in various fields for many purpose which are not performed by human. It reduces the risk to human life.

1. A robot couldn't hurt people or cause humankind to come to hurt because of its inaction.
2. A robot can not do any harm or harm a person, or cause an individual to come to hurt by inaction.
3. A robot should adhere to guidelines gave to it by people, except if those orders are infringing upon the 0th or first laws.
4. However long this safeguard doesn't meddle with the past rules, a robot should protect its own life. With the progression of time, individuals began to form an exhaustive depiction of a robot.

Methodology :

The project involves development of robotic arm that follows the movement of our hands and act accordingly. The function that we perform can be done by hundreds of arms at a time. This replaces humans in the places where there is a high risk for human life. By this way, time and Effort of manual working is saved.

Work Plan:

Module 1: Fundamental analysis



Module 2: Design



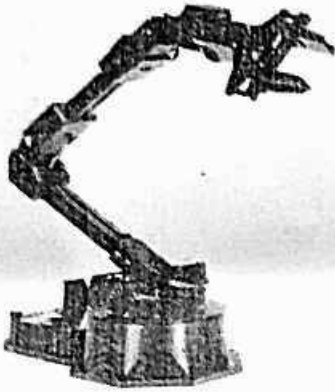
Module 3: Hardware and software fabrication



Module 4: coding and testing

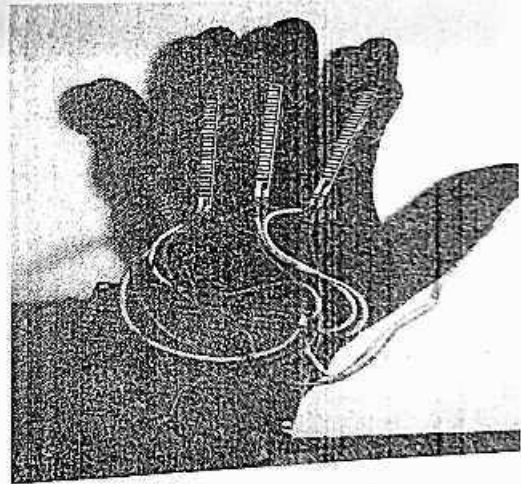
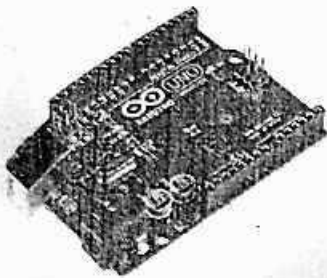


Module 5: Model



Budget:

Approximately we need 70,000 to built the robotic arm with components and sensors.





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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(An Autonomous Body, under Govt. of Tamilnadu)

DOTE Campus, CHENNAI – 600 025

Project Proposals

STUDENT PROJECTS SCHEME 2022-2023

TITLE :MEDICO



Sci

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RAISE FOMIS





TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



1. Name of the Student (s)

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1	Devika A	sit20ad004@sairamtap.edu.in	9791570831
2	S Sreeranjani	sit20ad047@sairamtap.edu.in	8281112965
3	Dharshini K R	sit20ad045@sairamtap.edu.in	9360198711

2. Name of the Guide : Keerthana S
Department / Designation : Dept. AI-DS / Assistant Professor
Institutional Address : Sri Sairam Institute of Technology, West Tambaram,
Chennai-44
Phone No. & Mobile No. : 9944736860
3. Project Title : MEDICO
4. Sector in which your Project proposal is to be Considered : Medical

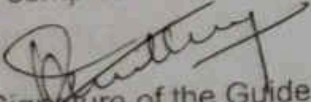
5. Project Details

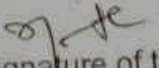
- i. Introduction
ii. Objectives
iii. Methodology
iv. Work Plan
v. Budget
vi. Any other details
- No


6. Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one

CERTIFICATE

This is to certify that Ms.Devika A, Ms. Sreeranjani S, Ms. Dharshini KR is a bonafide Pre-final year students of U.G. Engineering course of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.


Signature of the Guide


Signature of the HOD


Signature of the Principal/
Dr.K.PALANI KUMAR
PRINCIPAL
Head of the Institution
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 07th September 2022, 5 pm.



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



1. Name of the Student (s) :

S.No	Name of the Student	E-Mail ID	Phone No.
1	Devika A	sit20ad004@sairamtap.edu.in	9791570831
2	S Sreeranjani	sit20ad047@sairamtap.edu.in	8281112965
3	Dharshini K R	sit20ad045@sairamtap.edu.in	9360198711

2. Name of the Guide : Keerthana S

Department / Designation : Dept. AI-DS / Assistant Professor

Institutional Address : Sri Sairam Institute of Technology, West Tambaram,

Chennai-44

Phone No. & Mobile No. : 9944736860

3. Project Title : MEDICO

4. Sector in which your Project proposal is to be Considered : Medical

5. Project Details :

i. Introduction

iv. Work Plan

ii. Objectives

v. Budget

iii. Methodology

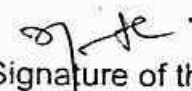
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Signature of the Guide


Signature of the HOD


Signature of the Principal/
Dr.K.PALANI KUMAR
PRINCIPAL
Head of the Institution
SRI SAIRAM INSTITUTE OF TECHNOLOGY
(with seal)
SAI LEO NAGAR, CHENNAI-600 044.

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 07th September 2022, 5 pm.

MEDICO

INTRODUCTION:

When a patient visits the hospital for a medical issue, the doctor will ask for the medical records in order to perform a quick analysis. E-medical history is highly sensitive and must be kept private by the responsible staff only. The major problem for the patient nowadays is to get a report after consultation. Many hospitals manage reports in their systems only and it's not available to the patient when he / she is outside. In this project we are going to provide the extra facility to store the report in the cloud and make it available from anywhere in the world. Through a web application we can store the medical records of a person in a cloud platform. It also reduces the difficulty in managing the large amount of user data and guarantees confidentiality while using cloud computing services to store medical records. After the collection of data, Predictions will be done on that data and prior awareness will be given to them. Early detection of preventable diseases is important for better disease management, improved interventions, and more efficient health-care resource allocation. It will be more helpful for the doctors to analyze the previous and present records simultaneously in order to help the patient.

OBJECTIVES:

E-medical history of a patient is essential to guarantee that the right diagnosis is achieved. The objective of this project is to design a web application to store the medical records of a patient in a cloud platform. The medical records should be accessible by any health care institutions and patients as well. Then, disease prediction can be performed on the data collected from the patients. Based on the prediction, awareness will be given to them.

METHODOLOGY:

- Each person is given an unique id using a face detection method.
- Using the face detection method, the hospitals can access the medical history of the particular person they want.
- Following data collecting, predictions will be made using that data, and foreknowledge will be provided to them.

• WORK PLAN:

- MODULE I - IDEATION
- MODULE II - PATIENT MODULE
- MODULE III - HOSPITAL / CLINIC MODULE
- MODULE IV - FURTHER ENHANCEMENTS
- MODULE V - DISEASE PREDICTION

BUDGET PLAN:

Approximately we need 1,50,000 for the basic standard storage to store patient's record in the cloud platform and this will be used to store 50,000 patients records.

WORK PLAN:

- **MODULE I** - IDEATION
- **MODULE II** - PATIENT MODULE
- **MODULE III** - HOSPITAL / CLINIC MODULE
- **MODULE IV** - FURTHER ENHANCEMENTS
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DOTE Campus, CHENNAI – 600 025

Project Proposals

STUDENT PROJECTS SCHEME 2022-2023

TITLE :UAV INSPECTION



Sri

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Sarvam Sarvam
RAISE FOMS





TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



1. Name of the Student (s) :

S.No	Name of the Student	E-Mail ID	Phone No.
1	Akash G	sit20ad031@sairamtap.edu.in	9047871071
2	Arunmozhiselvam B	sit20ad015@sairamtap.edu.in	9363385607
3	Thiyagarajan S	sit20ad006@sairamtap.edu.in	9514457412

2. Name of the Guide :

Sathiya A

Department / Designation :

Dept. AI-DS / Assitant Professor

Institutional Address :

Sri Sairam Institute of Technology, West Tambaram, Chennai-44.

Phone No. & Mobile No. :

8760284186

3. Project Title :

UAV INSPECTION

4. Sector in which your Project proposal is to be Considered :

Engineering Technology (Electronics & Communication)

5. Project Details :

- i. Introduction
- ii. Objectives
- iii. Methodology
- iv. Work Plan
- v. Budget

6. Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one

NO

CERTIFICATE

This is to certify that Mr.Akash G, Mr.Arunmozhiselvam B, Mr.Thiyagarajan S are bonafide pre-final year students of the U.G. Engineering course of our college and it is also certified that two copies of the utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.

Signature of the Guide

Signature of the HOD

Signature of the Principal/

Head of the Institution

Dr.K. PALANI KUMAR

(PRINCIPAL)

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SALLEO NAGAR, CHENNAI-600 044.

I.B.: 2 copies of the proposals are to be submitted through the proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 7th September 2022, 5 pm.

Introduction:

Unmanned aerial vehicles (UAVs) better known as *drone*s are one of the technological innovations of our age. Automation of drones led to the emergence of UAVs with the *Fixed-wing* Pre-Programmed flight control path using the GPS to replace the purpose of manual *drone*s and drone pilots. Drones have short flight ranges so UAVs are used over a long range of surveillance to inspect mobile towers. This can be used for frequent inspection of mobile towers to acquire inspection reports at regular intervals even from a remote location. This UAV is designed in an aerodynamically efficient manner to improve its efficiency of it. This Prototype is structurally composed of carbon Fibre, a lightweight material that can be used in various climatic conditions as it has high tensile strength and temperature tolerance.

Objectives:

Aims to develop an autonomous drone system to overcome the demerits of the manual drone. Mainly autonomous drones could help with the high radiation exposure where humans can't work. UAV can be operated from even long range Convenient for a user to perform inspection Frequent Inspection can be performed even from remote places.

Methodology:

The drone's flight control system is Pre-Programmed to navigate over the flight path and it has a GPS system to find its location to return in case change in the path. A Thermal camera is used to monitor the power leaking point that is identified using a deep learning algorithm.

Introduction:

Unmanned aerial vehicles (UAVs) better known as drones are one of the technological innovations of our age. Automation of drones led to the emergence of UAVs with the Pixhawk Pre-Programmed flight control path using the GPS to replace the purpose of manual drones and drone pilots. Drones have short flight ranges so UAVs are used over a long range of surveillance to inspect mobile towers. This can be used for frequent inspection of mobile towers to acquire inspection reports at regular intervals even from a remote location. This UAV is designed in an aerodynamically efficient manner to improve its efficiency of it. This Prototype is structurally composed of carbon Fibre, a lightweight material that can be used in various climatic conditions as it has high tensile strength and temperature tolerance.

Objectives:

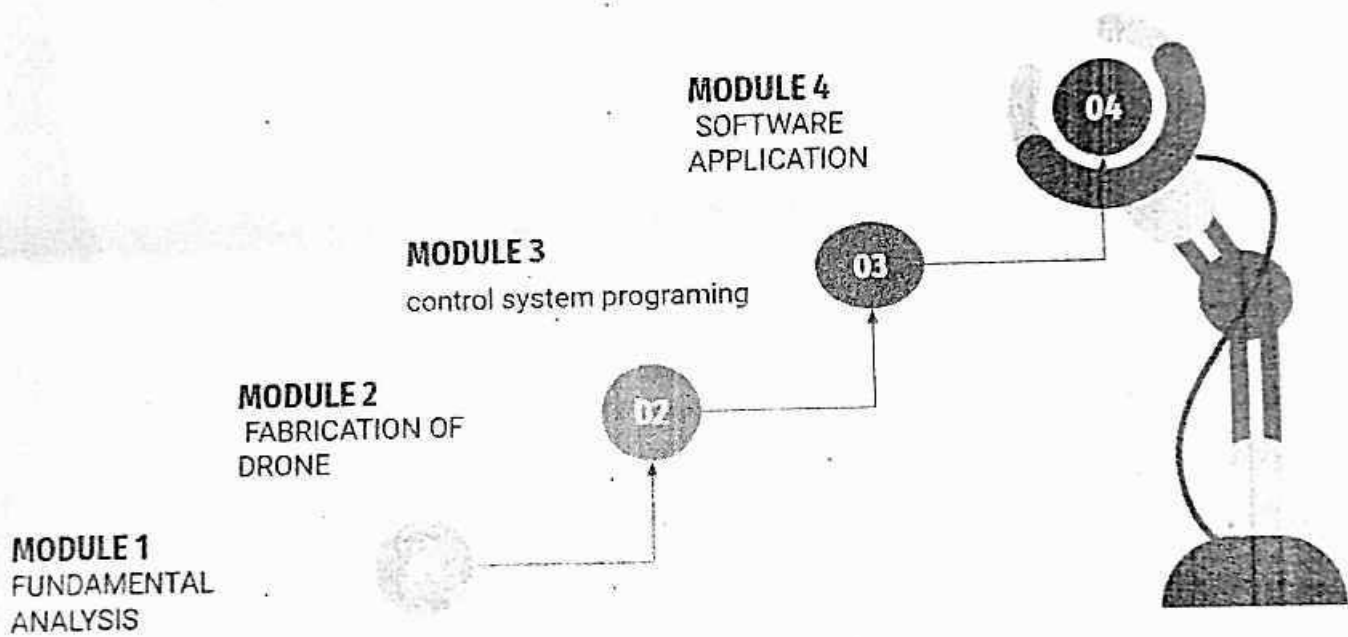
Aims to develop an autonomous drone system to overcome the demerits of the manual drone. Mainly autonomous drones could help with the high radiation exposure where humans can't Work. UAV can be operated from even long range Convenient for a user to perform inspection Frequent Inspection can be performed even from remote places.

Methodology:

The drone's flight control system is Pre-Programmed to navigate over the flight path and it has a GPS system to find its location to return in case change in the path. A Thermal camera is used to monitor the power leaking point that is identified using a deep learning algorithm.

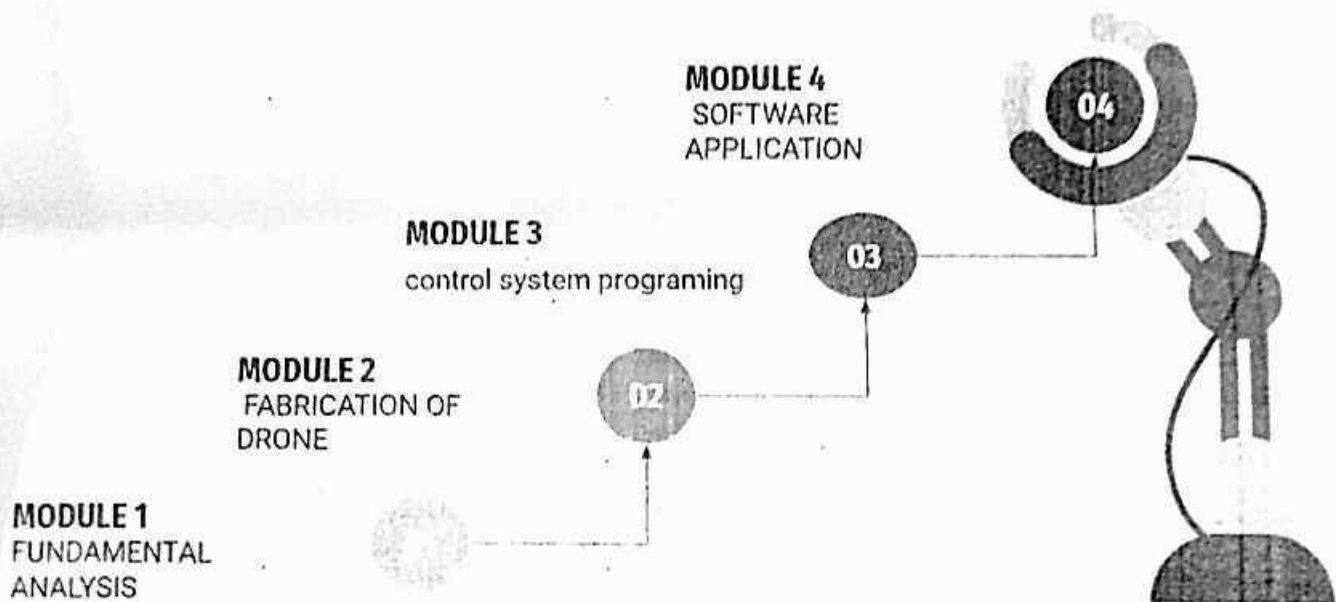
Work Plan:

1. Fundamental analysis and design
2. Fabrication of drone
3. construction of AI
4. Application software



Work Plan:

1. Fundamental analysis and design
2. Fabrication of drone
3. construction of AI
4. Application software



Budget:

These are the electrical components that are used in the project with an approximate cost estimate.

BRUSHLESS MOTORS	- 2800
PROPELLER	- 700
ESC	- 2500
PDB	- 500
VTX	- 1500
THERMAL CAMERA	- 13000
CAMERA	- 2000
GIMBAL	- 3000
BATTERY	- 8000
FLIGHT CONTROLLER	-12000
OBSTACLE SENSORS	-4000

Counting in all the components the total budget of the project is Rs 50,000.



TNSCST



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DOTE Campus, CHENNAI – 600 025

Project Proposals

STUDENT PROJECTS SCHEME 2022-2023

TITLE :FARMBOT



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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



1. Name of the Student (s)

S.No	Name of the Student	E-Mail ID	Phone No.
1	Reesman A	Sit20ad038@sairamtap.edu.in	9500081540
2	Yazhini R	Sit20ad040@sairamtap.edu.in	9790193859

2. Name of the Guide : Dr.SU Suganthi
Department / Designation : AS-Agricultural Sciences
Institutional Address : Sai Leo Nagar, West Tambaram, Chennai – 600 044.
Phone No. & Mobile No. : 9962987428
3. Project Title : Farmbot
4. Sector in which your Project proposal is to be Considered : Agricultural
(Specify only one sector)

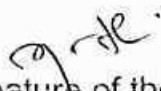
5. Project Details


- i. Introduction iv. Work Plan
ii. Objectives v. Budget
iii. Methodology vi. Any other details


6. Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one : No

CERTIFICATE

This is to certify that Mr./Miss. A Reesman and R. yazhini is a bonafide final year student of U.G. Engineering of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.


Signature of the Guide


Signature of the HOD


Signature of the Principal/

Dr.K.PALANI KUMAR
Head of the Institution
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

N.B.: 2 copies of the proposals are to be submitted through proper channel to **The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025** on or before **07th September 2022, 5 pm.**

Abstract:

Fruit picking is a physically laborious task that requires eight hours of standing and it is generally a repetitive, low-paid, seasonal job. However, there is a global shortage of these seasonal fruit pickers, hence, automation and labor saving in agriculture have been required recently. This paper proposes the development of an automatic fruit harvesting robot that uses stereo camera to detect color, distance and three-dimensional position. The images are processed using opencv, after analyzing, the angles of the joint is calculated to move the robotic arm to the expected location. The manipulations are done in MATLAB by inverse kinematics, which are then converted into different cases that directs the movement of the robotic arm to the target fruit's position. The robot then harvest the fruit by twisting the hand axis causing least damage. The expected outcome would be 90% of fruit detection and 16seconds duration for harvesting 1 fruit.

Introduction:

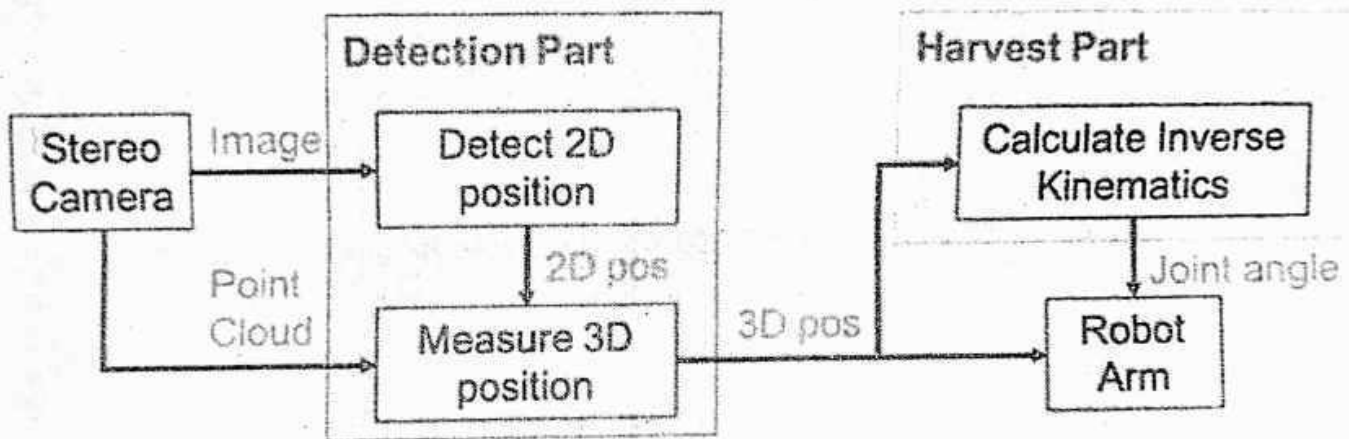
The agricultural industry has many problems, including the decrease number of farm workers and increasing cost of fruit harvesting. As the younger generations migrate to urban areas, the pickers are aging and global shortage of seasonal fruit pickers is worsening. The COVID-19 pandemic has aggravated this situation due to enforced travel restrictions preventing these farmers from crossing borders. Saving labors and scale up in agriculture is necessary in solving these problems. Also time is extremely crucial when it comes to harvesting, fruit picked two weeks late loses 80 percent of its value before reaching the consumer.

Hence the robot picks only ripe fruit by classifying its size and ripeness, taking care of that problem effectively. The pseudo farmbot involves two big tasks: (1) fruit detection among the foliage and localization using computer vision and (2) movement of the robotic arm to reach the target fruit's position and harvesting the fruit without damaging the target fruit and the tree. The robot uses computer vision algorithms to identify and locate the fruits in the tree. Later, in robot development is to improve the learning algorithms, in order to make better fruit harvesting decisions, the robot needs algorithms capable of learning so that harvesting to be done with fewer errors.

SWOT Analysis:

Strength <ol style="list-style-type: none"> 1. Can able to identify and farm the veggies before gets ageing 2. Able to track the growing phase 3. Sustainable veggies production for the year 	Weakness <ol style="list-style-type: none"> 1. Monitoring person who is not available for the whole day
Opportunity <ol style="list-style-type: none"> 1. Export the good quality day by day 2. Supply to the local markets without any damages in the veggies 3. Online Marketing Support. 4. Farming and packaging will also be done in future with the help of Bot. 	Threats <ol style="list-style-type: none"> 1. Competitors who can sell the veggies at a low cost. 2. Huge investment is needed for the big acres of farming.

Work Plan:



Budget Plan:

Title	Quantity	Price
Arduino UNO	1	449
Arduino GSM Shield v2	1	785
Sparkfun Soil Moisture Sensor (with Screw Terminals)	1	702
DHT22 Temperature Sensor	1	289
PIR Sensor - 7 m	1	2450
Thermal Camera	1	74990
VGA Camera	1	155
Cloud Storage	100 GB / Month	1910
bot Arm	7 * 4599	32193
Human Resource	2	20000
Servo Arm Motor for Bot	15 * 349	5235
Total		139158



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Project Proposals

STUDENT PROJECTS SCHEME 2022-2023

TITLE :APPLICATION OF DATA SCIENCE TECHNIQUES FOR MAPPING
AND PREDICTION OF LAND SUBSIDENCE



Sci

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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
STUDENT PROJECT PROPOSAL



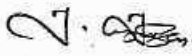
1. Name of the Student (s)


S.No	Name of the Student	E-Mail ID	Phone No.
1	Aaradhyanidhi Aiyer	aaradhyaishwar@gmail.com	6202226138


2. Name of the Guide : Jeya Ganesan J
Department / Designation : B Tech Artificial Intelligence and Data Science
Institutional Address : Sri Sairam Institute of Technology, Sai Leo Nagar,
West Tambaram, Chennai, Tamil Nadu 600044
Phone No. & Mobile No. : 6202226138
3. Project Title : Application of Data Science Techniques for Mapping
and Prediction of Land Subsidence.
4. Sector in which your Project
proposal is to be Considered : Agricultural/Biology/Environment/Medical/Physical/Social/Veterinary
Engineering Technology (Chemical Engg/Computer Science/ I.T/
Civil/Mechanical/Mechatronics/Electrical/Electronics/Communication/
Instrumentation)
(Specify only one sector)
5. Project Details : (write up (max. 3 pages only) should be given for
each item including justification for acquiring /
fabricating equipment's / apparatus in the budget)
i. Introduction iv. Work Plan
ii. Objectives v. Budget
iii. Methodology vi. Any other details
6. Has a similar project been carried out in your college / elsewhere? If
so furnish details of the previous
project and highlight the
improvements suggested in the
present one : No

CERTIFICATE

This is to certify that Miss. Aaradhyanidhi Aiyer is a bonafide Third year student of U.G. Engineering courses of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.


Signature of the Guide


Signature of the HOD


Signature of the Principal/
Head of the Institution
O.R. PALANI KUMAR
(with seal)
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member
Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 07th September 2022,
5 pm.

APPLICATION OF DATA SCIENCE TECHNIQUES FOR MAPPING AND PREDICTION OF LAND SUBSIDENCE

Introduction:

- The exact location and timing of a land subsidence-related calamity cannot be foreseen with any degree of confidence
- Subsidence is generally caused by fluid (groundwater, oil or gas) withdrawal and abrupt subsidence on surface caused by underground mine collapse.
- Remote sensing using satellite based microwave sensors has made monitoring of earth deformation precisely more reliable and it generates large number of Persistent Scatterer Candidates (PSC's) or sampling points. Such large number of sampling points cannot be obtained in ground based measurements.
- But mapping and prediction of susceptible subsidence prone zones is still an issue
- The **Persistent Scatterer Interferometric (PSI)** processing technique using radar images generates a Big Data of sampling points or Persistent Scatterers over the satellite based observation period of a region.
- This Big Data needs to be analyzed and visualized for better interpretation of land subsidence phenomena.

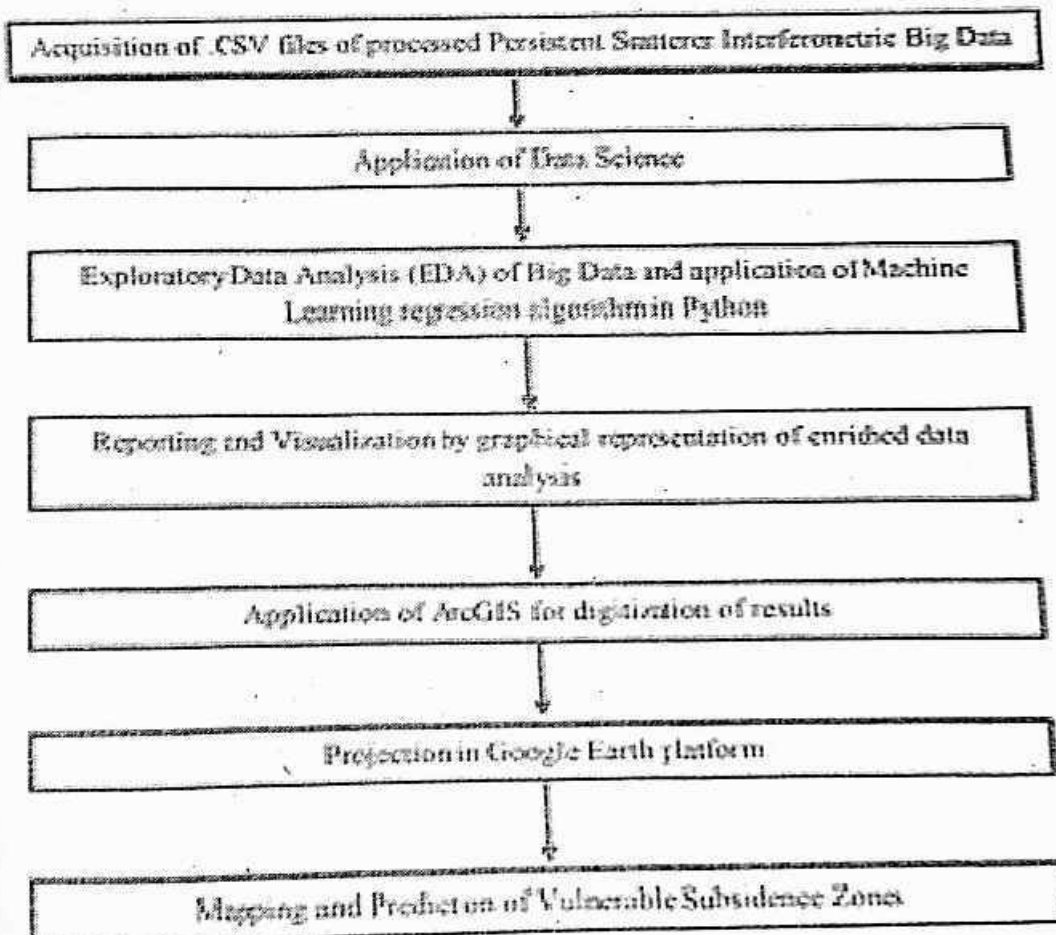
Objectives:

- This paper deals with the application of the Exploratory Data Analysis (EDA), a powerful environment in Data Science.
- To provide a set of tools that made it easier to interpret Persistent Scatterer Interferometry (PSI) processed Big Data.
- To provide a better management, visualization, and presentation of results with greater reliability (using ARCGIS software).

Methodology:

- The pre-processed PSI data in .csv format using 100 images of Sentinel-1A satellite (C-band) from 2015-2018 with refined 685 subsidence Persistent Scatterer Candidates (PSC's) or sampling points was acquired.
- The study area of 23 km² is lying within geographical coordinates of 86.45° longitude and 22.53° latitude in the state of Jharkhand, India.
- The reasons of land subsidence is beyond the scope of this project and only deals with visualization and interpretation of results using Data Science techniques.
- This Big Data has been processed in Anaconda distribution platform using python script in Jupyter notebook.

WORK PLAN:



BUDGET:

Approximately around ₹ 1,00,000 for data collection process using Sentinel-1A satellite and use of ArcGIS software to digitize or make the results realistic by mapping it in Google Earth Platform.



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Project Proposals STUDENT PROJECTS SCHEME 2022-2023

TITLE :WASTE SEGRINATOR



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STUDENT PROJECT PROPOSAL



1. Name of the Student (s) :

S No	Name of the Student	E-Mail ID	Phone No.
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2	Sanjay Dilip	sit20ad002@sairamtap.edu.in	8056178031
3	Nebo Eleyazer Abinadap J	sit20ad019@sairamtap.edu.in	7539953811
4	Teja SU	sit20ad021@sairamtap.edu.in	9176554404
5	Sridhar V	sit20ad049@sairamtap.edu.in	7548833194

2. Name of the Guide : Ravikumar B
Department / Designation : Dept. AI-DS / Assistant Professor
Institutional Address : Sri Sairam Institute of Technology, West
Tambaram, Chennai-44.
Phone No. & Mobile No. : 9600305123
3. Project Title : Waste Segrinator
4. Sector in which your Project proposal is to be Considered : Waste Management
5. Project Details : I. Introduction II. Objectives
III. Methodology IV. Work Plan
V. Budget
6. Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one. : No

CERTIFICATE

This is to certify that Mr. Vikash G, Mr. Sanjay Dilip, Mr. Nebo Eleyazer Abinadap J, Ms. Teja SU, Mr. Sridhar V is bonafide Pre-final year students of the U.G. Engineering course of our college and it is also certified that two copies of the utilisation certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.

Signature of the Guide

Signature of the HOD

Signature of the Principal/
Head of the Institution
Dr. J. PALANI KUMAR
(with seal)
PRINCIPAL

N.B.: 2 copies of the proposals are to be submitted through the proper channel to The Member Secretary, TNSCST, DOTE Campus, SAI LEO NAGAR, CHENNAI-600 044. 600 025 on or before 07th September 2022, 5 pm.

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

Introduction:

Proper waste management and disposal is an essential aspect of our lives. The industrial production and the corresponding waste disposal are linear, meaning that the more production is generated, the more waste is disposed. However, most of the solid wastes are disposed in a landfill like manner in dump yards. The recyclable wastes are also disposed without any awareness. Segregation of wastes is done by human beings. This kind of long-term exposure, especially to industrial wastes, is harmful to the people who are physically doing the work. The bad odour/ foul smell arising from the dumps can cause the people who live in the surrounding areas to get uncomfortable. This project is done in order to clear out the dump yards by removing the human factor in waste segregation. It classifies the wastes using Machine Learning into several categories such as Paper, Plastics etc. It also acts as the man in the middle to vendors who collect recyclable waste products.

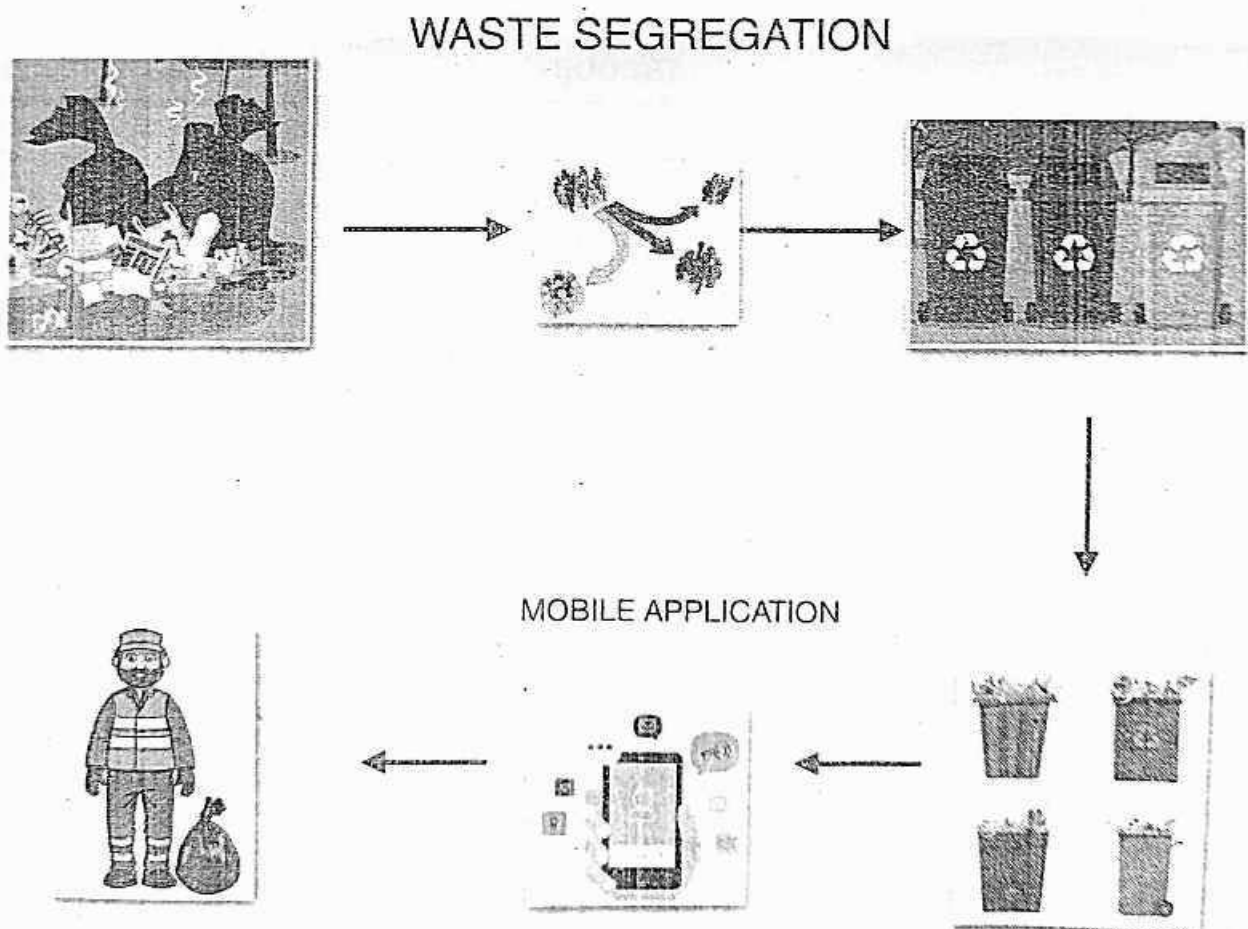
Objectives:

- To reduce the waste collection in the dump yards
- To segregate the wastes into categories like recyclable and non-recyclable
- To act as the middle man to vendors, in order to reuse the wastes
- To prevent the surrounding areas of the dump yards from getting affected.

Methodology:

The proposed model is designed for efficient waste separation. Furthermore, real-time objecting algorithms and computational neural networking are used to effectively perform waste segregation.

Vendors who require segregated waste can be notified about the waste via an app and the information will be sent whenever the waste is ready to be collected for the vendors who make use our application.



Work Plan:

1. Fundamental analysis and design
2. Multi-object classifier
3. Design & Development of App
4. Integration with hardware
5. Testing and analysis

BUDGET

S No	Component Name	Price
1.	Raspberry pi	₹ 10000.00
2.	Arduino Uno	₹ 5000.00
3.	Controllers	₹ 5000.00
4.	Development of Machine	₹ 200000.00
		₹ 220000.00



TNSCST



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DOTE Campus, CHENNAI – 600 025

Project Proposals

STUDENT PROJECTS SCHEME 2022-2023

TITLE : IOT WATER POLLUTION MONITOR RC BOAT



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STUDENT PROJECT PROPOSAL



1. Name of the Student (s)

S.No	Name of the Student	E-Mail ID	Phone No.
1	V.SANTHOSH	Sit20ad030@sairamtap.edu.in	8098574918
2	D.GOKULA KRISHNAN	Sit20ad034@sairamtap.edu.in	7010714688
3	PURUSHOTHAMAN S	Sit20ad029@sairamtap.edu.in	9994498619

2. Name of the Guide

: SAGEENGRANA S

Department / Designation

:ARTIFICIAL INTELLIGENCE AND DATA
SCIENCE/ASSISTANT PROFESSOR

Institutional Address

:SRI SAIRAM INSTITUTE OF TECHNOLOGY,WEST
TAMBARAM

Phone No. & Mobile No.

9791053998

3. Project Title

:IOT WATER POLLUTION MONITOR RC BOAT

4. Sector in which your Project proposal is to be Considered

:
Engineering Technology (Computer Science/ Electronics and Communication)

5. Project Details

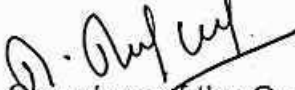
i.Introduction i.Workplan
ii.objective v. Budget
iii. methodology

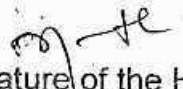
6. Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the improvements suggested in the present one

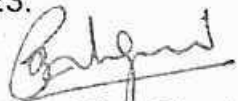
: No

CERTIFICATE

This is to certify that Mr.D.Gokulakrishnan, Mr.Santhosh.v, Mr.Purushothaman.S are a bonafide pre final year student of U.G. Engineering course of our college and it is also certified that two copies of utilization certificate and final report along with seminar paper will be sent to the Council after completion of the project by the end of May 2023.


Signature of the Guide


Signature of the HOD


Signature of the Principal/
Head of the Institution
Dr.K.PALAN KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.

N.B.: 2 copies of the proposals are to be submitted through proper channel to The Member Secretary, TNSCST, DOTE Campus, Chennai - 600 025 on or before 07th September 2022, 5 pm.

INTRODUCTION

Water quality plays a very important part in the health of animals and human beings. Lakes and reservoirs, canals one of the major sources of drinking water. The first step towards water pollution control is to be able to monitor the actual level of water pollution. The problem with water pollution monitoring is the manual effort of taking a boat through a lake or reservoir each time to monitor pollution throughout the water body. So we here design a solution for easy water quality checking of vast water bodies with ease. This RC water pollution monitor boat allows for recording as well as transmitting water quality data to an IOT server online. This will further help us to maintain the water clean. This project is remote-operated and controlled by an RC remote using which it can be maneuver accordingly, a motorized propeller system to provide the forward propulsion and servo motor arrangement to provide with the steering using a rudder.

OBJECTIVES

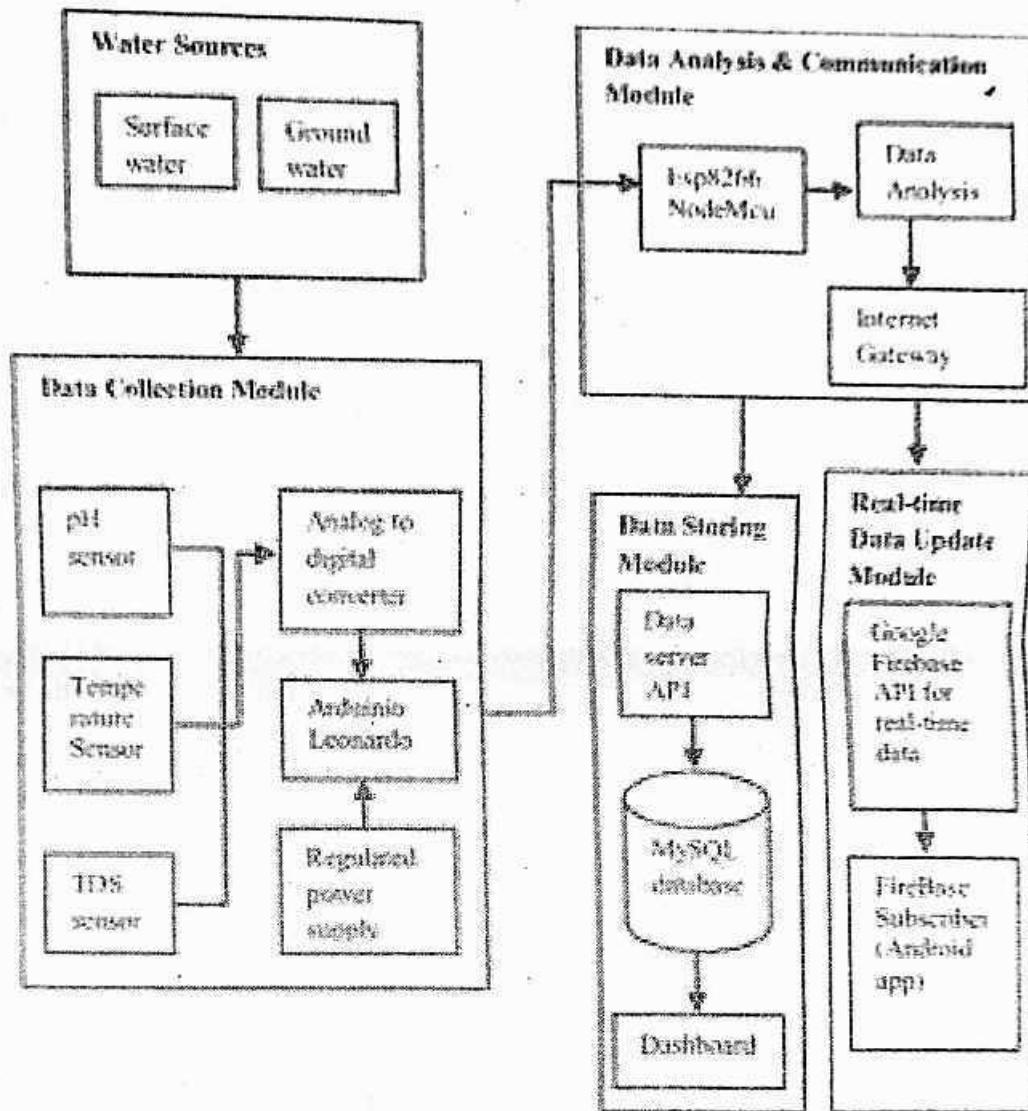
Ph & Turbidity Sensing • Dissolved Oxygen Level Sensing • Long Range Remote Controlled Operation • Data Logging as well as IOT Online Transmission • Efficient Propeller Driven Navigation system • Easy to operate.

METHODOLOGY

As per the commands received by the rc receiver the controller operates the DC motor which rotates the propeller through a flexible bearing and shaft. Now we have 2x direction control rudders attached to a servo motor used to steer the boat as per controller signals received. Additionally, two sensors to determine water quality, we include PH sensors as well as turbidity sensor and a dissolved oxygen sensor. These sensors will detect the presence of

suspended particles in the water and a GPS module and micro SD card, which will log the data from sensors as well as GPS locations as well as transmit the same online over IOT at particular intervals.

WORK PLAN



BUDGET

These are the electrical components that are used in the project with the approximate cost estimate.

- RASPBERRY PI - 3000
- PH SENSOR - 2000
- PROPELLER - 8000
- SHAFT - 3000
- RUDDER - 1500
- TURBIDITY SENSOR - 2000
- GPS MODULE - 2000
- SD CARD MODULE - 3000
- RC RECEIVER - 3000
- RC REMOTE - 2000
- SERVO MOTOR- 4000
- LIGHTS - 1500
- RESISTORS- 1000
- CAPACITORS- 1000
- CABLES AND CONNECTORS - 1000
- DIODES - 800
- PCB AND BREADBOARDS-2000
- LED -500
- MOUNTS AND JOINTS - 200
- SWITCHES & BUTTONS -400
- SCREWS AND BOLTS-200
- TOTAL - 42,100



An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

File Number : IPA/2021/000188

Submitted By : Prof. Palanikumar K

Submission Date : 30-Dec-2021

PROPOSAL DETAILS

(IPA/2021/000188)

Prof. Palanikumar K

palanikumar@sairamit.edu.in
Professor and Principal(Mechanical Engineering)

Sri Sairam Institute of Technology

Sairam college rd, sai leo nagar, west tambaram, chennai, tamil nadu , Chennai, Tamil nadu-600044

Technical Details :

Scheme :	Intensification of Research in High Priority Areas (IRHPA)		
High Priority	BSL-3		
Duration :	60 Months	Contact No :	+919677053338
Date of Birth :	10-May-1968	Total Cost (INR) :	49,78,819

Project Summary :

Alzheimer's disease tends to produce immense family, societal, and economic burdens for contemporary society. Current medical approaches remain minimal despite major advancements, therefore alternative therapeutic approaches are desperately needed. With the new affordability of high-performance computing techniques and advent of deep learning architectures over the past decade, it is now possible to perform genomics research at the population level. Focusing on high priority areas, Genomics science is on track to accelerate its data boom as scientists produce petascale and eventually lead to exascale data sizes. In total, it took almost two days for conventional genomic testing methods to process 30 million "reads," including the analysis and assembly of 30 million snippets and the preservation of those using the FASTQ format. This process took 22 minutes, using a dataset of 127 million reads on its current hardware. The proposed method plans to employ Kallisto on the High Performance Computing based GENOME Server using Memory-Driven Computing and Deep Learning Algorithms to analyze the very same data within 13 seconds. An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention will be developed as a patient-centric tool to facilitate personalized treatment strategy during Alzheimer care that can be used in real-time by patients, doctors, caregivers by providing automated reports to monitor any progress thereby aggrandizing treatment for Alzheimer.

Keywords :

HPC, Deep Learning, Precision Medicine, Genomics Science, Alzheimer

Objectives :

- To develop an automated health information application for Alzheimer treatment that can be assessed in real-time for both patients, doctors and caretakers.
- To employ Kallisto using High Performance Genome Server with Memory-Driven Computing and Deep learning algorithms, thereby processing the data within 13 seconds to identify Alzheimer's gene (APOE e4 gene) which is one of the important genetic risk factor.
- To integrate High-Performance Computing (HPC) infrastructures with Deep Learning (DL) techniques to support doctor's treatment that require the analysis of large and complex datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer disease are devised.
- To enable doctors and researchers to identify biomarkers that divide into patient with better and worse prognoses, thereby responding better to different drugs or treatment. .
- To modify k-mer access and memory management using librarian file system (LFS) instead of traditional storage
- To develop of Deep learning architecture to apprehend a tremendous amount of genome data and find nuanced patterns within it

Novelty and impact of the proposal with respect to High Priority Area :

The availability of high-performance computing has become a central method of allowing efficient utilization biological high-performance sequencing (HTS) data, which takes a fair amount of time to collect useful biological knowledge. An analysis of the importance of genetics includes a neurodegenerative disease such as Alzheimer. Researchers survey an enormous number of human genomes to do so and compile those genomes together into recognizable entities. This needs considerable computing resources. It takes 180 uncompressed gigabytes to reassemble one genome into a genetic representation of an organism, while computing specifications on that genome add 500 GB and an additional 100 GB is needed for long-term storage. This helps clinicians and researchers to distinguish biomarkers that are split into persons with positive and negative prognoses, while adapting better to various medications or therapies. In order to define treatment targets, the proposed work incorporate radiology, imaging, blood, and genomics results. That is the development cycle in the proposed work. The application of deep learning to genomic datasets is a fascinating field that is quickly evolving and is intended to revolutionize the study of genomes.

How do you envision the progress of the proposed area after 5 years taking into view your expected contribution ?

The proposed project will reduce the additional costs incurring hospitals as well as research Institutes by streamlining and support biomedical applications that require the analysis of large and complex genome datasets. Mixed methods of both quantitative and qualitative data in a series of studies will be followed for a better understanding of Alzheimer research problem. Intervention-specific questionnaire items will be included in a follow-up questionnaire to gain personal health record and detailed medical history of the patient, and then combined into statistical evaluation for implementation. Semi-structured interviews for patients with Alzheimer, doctors and caretakers (families) to meet the objectives of proposed project which are consistent with beneficiary's requirement. Long-term field observations will be carried out to study the cognitive function of patients with Alzheimer to enhance the efficiency of the proposed project. An intelligent light weight application termed as "AlzeCare" will be developed to reach every Indian population groups with Alzheimer.

To what extent the proposed work qualify as high priority in the specified area :

Based on the statistical value given by World Health Organization, around 50 million people suffer from Alzheimer, and every year, nearly 10 million new cases are included in particularly developing countries such as India. Alzheimer not only causes burden to families but also inflicts a heavy economic burden on India. It is estimated by World Health Organization that around US\$ 818 billion annual global cost is spent on Alzheimer. More than 80% of costs relate to family and remaining 20% is spent on medical as well as care. This number will increase to US\$ 2 trillion by 2030 for taking care of people suffering from Alzheimer. In genomics science, High Performance Computing allows researchers to grasp a vast amount of knowledge and uncover complex trends within it. It is beyond the limits of standard analysis to do so. The availability of high-performance computing has become a central method of allowing efficient utilization biological high-performance sequencing (HTS) data, which takes a fair amount of time to collect useful biological knowledge. High Performance Computing and deep learning technologies provides a pathway to address the issue. Furthermore, the proposed work focus on extracting nuanced patterns within it.

Expected Output and Outcome of the proposal :

Project will be proven to work in its final form under expected conditions, the proposed project will modify the k-mer access and memory management using librarian file system (LFS) for faster processing speed using pseudo-alignment application . The HPC-based Deep Learning project is intended to revitalize genome analysis with genomic datasets. As a software deployment for patients particularly during Alzheimer's care, an intelligent assistive tool health information application (AlzeCare) will be created that can be used in real time for all patients, doctors , caregivers and self-administered assessments to check any progress during treatment, along with an ease-to-interpret summary to build a personalized plan for patients during treatment. The application plan to tie-up with hospitals treating Alzheimer and as a treatment package during Alzheimer care. The usefulness of the application is proven to Ministry of Health and Family Welfare under the Government of India (<https://mohfw.gov.in/>) for deploying the application in government hospitals as recommended by the Ministry.

Sustainability plan of research undertaken after the completion of project :

The proposed scheme upon successful completion will be patented at the intellectual property rights in the name of the institution (SSIT) and SERB . The outcome of the proposed algorithms and its results will be documented with pictorial, experimental results as evidences and a format will be prepared to enable this work to get published in reputed journal. This work upon successful completion and testing for a suitable period will be subjected for approval from concerned authorities for scaling up purposes and for consultancy purposes This work can be made sustainable through a procedure starting with applying for Intellectual Property Rights, next will the conversion of the project to product. Even after the completion of the project, continuous research and development shall be undertaken to ensure that any necessary modification that will improve the performance of the application can be incorporated successfully. The commercialization aspects of the product like cost, marketing strategy shall be analysed. Scaling up of the project work shall be explored.

Any other relevant information:

Upon completion of project, its usefulness will be proven and meaningful insights would be provided to research community especially in India

Theme of Proposed Work:

Health, Manufacturing

Expertise Area :

Composites, Biomaterials, Materials Processing, Natural Products, Modeling, Optimization, Machining Science, Artificial Intelligence, sustainability, Fuzzy Systems

SN.No.	CO-PI Details
1	 <p>kallam suresh sureshkallam@gmail.com Associate Professor(Computer Science and Engineering)</p> <p>Sree Vidyaniethan Engineering College Sree Sainath Nagar, A, Rangampet, Chandragiri Manfal, Near Tirupati, ANDHRA PRADESH, CHITTOOR D.O.B : 01 Jun, 1984</p>
2	 <p>L Gladence marygladence.it@sathyabamauniversity.ac.in Associate Professor(Computer Science and Engineering)</p> <p>Sathyabama Institute of Science and Technology Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai, TAMIL NADU, CHENNAI D.O.B : 27 Nov, 1977</p>
3	 <p>SURESH ANNAMALAI prisu6esh@gmail.com Associate Professor(Computer Science and Engineering)</p> <p>SRM Institute of Science and Technology SRM Nagar, Kattankulathur, TAMIL NADU, Chengalpattu D.O.B : 27 May, 1977</p>
4	 <p>Arunarasi Jayaraman arasi_arun@yahoo.co.in Assistant Professor(Computer Science and Engineering)</p> <p>Sri Sairam Engineering College Sairam Campus, Sai Leo Nagar, West Tambaram, Chennai, TAMIL NADU, CHENNAI D.O.B : 27 Jun, 1982</p>
5	 <p>Udendhran R udendhran.cse@sairamit.edu.in assistant professor(Computer Science and Engineering)</p> <p>Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu , TAMIL NADU, CHENNAI D.O.B : 10 Aug, 1991</p>
6	 <p>B SREDEVI hodcse@sairamit.edu.in Professor(Computer Science and Engineering)</p> <p>Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu , TAMIL NADU, CHENNAI D.O.B : 26 Sep, 1978</p>
7	 <p>SIVAKUMAR PONNUSAMY drsivakumar.p@gmail.com Associate Professor(Computer Science and Engineering)</p> <p>SRM University NCR Campus ,Modinagar Sikri Kalan, UTTAR PRADESH, GHAZIABAD D.O.B : 01 Jun, 1982</p>

Industry-wise Contribution :

Head	Industry 1 Contribution (INR)	Details
Manpower	0	NA
Consumables	0	NA
Travel	0	NA
Equipment	0	NA
Contingency	0	NA
Othercost	0	NA
In Kind	0	NA
Total	0	

PROPOSAL SUBMITTED TO (SERB) IRPHA

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

Dr.K.Palanikumar

Dr.B.Sreedevi

Mr.R.Udendhran

1. Origin

As genomic analysis becomes more mainstream, sequencing DNA base pairs is critical to identifying mutations that can cause disease. Alzheimer's disease tends to produce immense family, societal, and economic burdens for contemporary society. Current medical approaches remain minimal despite major advancements, therefore alternative therapeutic approaches are desperately needed. With the new affordability of high-performance computing techniques and storage power over the past decade, it is now possible to perform genomics at the population level. "Large national genomics projects are developing all over the world, such as the "UK Biobank," the "All of Us scheme" in the US, Singapore's "Genome Asia," "Genomics Thailand,". With Precision Medicine, the hope is to provide individualized prevention, diagnosis, and care by exploiting genetic history information from a person. According to World Health Organization, around 50 million people suffer from Alzheimer, and every year, nearly 10 million new cases are included in particularly developing countries such as India. In India, more than 4 million people suffer from some form of Alzheimer. Alzheimer is not a disease, instead it is considered as a syndrome generally as progressive or chronic in nature. Alzheimer is not a normal process of ageing; it is caused due to variety of brain illness and affects the ability to carry out everyday activities. High Performance Computing (HPC) can drive the diagnosis and treatment of the disease forward. In the late 2000s, the advancement of Next-Generation Sequencing (NGS) technology led to a drastic decline in DNA sequencing costs. The introduction of NGS, combined with the developments in HPC storage and computational technology at the time provided the ideal storm for a genomics data deluge. This set of factors has led to an urgent question: how best to use all this information?

2 Review of status of Research and Development in the subject

2.1 International status:

- I. The Big Data for Advancing Alzheimer Research project proposed by Health Ministers of G8 countries emphasizing on importance of integrating Big Data in Alzheimer research which led to enhanced Alzheimer research and development of technology which assists in determining the factors that contribute to Alzheimer such as early detection of Alzheimer in elders, recommending effective support for Alzheimer care as well as proposing new analysis methods. In this perspective, Chen et al (2018) proposed a Alzheimer related medicine database with the capabilities of supercomputers in which data mining concepts were employed to create comorbid associations between Alzheimer and various kinds of illnesses.
- II. On April 2016, one of the founding partners of the JRU, ELIXIR-IT and CINECA, launched a pilot project called ELIXIR-IT HPC@CINECA, aimed at offering an entry-level but still significant HPC resource package (core hours, 1 TB of permanent storage expandable based on project needs) for research projects submitted by Italian and European researchers in the life sciences. Three years since its inception, it can measure the effect of this program, which can now be regarded as effective experimental program with over 60 project applications submitted, an approval rate of around 90% and many publications made possible by the allocated HPC capital.
- III. After the advent of Zero effort technologies which can gather, analysis and incorporating advanced computing techniques such as high performance computing, machine learning, sensor fusion, decision-making and planning, assistive systems were made effective and seamlessly integrated into patient's lives. Robillard et al (2018) proposed an effective as deep learning based assistive technology with emotion and motivation as its main parameters for improving cognitive working of Alzheimer patients.

2.2 National status

- I. Ramanathan Sathianathan et al (2018) presented a detailed report on Alzheimer's disease and its impact, prevention, as well as problem experienced by India. The authors highlighted that lack of effective information application which can provide insight into true trend of the disease and determine the symptoms in early stage and its associated risk factors, paucity of basic as well as advance researches on Alzheimer, poor awareness, and less availability of social benefit.
- II. Bhagyashree et al (2018) presented machine learning methods which can be integrated into Alzheimer's analysis and mainly focused on exploratory study from south India. The authors highlighted several benefits obtained in introducing machine learning concepts into Alzheimer analysis.

References:

1. Chen PH, Lee DD, Yang MH. *Data mining the comorbid associations between Alzheimer and various kinds of illnesses using a medicine database. Computer Electrical Engineering.* 2018; 70: 12–20
2. Robillard JM, Hoey J. *Emotion and Motivation in Cognitive Assistive Technologies for Alzheimer. Computer.* 2018; 51(3): 24–34.
3. Sathianathan R, Kantipudi SJ. *The Alzheimer epidemic: Impact, prevention, and challenges for India. Indian J Psychiatry* 2018;60:165-7
4. Castrignanò, T., Gioiosa, S., Flati, T. et al. *ELIXIR-IT HPC@CINECA: high performance computing resources for the bioinformatics community. BMC Bioinformatics* 21, 352 (2020). <https://doi.org/10.1186/s12859-020-03565-8>
5. Bhagyashree SI, Nagaraj K, Prince M, Fall CH, Krishna M. *Diagnosis of Alzheimer by Machine learning methods in Epidemiological studies: a pilot exploratory study from south India. Social Psychiatry Epidemiology.* 2018 Jan; 53(1): 77–86.

3. Technical Details:

In genomics science, High Performance Computing allows researchers to grasp a vast amount of knowledge and uncover complex trends within it. It is beyond the limits of standard analysis to do so. The availability of high-performance computing has become a central method of allowing efficient utilization biological high-performance sequencing (HTS) data, which takes a fair amount of time to collect useful biological knowledge. An analysis of the importance of genetics includes a neurodegenerative disease such as Alzheimer. Researchers survey an enormous number of human genomes to do so and compile those genomes together into recognizable entities. This needs considerable computing resources. It takes 180 uncompressed gigabytes to reassemble one genome into a genetic representation of an organism, while computing specifications on that genome add 500 GB and an additional 100 GB is needed for long-term storage. This helps clinicians and researchers to distinguish biomarkers that are split into persons with positive and negative prognoses, while adapting better to various medications or therapies. In order to define treatment targets, the proposed work incorporate radiology, imaging, blood, and genomics results. That is the development cycle in the proposed work. The application of deep learning to genomic datasets is a fascinating field that is quickly evolving and is intended to revolutionize the study of genomes. More than 3 billion base pairs compose the human genome. The mechanistic understanding of genome biology has been expanded to an unprecedented degree by recent technical advancements. The scope and sheer quantity of knowledge found in DNA and chromatin, however, remain roadblocks to full understanding of all genome functions and interactions. Connecting genotype to phenotype, forecasting regulatory activity, and classifying forms of mutation are all fields in which new knowledge can be obtained from harnessing the enormous genomic data from a large number of individuals. When traditional approaches are used, however, operating in this broad data space is difficult. Therefore in genome science, new and ground-breaking methods are required to enrich the knowledge of fundamental biology and the ties to disease and the need to understand how a cell functions in order to know how Alzheimer's disease works by acquiring DNA sequencing. Computer scientists have to reassemble snippets of data obtained from a single entity to transform the sequencing from mathematics to knowledge. The genetic data snippets are matched to a reference genome, a complete genome that functions as a guide. This is a computationally costly method, however, the proposed work entails pseudo-alignment method called Kallisto, built at Caltech, to make it as time-effective as possible. It took about two days for previous instruments to process 30 million "reads," which requires evaluating and assembling 30 million snippets and preserving those who use the FASTQ format. This process took 22 minutes, using a dataset of 127 million reads on its current hardware. The same data was analyzed in 13 seconds when used with Kallisto and executed it on Genome Server and used Memory-Driven Computation resources.

In order to accomplish this upgrade, k-mer access and memory management would be incorporated using the librarian file system (LFS). As a result, it could process the data on nodes to reach the index in parallel, transferring the FASTQ files to LFS that separate applications could operate on the same datasets and further it would also discuss what could be exchanged between several instances. The concept of memory mapping is used for data to transfer to any available processing node without waiting period, unlike linear file reading. Then the reads are split into shorter k-mer and the graph generated as a hash table is read. Finally, by taking advantage of the large memory pool available, a hard-coded load factor of 95 percent in the hash table is minimized. Deep learning, a variant of machine learning that uses neural networks to automatically extract novel features from input data, is one exciting and promising technique now being applied in the genomics field. A matrix of real values is usually the input into a neural network. The input can be a DNA sequence in genomics, in which nucleotides A, C, T and G are encoded as [1,0,0,0], [0,1,0,0], [0,0,1,0] and [0,0,0,1].

4. Novelty Importance of the proposed project in the context of current status

- I. An automated health information application for Alzheimer treatment which can be assessed in real-time for both patients, doctors and caretakers.
- II. The proposed work intend to employ Kallisto using High Performance Genome Server with Memory-Driven Computing applications and Deep learning algorithms, thereby processing the data within 13 seconds.
- III. In particular, the project will combine High-Performance Computing (HPC) infrastructures with Deep Learning (DL) techniques to support doctor's treatment that require the analysis of large and complex datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer disease.

5. Organization of work elements

- Mixed methods of both quantitative and qualitative data in a series of studies will be followed for a better understanding of Alzheimer research problem. Intervention-specific questionnaire items will be included in a follow-up questionnaire to gain personal health record and detailed medical history of the patient, and then combined into statistical evaluation for implementation
- Relevance: Semi-structured interviews for patients with Alzheimer, doctors and caretakers (families) to meet the objectives of proposed project which are consistent with beneficiary's requirement
- Efficiency: Long-term field observations will be carried out to study the cognitive function of patients with Alzheimer to enhance the efficiency of the proposed project
- Coverage: By deploying an intelligent AlzeCare as light weight application so that it can be deployed in any smart phones to reach every Indian population groups with Alzheimer

6. Time schedule of activities giving milestones

Activities	Months					
	1-10	11-20	21-30	31-40	41-50	51-60
Staff Recruitment	■					
Literature Survey	■	■	■			
Establishing Computing Facility	■	■				
Cognitive & Psychological parameter analysis related to Alzheimer disease		■				
Pre Data Collection of Genome data of patients		■				
Development of pseudo-alignment application using HPC and Library File system			■			
Development of Deep Learning Architecture for analysis of large and complex biomedical datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer.			■			
Development of semantic annotator				■		
Automation of information application (AlzeCare) by applying deep learning techniques				■		
Testing the usefulness of AlzeCare app in real-time with participants					■	
Incorporating further advancements into AlzeCare system based on the real-time information gained from testing AlzeCare app on participants					■	
Validation, Debugging & Report generation					■	■

7. Brief SRS (Software Requirement Specification)

- High performance storage system incorporated with the HPC system (Required)
- Support for HPC mass storage system access (Required)
- Multi-core nodes located on the HPC interconnect (Optional)
- General Purpose GPU nodes residing on the HPC interconnection (Optional)
- Visualization, analysis of data and post-processing nodes that reside on the HPC interconnection (Required)

Prof. Palanikumar K

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Evaluation of mechanical properties of coconut flower cover fibre-reinforced polymer composites for industrial applications	Progress in Rubber, Plastics and Recycling Technology.	10.1177 /147776 0619895 011	3 to 18, and 1	37	Palani Kumar, K., Keshavan, D., Natarajan, E., Deepak, M., Freitas, L.I.
2	Optimization of wear properties on AA7075/Sic/Mos2 hybrid metal matrix composite by response surface methodology	Elsevier materials today proceedings	10.1016 /j.matpr. 2021.02. 541	4019 to 4024, and 46	9	K Umanath, K Palanikumar, Veeramalai Sankaradass, K Uma
3	Influence of Abrasive Water Jet Machining Parameters on Hybrid Polymer Composite	Journal of The Institution of Engineers (India):	10.1007 /s40032 -021- 00672-0	713 to 722, and 102	Series C	G Anand, SV Perumal, N Yuvaraj, K Palanikumar
4	Implications on the influence of mica on the mechanical properties of cast hybrid (Al+10% B4C+Mica) metal matrix composite	International Journal of Materials Research and Technology	10.1016 /j.jmtr. 2020.12. 004	99 to 109, and 10	1	Velavan, K., Palanikumar, K., Natarajan, E., Lim, W.H.
5	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	10.1177 /147776 0620918 605	32 to 48, and 1	37	Palani Kumar, K., Shadrach Jeya Sekaran, A., Dinesh, L., Hari Prasad, D., Deepak kumar, K.
6	Effects of magnesium carbonate concentration and lignin presence on properties of natural cellulosic Cissus quadrangularis fiber composites	International Journal of Biological Macromolecules	10.1016 /j.ijbioma c. 2020.08. 195	3611 to 3620, and 164	1	Siva, R., Valarmathi, T.N., Palanikumar, K.
7	Investigation of the effect of process parameters on surface roughness in drilling of particleboard composite panels using adaptive neuro fuzzy inference system	Materials and Manufacturing Processes	10.1080 /104269 14. 2020.17 11931	469 to 477, and 35	4	Valarmathi, T.N., Palanikumar, K., Sekar, S., Latha, B.
8	Study on a Novel natural cellulosic fiber from Kigelia africana fruit: Characterization and analysis	Carbohydrate Polymers	10.1016 /j.carbpol. 2020.11 6494	1164 to 1194, and 244	15	Siva, R., Valarmathi, T.N., Palanikumar, K., Samrot, A.V.
9	Technologies in additive manufacturing for fiber reinforced composite materials: a review	Current Opinion in Chemical Engineering	10.1016 /j.coche. 2020.01. 001	51 to 59, and 28	1	Palanikumar, K., Mudhukrishnan, M., P., Soorya Prabha
10	Sustainable drilling performance optimization for Nano SiC reinforced Al matrix composites	Materials and Manufacturing Processes	10.1080 /104269 14. 2020.17 72484	1304 to 1312, and 35	12	Kalyan Chakaravathy, V. V., Rajmohan, T., Vijayan, D., Palanikumar, K., Latha, B.

Dr. Arunarasi Jayaraman

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Experimental investigation on inherent properties of Hydroxybutanedioic Acid treated banana/sisal fibers based hybrid composite	Materials Today: Proceedings	https://doi. org/10. 1016/j. matpr. 2020.02. 708	2842 to 2845, and 33		D. Logendran, D. Muruganandam, J. Arunarasi, P. Karthick, A. Abraham Eben Andrews, Raghuram Pradhan

Dr. Sivakumar Ponnusamy

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Analysis of Automatic Generation Control for Three Area Renewable Energy Interconnected Power System	Journal of Computational and Theoretical Nanoscience	https://doi. org/10. 1166/jctn. 2020.84 76	1976 to 1984, and 17		Soorya Priya, G. ; Sivakumar, P.

Dr. Kallam Suresh

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Improved salient object detection using hybrid Convolution Recurrent Neural Network	Expert Systems with Applications	https://doi. org/10. 1016/j. eswa. 2020.11 4064	114 to 130, and 166		NalliannaV Kousik, Yuvaraj Natarajan, R Arshath Raja, Suresh Kallam, Rizwan Patan, Amir H Gandomi

Dr. L Mary Gladence

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Recommender system for home automation using IoT and artificial intelligence	Journal of Ambient Intelligence and Humanized Computing	https://doi. org/10. 1007/s1 2652- 020- 01968-2	78 to 85, and 6		L. Mary Gladence, V. Maria Anu, R. Rathna & E. Brumancia
2	Hybrid data fusion model for restricted information using Dempster-Shafer and adaptive neuro-fuzzy inference (DSANFI) system	Soft Computing, Springer	https://doi. org/10. 1007/s0 0500- 018- 03734-1	2637 to 2644, and 23		Brumancia, E., Justin Samuel, S., Gladence, L.M.

Dr. Suresh Annamalai

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	EECCRN: Energy Enhancement with CSS Approach Using Q-Learning and Coalition Game Modelling in CRN	Information Technology and Control	http://dx. doi. org/10. 5755/jo 1. itc. 50.1.274 94	135 to 145, and 50		Vimal Shanmuganathan, Annamalai Suresh,Seifedine Kadry,Y Harold Robinson,Lim Sangsoon

Dr. B Sreedevi

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques	Journal of Medical Imaging and Health Informatics	https://doi. org/10. 1166/jm ihi. 2016.19 71	2043 to -2047, and 6		Dr.B.Sreedevi,Dr. SP Rajagopalan

Dr. Udendhran R

SNo.	Title	Journal Name	DOI	Page and	Journal Issue	Author
1	Towards secure deep learning architecture for smart farming-based applications	Complex and Intelligent Systems	https://doi. org/10. 1007/s4 0747- 020- 00225-5	659 to 666, and 7		Udendhran, R., Balamurugan, M
2	Enhancing image processing architecture using deep learning for embedded vision systems	Microprocessors and Microsystems, Elsevier	https://doi. org/10. 1016/j. micpro. 2020.10 3094	34 to 44, and 76		R.Udendhran, M. Balamurugan, A. Suresh, R. Varatharajan
3	Hybridized neural network and decision tree based classifier for prognostic decision making in breast cancers	Soft Computing, Springer	https://doi. org/10. 1007/s0 0500- 019- 04066-4	7947 to 7953, and 24		Suresh, A., Udendhran, R. & Balamurugan, M
4	A Novel Internet of Things Framework Integrated with Real Time Monitoring for Intelligent Healthcare Environment	Journal of Medical Systems, Springer	https://doi. org/10. 1007/s1 0916- 019- 1302-9	165 to 173, and 43		Suresh, A., Udendhran, R., Balamurugan, M

Patent by Investigator(s)

Prof. Palanikumar K

SNo.	Title	Patent Status	Date of	Patent Number	Date of Patent	Inventor Details
1	A cattaail fiber activated charcoal cartridge for the filtration and removal of the pah from the aque	Granted	28 Mar, 2017	201741010893	29 Jul, 2020	K Palanikumar R. M.Asha
2	A device and method for assisting in self-learning of the braille language to visually impaired end users	Filed	16 Oct, 2020	202041045084		Vijayaraja L Dhanasekar R. K. Palanikumar
3	An automatized load carrying electric vehicle with custom path navigation	Filed	14 Oct, 2020	202041044652		G. Shanmugasundar K. Palanikumar
4	AN INTEGRATED FARMING EQUIPMENT WITH IOT CONTROL&NBSP; MODULE AND PHOTOVOLTAIC ARRANGEMENT	Filed	14 Jun, 2021	202141026318		K. Palanikumar G. Shanmugasundar V. Brindhadevi
5	AUTO NAVIGATION DRONE SYSTEM	Filed	27 Jul, 2020	202041051703		A.Ponnalar K. Palanikumar
6	Protective Head wear for Autism Patients	Granted	05 Jan, 2021	33/200-001	03 Feb, 2021	K. Palanikumar
7	Protective Head wear for Autism Patients with LED Light	Granted	31 Dec, 2020	337058-001	21 Jan, 2021	K. Palanikumar
8	VLC TRANSCIEVERS FOR SMART MUSEUMS	Filed	30 Jun, 2021	202141029314		Dr. K. Palanikumar Dr. B. Sreedevi
9	Wireless security camera for stalker and threat identification	Granted	28 Mar, 2019	201941012141	09 Apr, 2021	Dr. K. Palanikumar Dr. V.Brindha Devi P. Sharmila
10	Woven Aloevera/Sisal/Kena fFibre Epoxy composites for Corrugated Roof sheet	Granted	01 Jun, 2016	201641012809	30 Jun, 2021	A. Shadrach jeyasekaran K Palani Kumar

Dr. L Mary Gladence

SNo.	Title	Patent Status	Date of	Patent Number	Date of Patent	Inventor Details
1	IOT enabled smart wearable handy sanitizer dispenser	Filed	06 Dec, 2028	202041028753 A		

Dr. B Sreedevi

SNo.	Title	Patent Status	Date of	Patent Number	Date of Patent	Inventor Details
1	Mind Controlled Gaming for Differently Abled Indian Provisional	Filed	16 May, 2018	201841016343		
2	Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems	Filed	07 Jul, 2020	202041031869		

Research Collaboration of Investigator(s)

SNo.	Investigator Name	Expertise Related to Proposed Work (In what way expertise is complementary towards success of project.)	Role & Responsibility
1	Prof. Palanikumar K Professor and Principal (Mechanical Engineering) Sri Sairam Institute of Technology Sairam college rd, sai leo nagar, west tambaram, chennai, tamil nadu , Chennai, Tamil nadu-600044	Devised new fuzzy systems based for healthcare	Staff Recruitment Literature Survey Establishing Computing Facility
2	Dr. B Sreedevi Professor (Computer Science and Engineering) Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu - 600044	PhD. research focused on medical image processing	Automation of information application (AlzeCare) by applying deep learning techniques Validation, Debugging & Report generation
3	Dr. Kallam Suresh Associate Professor (Computer Science and Engineering) Sree Vidyankethan Engineering College Sree Sainath Nagar, A, Rangampet, Chandragiri Manfal, Near Tirupati - 517127	Developed novel algorithms for medical datasets	Cognitive & Psychological parameter analysis related to Alzheimer disease
4	Dr. L Mary Gladence Associate Professor (Information Technology) Sathyabama Institute of Science and Technology Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600119	Improvise and deployed software applications for healthcare sector	Development of semantic annotator and intelligent software
5	Dr. Arunarasi Jayaraman Assistant Professor (Electronics and Communication Engineering) Sri Sairam Engineering College Sairam Campus, Sai Leo Nagar, West Tambaram, Chennai - 600044	Proposed Novel Methodologies for HPC based electrical components	Development of pseudo-alignment application using HPC and Library File system
6	Dr. Suresh Annamalai Associate Professor (Computer Science and Technology) SRM Institute of Science and Technology SRM Nagar, Kattankulathur - 603203	Developed and published algorithms for medical oriented applications	Incorporating further advancements into AlzeCare system based on the real-time information gained from testing AlzeCare application
7	Dr. Udendhran R assistant professor (Department of Computer Science and Engineering) Sri Sairam Institute of Technology Sairam College Rd, Sai Leo Nagar, West Tambaram, Chennai, Tamil Nadu - 600044	Developed Deep Neural Networks for Precision Medicine	Development of Deep Learning Architecture for complex biomedical datasets and thus, new and more efficient ways of diagnosis, monitoring and treatment of Alzheimer.
8	Dr. Sivakumar Ponnusamy Associate Professor (Computer Science and Engineering) SRM University NCR Campus ,Modinagar Sikri Kalan - 201204	Devised state of the art methodologies for healthcare analysis	Observational Data Collection of Genome

Other Projects by Investigator(s)

Prof. Palanikumar K

SNo.	Title	Amount (INR)	Funding Agency	Status
1	Technology based training program Role : PI	4,80,000	DST-NSTEDB	Completed 20 Jan, 2021 - 28 Jul, 2021
2	Innovation and Entrepreneurship development center Role : PI	45,00,000	DST-NSTEDB	Completed 11 Dec, 2015 - 15 Apr, 2021
3	Computational Memory Indexed Neural Decision (MIND) Networks Using Block Chain for Materials and Manufacturing Engineering Role : PI	20,00,000	SERB	Submitted 18 March, 2021

Budget Details

Institution wise Budget Breakup :

Budget Head	Manpower	Consumables	Travel	Equipment	Contingencies	Overhead	Total
Sri Sairam Institute of Technology	35,75,000	2,25,000	50,000	1,55,959	1,25,000	8,47,860	49,78,819
Total	35,75,000	2,25,000	50,000	1,55,959	1,25,000	8,47,860	49,78,819

Institute Name : *Sri Sairam Institute of Technology*

Year Wise Budget Summary (Amount in INR) :

Budget Head	Year-1	Year-2	Year-3	Year-4	Year-5	Total
Manpower	9,75,000	6,50,000	6,50,000	6,50,000	6,50,000	35,75,000
Consumables	45,000	45,000	45,000	45,000	45,000	2,25,000
Travel	10,000	10,000	10,000	10,000	10,000	50,000
Equipments	1,55,959	0	0	0	0	1,55,959
Contingencies	25,000	25,000	25,000	25,000	25,000	1,25,000
Overhead	2,82,620	2,82,620	2,82,620	0	0	8,47,860
Grand Total	14,93,579	10,12,620	10,12,620	7,30,000	7,30,000	49,78,819

Manpower Budget Detail(Amount in INR) :

Designation	Year-1	Year-2	Year-3	Year-4	Year-5	Total
Research Associate-I <i>This project requires well-trained, research associate who has completed Ph.D. and a technical assistant with Master Degree as qualification since this project deals with high priority area i.e. precision medicine and HPC to develop and complete this project with utmost care and on-time delivery of the project.</i>	6,75,000	4,50,000	4,50,000	4,50,000	4,50,000	24,75,000
Technician <i>To operate laboratory tools and equipment, , manage inventories and stock supplies, record observations for further examination.</i>	3,00,000	2,00,000	2,00,000	2,00,000	2,00,000	11,00,000

Consumable Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>Installation of High Performance Computing Software and libraries</i>	45,000	45,000	45,000	45,000	45,000	2,25,000

Travel Budget Detail (Amount in INR) :

Justification (Inland Travel)	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>inland travel is necessary for the PI, Co-PI and the project assistant to attend workshops, present in conferences and develop open database therefore it could be useful for research community in India</i>	10,000	10,000	10,000	10,000	10,000	50,000

Equipment Budget Detail (Amount in INR) :

Generic Name ,Model No. , (Make)/ Justification	Quantity	Spare time	Estimated Cost
HP Z440 Workstation E5-1607v4 8GB K620 Win 10 Pro 64bit 1 EW88PA SSD Quadro M2000 Z440 E5-1607v4 (1) <i>Leveraging GPUs to accelerate this proposal's objective can vastly decrease runtime and costs compared to CPU-based approaches. The mentioned equipment is used for performing professional computer-aided design (CAD), computer-generated imagery (CGI), scientific calculations for genome sequencing and deep learning architectures.</i>	1	30 %	1,55,959

Contingency Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>contingency which are unexpected costs away from the budget is much needed for smooth completion of the project. here a contingency of 5 % is calculated per year of total cost and is equated for five years</i>	25,000	25,000	25,000	25,000	25,000	1,25,000

Overhead Budget Detail (Amount in INR) :

Justification	Year-1	Year-2	Year-3	Year-4	Year-5	Total
<i>since the institution is providing space, electricity and other facility to do the project, the institutional overheads are to be considered at 15 % of annual cost</i>	2,82,620	2,82,620	2,82,620	0	0	8,47,860

Reviewers Details

Suggested Reviewers (Max 3) :

SNo.	Suggested Reviewers
1	Dr Bhimsingh bsingh@ee.iitd.ac.in +01126591071 IIT Delhi
2	Dr Subhransu Sekhar Dash subhransudash_fee@gcekjr.ac.in + 9884356933 GOVERNMENT COLLEGE OF ENGINEERING, KEONJHAR
3	Dr PANIGRAHI bkpanigrahi@ee.iitd.ac.in +01126591078 IIT DELHI

BIO-DATA

1. Name and full correspondence address

Dr.K.PALANIKUMAR

Professor & Principal

Sri Sai Ram Institute of Technology

West tambaram, Chennai- 600044

2. Email(s) and contact number(s)

E-mail : palanikumar@sairamit.edu.in

palanikumar_k@yahoo.com

Mobile: 91-9677053338

Ph : 91-44-22512444, 2251 2111 (O)

3. Institution

: **Sri Sai Ram Institute of Technology, Sai
Leo Nagar, Chennai – 600 044.**

4. Date of Birth

: 10-05-1968

5. Gender(M/F/T)

: Male

6. Category Gen/SC/ST/OBC

: OBC

7. Whether differently abled(Yes/No)

: NO

8. Academic Qualification (Undergraduate Onwards)

Sl no	Degree	Year	Subject	University/Institution	% of marks
1.	Post Ph.D work	2008	Machining of Composites	University of Aveiro, Portugal.	NA
2.	Ph.D	2004	Mechanical Engineering - Composites	Anna University	NA
3.	M.E	1996	Production Engineering	Annamalai University	84 University First Rank
4.	A.M.I.E	1994	Mechanical Engineering	Institution of Engineers (India).	58

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title: “Studies on machining characteristics of glass fiber reinforced polymer composites”

Guide: Dr. Karunamoorthy, L , College of Engineering Guindy , Anna University , Chennai

Year of Award: 2004

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Professor and Principal	Sri Sai Ram Institute of Technology	01-09-2008	Till Date	66,986 + DA + HRA 1,39,220/-
2	Professor and Principal	S.R.R. Engineering College	20-10-2004	13-06-2008	75, 000
3	Lecturer, Asst. Professor and Professor	Sathyabama University	20-06-1992	01-06-2004	40, 000

11. Professional Recognition/Award/Prize/Certificate, Fellowship received.

S.No	Name of Award	Awarding Agency	Year
1	World Top 2 % Scientist in Materials Engineering award	Stanford university	2021
2	Chairman	The Institution of Engineers (India)- Kanchepuram Local Centre	2020
3	National Executive Member	Indian Society for Technical Education	2020
4	Executive Committee Member	Computer Society of India - Kanchepuram Local Centre	2020
5	Teaching awards in best research work in Mechanical Engineering	Education Matters	2019
6	Best Faculty of the Year Published Research	Computer Society of India (CSI)	2019
7	President	MOE's Institution Innovation Council (IIC)	2018
8	Coordinator	DST Sponsored IEDC	2015
9	Fellow Member	The Institution of Engineers	2012
10	Chartered Engineer (India),	The Institution of Engineers	2012
11	Fellow Member	Indian Institution of Production Engineers (IIPE)	2004
12	Best Research work in Engineering and Technology	Indian Society for Technical Education	2019
13	Best Principal Award	The Society for Educational and Entrepreneurship Development (SEED)	2017
14	Publons peer review Awards - Top 1% of peer reviewers in Engineering.	Publons from Web of Science	2017

15	Certified Sentinel of Science Award Recipient - As one of the Top 10 percent of Researchers Contributing to the peer review of the field of Engineering	Publons from Web of Science	2016
16	Outstanding Reviewer Award	Elsevier Journal - Measurement In cooperation with International Measurement Confederation	2016
17	Maharashtra State National Award for Best Research work in Engineering and Technology	Indian Society for Technical Education	2014
18	Special paper presentation by National Board of Accreditation	National Board of Accreditation	2013
19	Best Academic Researcher Award	ASDF Global Awards, Techno Forum Group, Pondicherry, India.	2013
20	Best Researcher Award	Association of Scientist, Developer and Faculties	2012
21	Received Best paper award	YMCA University, Faridabad	2012
22	Best Faculty Award	Nehru Group of Institutions	2012
23	Best Teacher award	Sathyabama University	2008
24	Best Teacher award	Sathyabama University	2004
25	Best Technical paper in R&D	Journal of Non-Destructive Testing	2003
26	Best Teacher award	Sathyabama University	2002
27	Best Teacher award	Sathyabama Engineering college	1999
28	University First Rank in M.E (Production Engineering)	Annamalai University	1996
29	Certificate of Excellence in Annamalai University Golden Jubilee Exhibition	Annamalai University	1995

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No	Authors	Title	Name of Journal	Volume	Page	Year
134	Palani Kumar, K., Shadrach Jeya Sekaran, A., Dinesh, L., Hari Prasad, D., Deepak kumar, K.	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	Progress in Rubber, Plastics and Recycling Technology	37(1)	32-48	2021
133	Palani Kumar, K., Keshavan, D., Natarajan, E., Deepak, M., Freitas, L.I.	Evaluation of mechanical properties of coconut flower cover fibre-reinforced polymer composites for industrial applications	Progress in Rubber, Plastics and Recycling Technology,	37(1)	3-18	2021
132	Velavan, K., Palanikumar, K., Natarajan, E., Lim, W.H.	Implications on the influence of mica on the mechanical properties of cast hybrid (Al+10%B4C+Mica) metal matrix composite	International Journal of Materials Research and Technology	10	99-109	2021
131	Chakravarthy, V.V.K., Rajmohan, T., Vijayan, D., Palanikumar, K.	Sustainable Drilling of Nano SiC Reinforced Al Matrix Composites Using MQL and Cryogenic Cooling for Achieving the Better Surface Integrity	Silicon,	In Press		2021
130	Siva, R., Valarmathi, T.N., Palanikumar, K.	Effects of magnesium carbonate concentration and lignin presence on properties of natural cellulosic Cissus quadrangularis fiber composites	International Journal of Biological Macromolecules	164	3611-3620	2020
129	Siva, R., Valarmathi, T.N., Palanikumar, K., Samrot, A.V.	Study on a Novel natural cellulosic fiber from Kigelia africana fruit: Characterization and analysis	Carbohydrate Polymers	244	116494	2020
128	Kalyan Chakaravarthy, V.V., Rajmohan, T., Vijayan, D., Palanikumar, K., Latha, B.	Sustainable drilling performance optimization for Nano SiC reinforced Al matrix composites	Materials and Manufacturing Processes,	35(12)	1304-1312	2020
127	Palanikumar, K., Mudhukrishnan, M., P., Soorya Prabha.	Technologies in additive manufacturing for fiber reinforced composite materials: a review	Current Opinion in Chemical Engineering	28	51-59	2020

126	Natarajan, E., Razif, M.R.M., Faudzi, A.A.M., Palanikumar , K.	Evaluation of a suitable material for soft actuator through experiments and FE simulations	International Journal of Manufacturing, Materials, and Mechanical Engineering	10(2)	64-76	2020
125	Valarmathi, T.N., Palanikumar , K., Sekar, S., Latha, B.	Investigation of the effect of process parameters on surface roughness in drilling of particleboard composite panels using adaptive neuro fuzzy inference system	Materials and Manufacturing Processes	35(4)	469-477	2020
124	Eaben Rajkumar, S., Palanikumar , K., Pitchandi, K., Latha, B.	Subsurface integrity studies on the drilling of Al/B4C/mica hybrid metal matrix composites	Materials and Manufacturing Processes	35(1)	52-60	2020
123	Mudhukrishnan, M., Hariharan, P., Palanikumar , K.	Measurement and analysis of thrust force and delamination in drilling glass fiber reinforced polypropylene composites using different drills	Measurement: Journal of the International Measurement Confederation	14	910-926	2020
122	Velavan, K., Palanikumar, K.	Analysis on sliding wear behavior of Al + B4 C + mica hybrid metal matrix composites	Materials Express	10(7)	986-997	2020
121	Mudhukrishnan, M., Hariharan, P., Palanikumar , K., Latha, B.	Optimization and sensitivity analysis of drilling parameters for sustainable machining of carbon fiber–reinforced polypropylene composites	Journal of Thermoplastic Composite Materials	32(11)	1485-1508	2019
120	Palanikumar , K., Eaben Rajkumar, S., Pitchandi, K.	Influence of Primary B4C Particles and Secondary Mica Particles on the Wear Performance of Al6061/B4C/Mica Hybrid Composites	Journal of Bio- and Tribo-Corrosion	5(3)	77-97	2019
119	Radhakrishnan, E., Kumaraswamidhas, L.A., Palanikumar, K., Muruganandam, D.	Strength and hardness studies of C44300 tube to AA7075-T651 tube plate threaded and unthreaded dissimilar joints fabricated by friction welding process	Journal of Materials Research and Technology	8(4)	3424-3433	2019
118	Rajkumar, S.E., Palanikumar, K., Kasiviswanathan,	Influence of mica particles as secondary reinforcement on the mechanical and wear	Materials Express	9(4)	299-309	2019

	P.	properties of al/b4c/mica composites				
117	Palanikumar, K., Subbiah, V.	Bio Caryota Fiber Reinforced Polymer Composites: Mechanical Properties and Vibration Behavior Analysis	Journal of Bionic Engineering	16(3)	480-491	2019
116	Padmavathi, K.R., Ramakrishnan, R., Palanikumar, K.	Wear properties of sicp and tio2p reinforced aluminium metal matrix composites	Indian Journal of Engineering and Materials Sciences	26(1)	51-58	2019
115	Das, S., Chandrasekaran, M., Samanta, S., Kayaroganam, P., Paulo Davim, J.	Fabrication and tribological study of AA6061 hybrid metal matrix composites reinforced with SiC/B4C nanoparticles	Industrial Lubrication and Tribology	71(1)	83-93	2019
114	NP Kumar, N Mani, K Palanikumar	Influence of Rutile Nano TiO2 on Thrust Force, Mechanical, Wear and Microstructural Behavior of Al-SiC Composites	Nanoscience and Nanotechnology Letters	11	1502-1512	2019
113	Ramya Devi, G., Palanikumar, K.	Analysis on drilling of woven glass fibre reinforced aluminium sandwich laminates	Journal of Materials Research and Technology	8(1)	1024-1035	2019
112	Raja, V.K.B., Palanikumar, K., Sai, A.S., Goud, B.V.	Pitting corrosion studies on Ti6Al4V alloy weldments in marine environment	Indian Journal of Geo-Marine Sciences	48(8)	1179-1182	2019
111	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Experimental investigation and analysis on the wear properties of glass fiber and CNT reinforced hybrid polymer composites	Science and Engineering of Composite materials	25(5)	963-974	2018
110	Anand, G., Alagumurthi, N., Palanikumar, K., Venkateshwaran, N., Elansezhain, R.	Influence of drilling process parameters on hybrid vinyl ester composite	Materials and Manufacturing Processes	35(12)	1299-1305	2018
109	Devi, G.R., Palanikumar, K.	Mechanical Properties Evaluation of Unidirectional Glass Fibre Reinforced Aluminium Sandwich Laminate	Silicon	10(5)	2329-2340	2018

108	Natrayan, L., Senthil Kumar, M., Palanikumar, K.	Optimization of squeeze cast process parameters on mechanical properties of Al ₂ O ₃ /SiC reinforced hybrid metal matrix composites using taguchi technique	Materials Research Express	5(6)	66516	2018
107	R. Anbusagar, N.R., Palanikumar, K.	Nanoclay Addition and Core Materials Effect on Impact and Damage Tolerance Capability of Glass Fiber Skin Sandwich Laminates	Silicon	10(3)	769-779	2018
106	Selvamani, S.T., Vigneshwar, M., Palanikumar, K., Jayaperumal, D.	The corrosion behavior of fully deformed zone of friction welded low chromium plain carbon steel joints in optimized condition	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(5)	246	2018
105	Anand, G., Alagumurthi, N., Elansezhian, R., Palanikumar, K., Venkateshwaran, N.	Investigation of drilling parameters on hybrid polymer composites using grey relational analysis, regression, fuzzy logic, and ANN models	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(4)	214-234	2018
104	Umanath, K., Palanikumar, K.	Evaluation of mechanical performance of friction welded AISI304L grade stainless steel joints	International Journal of Heavy Vehicle Systems	25(3-4)	419-429	2018
103	Kathirvel, M., Kumar, K.P., Diaz, P.M.	Experimental analysis on surface roughness in turning hybrid metal matrix (6061Al+SiC+Gr) composites	Mechanics and Mechanical Engineering	22(1)	341-356	2018
102	Selvamani, S.T., Premkumar, S., Vigneshwar, M., Hariprasath, P., Palanikumar, K.	Influence of carbon nano tubes on mechanical, metallurgical and tribological behavior of magnesium nanocomposites	Journal of Magnesium and Alloys	5(3)	326-335	2017
101	Mudhukrishnan, M., Hariharan, P., Palanikumar, K., Latha, B.	Tool materials influence on surface roughness and oversize in machining glass fiber reinforced polypropylene (GFR-PP) composites	Materials and Manufacturing Processes	32(9)	988-997	2017
100	Rajmohan, T., Sathishkumar, S.D., Palanikumar, K.	Effect of a nanoparticle-filled lubricant in turning of AISI 316L stainless steel (SS)	Particulate Science and Technology	35(2)	201-208	2017

99	Palani Kumar, K., Shadrach Jeya Sekaran, A., Pitchandi, K.	Investigation on mechanical properties of woven alovera/sisal/kenaf fibres and their hybrid composites	Bulletin of Materials Science	40(1)	117-128	2017
98	Srinivasan, T., Palanikumar, K., Rajagopal, K., Latha, B.	Optimization of delamination factor in drilling GFR–polypropylene composites	Materials and Manufacturing Processes	32(2)	226-233	2017
97	Ramesh, M., Palanikumar, K., Reddy, K.H.	Plant fibre based bio-composites: Sustainable and renewable green materials	Renewable and Sustainable Energy Reviews	79	558-584	2017
96	Ramesh, M., Palanikumar, K., Hemachandra Reddy, K.	Evaluation of Mechanical and Interfacial Properties of Sisal/Jute/Glass Hybrid Fiber Reinforced Polymer Composites	Transactions of the Indian Institute of Metals	69(10)	1851-1859	2016
95	Jeyasekaran, A.S., Kumar, K.P., Rajarajan, S.	Numerical and experimental analysis on tensile properties of banana and glass fibers reinforced epoxy composites	Sadhana - Academy Proceedings in Engineering Sciences	41(11)	1357-1367	2016
94	Palanikumar, K., Ramesh, M., Hemachandra Reddy, K.	Experimental investigation on the mechanical properties of green hybrid sisal and glass fiber reinforced polymer composites	Journal of Natural Fibers	13(3)	321-331	2016
93	Dhandapani, S., Rajmohan, T., Palanikumar, K., Charan, M.	Synthesis and characterization of dual particle (MWCT+B4C) reinforced sintered hybrid aluminum matrix composites	Particulate Science and Technology	34(3)	255-262	2016
92	Palanikumar, K., Srinivasan, T., Rajagopal, K., Latha, B.	Thrust Force Analysis in Drilling Glass Fiber Reinforced/Polypropylene (GFR/PP) Composites	Materials and Manufacturing Processes	31(5)	581-586	2016
91	Ramesh, M., Palanikumar, K., Reddy, K.H.	Influence of fiber orientation and fiber content on properties of sisal-jute-glass fiber-reinforced polyester composites	Journal of Applied Polymer Science	133(6)	42968	2016
90	Palanikumar, K., Valarmathi, T.N.	Experimental Investigation and Analysis on Thrust Force in Drilling of Wood Composite Medium Density Fiberboard Panels	Experimental Techniques	40(1)	391-400	2016

89	Rajmohan, T., Palanikumar, K., Davim, J.P., Premnath, A.A.	Modeling and optimization in tribological parameters of polyether ether ketone matrix composites using D-optimal design	Journal of Thermoplastic Composite Materials	29(2)	161-188	2016
88	Palanikumar, K., Rajasekaran, T., Latha, B.	Fuzzy rule-based modeling of machining parameters for surface roughness in turning carbon particle-reinforced polyamide	Journal of Thermoplastic Composite Materials	28(10)	1387-1405	2015
87	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Comparison of the Wear Properties of Polymer Composites Having CNT With and Without Glass Fiber Reinforcement	Transactions of the Indian Institute of Metals	68	91-97	2015
86	Anbusagar, N.R.R., Palanikumar, K., Giridharan, P.K.	Study of sandwich effect on nanoclay modified polyester resin GFR face sheet laminates	Composite Structures	125	336-342	2015
85	Tamilarasan, U., Karunamoorthy, L., Palanikumar, K.	Mechanical properties evaluation of the carbon fibre reinforced aluminium sandwich composites	Materials Research	18(5)	1029-1037	2015
84	Shadrach Jeya Sekaran, A., Palani Kumar, K., Pitchandi, K.	Evaluation on mechanical properties of woven aloevera and sisal fibre hybrid reinforced epoxy composites	Bulletin of Materials Science	38(5)	1183-1193	2015
83	Bosco, M.A.J., Palanikumar, K., Prasad, B.D., Velayudham, A.	Analysis on influence of machining parameters on thrust force in drilling GFRP-armor steel sandwich composites	Journal of Composite Materials	49(3)	1539-1551	2015
82	Selvamani, S.T., Palanikumar, K., Umanath, K., Jayaperumal, D.	Analysis of friction welding parameters on the mechanical metallurgical and chemical properties of AISI 1035 steel joints	Materials and Design	65	652-661	2015
81	Rajmohan, T., Palanikumar, K., Arumugam, S.	Synthesis and characterization of sintered hybrid aluminium matrix composites reinforced with nanocopper oxide particles and microsilicon carbide particles	Composites Part B: Engineering	59	43-49	2014
80	Krishna Sastry, K.V., Seshagiri Rao, V., Palanikumar,	Assessment of process parameters influencing delamination factor on the	Indian Journal of Science and Technology	7(2)	142-150	2014

	K., Dhanalakshmi, R., Kuravi, A.	drilling of CFRC composite material with TiN coated carbide tool				
79	Kumar, K.P., Sekaran, A.S.J.	Some natural fibers used in polymer composites and their extraction processes: A review	Journal of Reinforced Plastics and Composites	33(20)	1879-1892	2014
78	Palanikumar, K., Muniaraj, A.	Experimental investigation and analysis of thrust force in drilling cast hybrid metal matrix (Al-15%SiC-4%graphite) composites	Measurement: Journal of the International Measurement Confederation	53	240-250	2014
77	Selvamani, S.T., Palanikumar, K.	Optimizing the friction welding parameters to attain maximum tensile strength in AISI 1035 grade carbon steel rods	Measurement: Journal of the International Measurement Confederation	53	Oct-21	2014
76	Elango, G., Raghunath, B.K., Palanikumar, K.	Experimental analysis of the wear behavior of hybrid metal-matrix composites of LM25Al with equal volumes of SiC + TiO2	Materiali in Tehnologije	48(6)	803-810	2014
75	Rathika, S., Palanikumar, K., Raghavan, P.S.	Physical performance of sisal-PALF-banana/glass fiber reinforced polyester hybrid composites	Asian Journal of Chemistry	26(14)	4157-4161	2014
74	Anbusagar, N.R.R., Giridharan, P.K., Palanikumar, K.	Effect of nanomodified polyester resin on hybrid sandwich laminates	Materials and Design	54	507-514	2014
73	Elango, G., Raghunath, B.K., Palanikumar, K., Thamizhmaran, K.	Sliding wear of LM25 aluminium alloy with 7.5% SiC+2.5% TiO2 and 2.5% SiC+7.5% TiO2 hybrid composites	Journal of Composite Materials	48(18)	2227-2236	2014
72	Diaz, P.M., Austin, N., Maniysundar, K., Manoj Abraham, D.S., Palanikumar, K.	Simulation analysis of combustion parameters and emission characteristics of CNG fueled HCCI engine	Advances in Mechanical Engineering	2(35)	241-249	2013
71	Jayabal, S., Velumani, S., Navaneethakrishnan, P., Palanikumar, K.	Mechanical and machinability behaviors of woven coir fiber-reinforced polyester composite	Fibers and Polymers	14(9)	1505-1514	2013
70	Rajamurugan, T.V., Shanmugam, K., Palanikumar, K.	Mathematical model for predicting thrust force in drilling of GFRP composites by multifaceted drill	Indian Journal of Science and Technology	6(10)	5316-5324	2013

69	Raj, A.M., Das, S.L., Palanikumarr, K.	Influence of drill geometry on surface roughness in drilling of al/sic/gr hybrid metal matrix composite	Indian Journal of Science and Technology	6(7)	5002-5007	2013
68	Valarmathi, T.N., Palanikumar, K.	Studies on delamination in drilling of particleboard (PB) wood composite panels	Proceedings of the Indian National Science Academy	79(3)	339-345	2013
67	Umanath, K., Palanikumar, K., Selvamani, S.T.	Analysis of dry sliding wear behaviour of Al6061/SiC/Al ₂ O ₃ hybrid metal matrix composites	Composites Part B: Engineering	53	159-168	2013
66	Rajmohan, T., Palanikumar, K., Prakash, S.	Grey-fuzzy algorithm to optimise machining parameters in drilling of hybrid metal matrix composites	Composites Part B: Engineering	50	297-308	2013
65	Gandhi, R.A., Kumar, K.P., Ragnath, B.K., Kanagaraj, D.	Role of nano clay in improving wear properties of polypropylene in dry sliding condition	Asian Journal of Chemistry	25	S139-S142	2013
64	Ramesh, M., Palanikumar, K., Reddy, K.H.	Mechanical property evaluation of sisal-jute-glass fiber reinforced polyester composites	Composites Part B: Engineering	48	1 9	2013
63	Valarmathi, T.N., Palanikumar, K., Sekar, S.	Parametric analysis on delamination in drilling of wood composite panels	Indian Journal of Science and Technology	6(4)	4347-4356	2013
62	Rajmohan, T., Palanikumar, K.	Modeling and analysis of performances in drilling hybrid metal matrix composites using D-optimal design	International Journal of Advanced Manufacturing Technology	64(9-12)	1249-1261	2013
61	Rajmohan, T., Palanikumar, K.	Application of the central composite design in optimization of machining parameters in drilling hybrid metal matrix composites	Measurement: Journal of the International Measurement Confederation	46(4)	1470-1481	2013
60	Rajmohan, T., Palanikumar, K., Ranganathan, S.	Evaluation of mechanical and wear properties of hybrid aluminium matrix composites	Transactions of Nonferrous Metals Society of China (English Edition)	23(9)	2509-2517	2013

59	Valarmathi, T.N., Palanikumar, K., Latha, B.	Measurement and analysis of thrust force in drilling of particle board (PB) composite panels	Measurement: Journal of the International Measurement Confederation	46(3)	1220-1230	2013
58	Rajamurugan, T.V., Shanmugam, K., Palanikumar, K.	Analysis of delamination in drilling glass fiber reinforced polyester composites	Materials and Design	45	80-87	2013
57	Ashok Gandhi, R., Palanikumar, K., Ragnath, B.K., Davim, J.P.	Role of carbon nanotubes (CNTs) in improving wear properties of polypropylene (PP) in dry sliding condition	Materials and Design	48	52-57	2013
56	Rajmohan, T., Palanikumar, K., Davim, J.P.	Analysis of Surface Integrity in Drilling Metal Matrix and Hybrid Metal Matrix Composites	Journal of Materials Science and Technology	28(8)	761-768	2012
55	Kanagarajan, D., Palanikumar, K., Karthikeyan, R.	Effect of Electrical Discharge Machining on strength and reliability of WC-30%Co composite	Materials and Design	39	469-474	2012
54	Prakash, S., Palanikumar, K., Krishnamoorthy, A.	Thrust force evaluation in drilling medium density fibre (MDF) panels using design of experiments	International Journal of Manufacturing Technology and Management	25(1-3)	95-112	2012
53	Rajmohan, T., Palanikumar, K., Kathirvel, M.	Optimization of machining parameters in drilling hybrid aluminium metal matrix composites	Transactions of Nonferrous Metals Society of China (English Edition)	22(6)	1286-1297	2012
52	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Measurement and analysis of surface roughness in turning of aerospace titanium alloy (gr5)	Measurement: Journal of the International Measurement Confederation	45(5)	1266-1276	2012
51	Krishnamoorthy, A., Rajendra Boopathy, S., Palanikumar, K., Paulo Davim, J.	Application of grey fuzzy logic for the optimization of drilling parameters for CFRP composites with multiple performance characteristics	Measurement: Journal of the International Measurement Confederation	45(5)	1286-1296	2012
50	Rajmohan, T., Palanikumar, K.	Optimization of machining parameters for multi-performance characteristics in drilling hybrid metal matrix composites	Journal of Composite Materials	46(7)	869-878	2012

49	Rajasekaran, T., Palanikumar, K., Vinayagam, B.K.	Experimental investigation and analysis in turning of CFRP composites	Journal of Composite Materials	46(7)	809-821	2012
48	Rajmohan, T., Palanikumar, K.	Optimization of machining parameters for surface roughness and burr height in drilling hybrid composites	Materials and Manufacturing Processes	27(3)	320-328	2012
47	Palanikumar, K., Latha, B., Senthilkumar, V.S., Davim, J.P.	Analysis on drilling of glass fiber-reinforced polymer (GFRP) composites using grey relational analysis	Materials and Manufacturing Processes	27(3)	297-305	2012
46	Somasundaram, G., Rajendra Boopathy, S., Palanikumar, K.	Modeling and analysis of roundness error in friction drilling of aluminum silicon carbide metal matrix composite	Journal of Composite Materials	46(2)	169-181	2012
45	Palanikumar, K.	Experimental investigation and optimisation in drilling of GFRP composites	Measurement: Journal of the International Measurement Confederation	44(10)	2138-2148	2011
44	Somasundaram, G., Rajendra Boopathy, S., Palanikumar, K.	Experimental investigation on roundness error in friction drilling and mechanical properties of Al/SiCp-MMC composites	Mecanique et Industries	12(6)	445-457	2011
43	Ezilarasan, C., Senthil Kumar, V.S., Velayudham, A., Palanikumar, K.	Modeling and analysis of surface roughness on machining of Nimonic C-263 alloy by PVD coated carbide insert	Transactions of Nonferrous Metals Society of China (English Edition)	21(9)	1986-1994	2011
42	Prakash, S., Palanikumar, K.	Modeling for prediction of surface roughness in drilling MDF panels using response surface methodology	Journal of Composite Materials	45(16)	1639-1646	2011
41	Rajmohan, T., Palanikumar, K.	Experimental investigation and analysis of thrust force in drilling hybrid metal matrix composites by coated carbide drills	Materials and Manufacturing Processes	26(8)	961-968	2011
40	Raghunath, B.K., Raghukandan, K., Karthikeyan, R., (...), Pillai, U.T.S., Gandhi, R.A.	Flow stress modeling of AZ91 magnesium alloys at elevated temperature	Journal of Alloys and Compounds	509(15)	4992-4998	2011

39	Krishnamoorthy, A., Rajendra Boopathy, S., Palanikumar, K.	Delamination prediction in drilling of CFRP composites using artificial neural network	Journal of Engineering Science and Technology	6(2)	191-203	2011
38	Latha, B., Senthilkumar, V.S., Palanikumar, K.	Modeling and optimization of process parameters for delamination in drilling glass fiber reinforced plastic (GFRP) composites	Machining Science and Technology	15(2)	172-191	2011
37	Latha, B., Senthilkumar, V.S., Palanikumar, K.	Influence of drill geometry on thrust force in drilling GFRP composites	Journal of Reinforced Plastics and Composites	30(6)	463-472	2011
36	Palanikumar, K., Shanmugam, K., Davim, J.P.	Analysis and optimisation of cutting parameters for surface roughness in machining Al/SiC particulate composites by PCD tool	International Journal of Materials and Product Technology	37(1-2)	117-128	2010
35	Palanikumar, K.	Modeling and analysis of delamination factor and surface roughness in drilling GFRP composites	Materials and Manufacturing Processes	25(10)	1059-1067	2010
34	Hussain, S.A., Pandurangadu, V., Palanikumar, K.	Surface roughness analysis in machining of GFRP composites by carbide tool (K20)	European Journal of Scientific Research	41(1)	84-98	2010
33	Palanikumar, K., Prakash, S., Manoharan, N.	Experimental investigation and analysis on delamination in drilling of wood composite medium density fiber boards	Materials and Manufacturing Processes	24(12)	1341-1348	2009
32	Prakash, S., Palanikumar, K., Manoharan, N.	Optimization of delamination factor in drilling medium-density fiberboards (MDF) using desirability-based approach	International Journal of Advanced Manufacturing Technology	45(13)	370-381	2009
31	Krishnamoorthy, A., Boopathy, S.R., Palanikumar, K.	Delamination analysis in drilling of CFRP composites using response surface methodology	Journal of Composite Materials	43(24)	2885-2902	2009
30	Palanikumar, K.	Surface roughness model for machining glass fiber reinforced plastics by pcd tool using fuzzy logics	Journal of Reinforced Plastics and Composites	28(18)	2273-2286	2009
29	Sarma, P.M.M.S., Karunamoorthy, L., Palanikumar, K.	Surface roughness parameters evaluation in machining GFRP composites by PCD tool using digital image	Journal of Reinforced Plastics and Composites	28(13)	1567-1585	2009

		processing				
28	Srinivasan, V., Asaithambi, B., Ganesan, G., Karthikeyan, R., Palanikumar, K.	Wear mechanism of glass fiber reinforced epoxy composites under dry sliding using fuzzy clustering technique	Journal of Reinforced Plastics and Composites	28(11)	1349-1358	2009
27	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Davim, J.P.	Application of goal programming technique for electro discharge machining (EDM) characteristics of cemented carbide (WC/Co)	International Journal of Materials and Product Technology	35(12)	216-227	2009
26	Palanikumar, K., Latha, B., Senthilkumar, V.S., Karthikeyan, R.	Multiple performance Optimization in machining of GFRP composites by a pcd tool using Non-dominated Sorting Genetic Algorithm (NSGA-II)	Metals and Materials International	15(2)	249-258	2009
25	Ramesh, S., Karunamoorthy, L., Senthilkumar, V.S., Palanikumar, K.	Experimental study on machining of titanium alloy (Ti64) by CVD and PVD coated carbide inserts	International Journal of Manufacturing Technology and Management	17(4)	337-385	2009
24	Palanikumar, K., Davim, J.P.	Assessment of some factors influencing tool wear on the machining of glass fibre-reinforced plastics by coated cemented carbide tools	Journal of Materials Processing Technology	209(1)	511-519	2009
23	Kalaichelvi, V., Sivakumar, D., Karthikeyan, R., Palanikumar, K.	Prediction of the flow stress of 6061 Al-15% SiC - MMC composites using adaptive network based fuzzy inference system	Materials and Design	30(4)	1362-1370	2009
22	Palanikumar, K., Campos Rubio, J., Abrao, A.M., Esteves Correia, A., Davim, J.P.	Influence of drill point angle in high speed drilling of glass fiber reinforced plastics	Journal of Composite Materials	42(24)	2585-2597	2008
21	Palanikumar, K., Muthukrishnan, N., Hariprasad, K.S.	Surface roughness parameters optimization in machining A356/SiC/20p metal matrix composites by PCD tool using response surface methodology and desirability function	Machining Science and Technology	12(4)	529-545	2008

20	Palanikumar, K., Prakash, S., Shanmugam, K.	Evaluation of delamination in drilling GFRP composites	Materials and Manufacturing Processes	23(8)	858-864	2008
19	Palanikumar, K., Rubio, J.C., Abrao, A., Esteves, A., Davim, J.P.	Statistical analysis of delamination in drilling Glass Fiber-Reinforced Plastics (GFRP)	Journal of Reinforced Plastics and Composites	27(15)	165-1623	2008
18	Palanikumar, K., Karthikeyan, R.	Modeling of machining parameters to predict surface roughness in machining Al/SiC particulate composites by carbide insert	Multidiscipline Modeling in Materials and Structures	4(4)	345-358	2008
17	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Sivaraj, P.	Influence of process parameters on electric discharge machining of WC/30%Co composites	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	222(7)	807-815	2008
16	Palanikumar, K., Mata, F., Davim, J.P.	Analysis of surface roughness parameters in turning of FRP tubes by PCD tool	Journal of Materials Processing Technology	204(1-3)	469-474	2008
15	Palanikumar, K., Sivakumar, G., Paulo Davim, J.	Development of an empirical model for surface roughness in the machining of Al/SiC particulate composites by PCD tool	International Journal of Materials and Product Technology	32(2-3)	318-332	2008
14	Sarma, P.M.M.S., Karunamoorthy, L., Palanikumar, K.	Modeling and analysis of cutting force in turning of GFRP composites by CBN tools	Journal of Reinforced Plastics and Composites	27(7)	711-723	2008
13	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Fuzzy modeling and analysis of machining parameters in machining titanium alloy	Materials and Manufacturing Processes	23(4)	439-447	2008
12	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Davim, J.P.	Optimization of electrical discharge machining characteristics of WC/Co composites using non-dominated sorting genetic algorithm (NSGA-II)	International Journal of Advanced Manufacturing Technology	36(11)	1124-1132	2008
11	Sathianarayanan, D., Karunamoorthy, L., Srinivasan, J., Kandasami,	Chatter suppression in boring operation using magnetorheological fluid damper	Materials and Manufacturing Processes	23(4)	329-335	2008

	G.S., Palanikumar, K.					
10	Palanikumar, K.	Application of Taguchi and response surface methodologies for surface roughness in machining glass fiber reinforced plastics by PCD tooling	International Journal of Advanced Manufacturing Technology	36(1-2)	19-27	2008
9	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Surface roughness analysis in machining of titanium alloy	Materials and Manufacturing Processes	23(2)	174-181	2008
8	Srinivasan, V., Maheshkumar, K.V., Karthikeyan, R., Palanikumar, K.	Application of probabilistic neural network for the development of wear mechanism map for glass fiber reinforced plastics	Journal of Reinforced Plastics and Composites	26(18)	1893-1906	2007
7	Palanikumar, K.	Modeling and analysis for surface roughness in machining glass fibre reinforced plastics using response surface methodology	Materials and Design	28(10)	2611-2618	2007
6	Palanikumar, K., Paulo Davim, J.	Mathematical model to predict tool wear on the machining of glass fibre reinforced plastic composites	Materials and Design	28(7)	2008-2014	2007
5	Palanikumar, K., Karthikeyan, R.	Assessment of factors influencing surface roughness on the machining of Al/SiC particulate composites	Materials and Design	28(5)	1584-1591	2007
4	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Multiple performance optimization of machining parameters on the machining of GFRP composites using carbide (K10) tool	Materials and Manufacturing Processes	21(8)	846-852	2006
3	Palanikumar, K.	Cutting parameters optimization for surface roughness in machining of GFRP composites using Taguchi's method	Journal of Reinforced Plastics and Composites	25(16)	1739-1751	2006
2	Palanikumar, K., Karunamoorthy, L., Manoharan, N.	Mathematical model to predict the surface roughness on the machining of glass fiber reinforced polymer composites	Journal of Reinforced Plastics and Composites	25(4)	407-419	2006

1	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Assessment of factors influencing surface roughness on the machining of glass fiber-reinforced polymer composites	Materials and Design	27(10)	862-871	2006
134	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Parametric optimization to minimise the surface roughness on the machining of GFRP composites	Journal of Materials Science and Technology	22(1)	66-72	2006
133	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R., Latha, B.	Optimization of machining parameters in turning GFRP composites using a carbide (K10) tool based on the taguchi method with fuzzy logics	Metals and Materials International	12(6)	483-491	2006
132	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Optimizing the machining parameters for minimum surface roughness in turning of GFRP composites using the design of experiments	Journal of Materials Science and Technology	20(4)	373-378	2004

13. Detail of Patents.

S. No.	Patent Title	Name of The Applicants	Patent No	Award Date	Agency/ Country	Status
20	Protective Head Wear for Autism Patients with LED light	Dr.K.Palanikumar	337058-001	31-12-2020	INDIA	Granted
19	Protective Head Wear for Autism Patients	Dr.K.Palanikumar	337200-001	05-01-2021	INDIA	Granted
18	A device and method for assisting in self-learning of the braille language to visually impaired end users	1 . Vijayaraja L 2 . Dhanasekar r 3 . K. Palanikumar 4 . Dhinakaran m s 5 . Dinesh kumar r 6 . Joahnas mathew saji 7 . Vijay s	202041045084	16-10-2020	INDIA	Published

17	An automatized load carrying electric vehicle with custom path navigation	1 . G. Shanmugasundar	202041044652	14-10-2020	INDIA	Published
		2 . K. Palanikumar				
		3 . Anooj. M				
		4 . Maniponraja.H				
		5 . Jayant.M				
		6 . Yokeshkrishna.P				
16	E-glove	1 . G.saravanan	202041042710	01-10-2020	INDIA	Published
		2 . K.Palanikumar				
		3 . Hrini Karthik				
		4 . M.Unashalini				
		5 . V.Janani				
		6 . B.Uivashini				
15	Wireless security camera for stalker and threat identification	1 . Dr. K.Palanikumar	201941012141	28-03-2019	INDIA	Published & FER Replied
		2 . Dr. V.Brindha Devi				
		3 . P.Sharmila				
		4 . Neeraja.S				
		5 . Pavitra.P				
		6 . Queency Leena Sawyer				
14	An authentication slip procurement system for a public transport vehicle	1 . Dr. K. Palanikumar	201941008408	05-03-2019	INDIA	Published & FER Replied
		2 . Sharmila p				
		3 . Skanda gurunathan				
		4 . S. Vivekanandan				
		5 . Shankar t				
		6 . Aravind g				
13	A sign language translator	1 . K.Palanikumar	201841026260	13-07-2018	INDIA	Published

	glove	2 . K.C.Suresh				& FER Replied
		3 . B. Krishna moorthy				
12	An exoarm frame structure utilizing electrical actuators for arm rehabilitation and effortless load	1 . K. Palanikumar	201841025468	09-07-2018	INDIA	Published & FER Received
		2 . G. Shanmugasundar				
		3 . Tanush.h.bhaskar				
		4 . N.kishore				
		5 . S.a.vetri ganesh				
		6 . Anissh khaan.i				
11	Mind controlled gaming for the differently abled	1 . K. Palanikumar	201841016343	01-05-2018	INDIA	Published
		2 . B. Sreedevi				
		3 . P. Navaneeth				
		4 . H. Akshay				
		5 . M. Nirmalraj				
		6 . S. Athreya				
10	Exo Skeleton Arm using Block and Tackle Mechanism	1 . Dr. K. Palanikumar	201741042997	30-11-2017	INDIA	Published & FER Replied
		2 . G.shanmugasundar				
		3 . Tanush.'h.bhaskar				
		4 . N. Kishore				
		5 . Anissh khaan.i				
		6 . S.a.vetri ganesh				
9	An automatic system and method for the detecting and arresting of the LPG spillage from the gas stov	1 . K. Palanikumar	201741028002	07-08-2017	INDIA	Published & FER Replied
		2 . T. Srinivasan				
		3 . E. Thamizhmaran				
		4 . S. Rahavendhor				
		5 . B. Abhijeeth				
		6 . S. Solomon jaisingh				
8	A system and a method for toggling the operating state of electrical	1 . K.Palanikumar	201741027560	03-08-2017	INDIA	Published & FER Replied
		2 . R.nagammai nachu				

	appliances through user gesture	3 . V.kayalvizhi 4 . S.mythili 5 . S.malathy 6 . S.rajarajan				
7	A fibre reinforced hybrid polymer composite protective mechanism for the head	1 . Dr.K.Palanikumar 2 . K.R.Bharat	201741016072	08-05-2017	INDIA	Published & FER Replied
6	Phoneme encryptor	1 . K.Palanikumar, 2 . J. Ilakkiya, 3 . A. Subathra, 4 . S. Ragavi,	201741012896	11-04-2017	INDIA	Published & FER Replied
5	Egensor	1 . K.Palanikumar 2 . Arvindh.r 3 . Shubham shekhar 4 . Venkatesan.m 5 . Vignesh.a 6 . L.vijayaraja	201741011384	30-03-2017	INDIA	Published & FER Replied
4	A cattail fiber activated charcoal cartridge for the filtration and removal of the pah from the aque	1 . K.Palanikumar 2 . T. Gowshik 3 . S. Balaji 4 . R.satish 5 . Grandhe Venkata Karthik 6 . S.Aiswarya Devi 7 . R.M.Asha	201741010893	28-03-2017	INDIA	Granted
3	A durable multi-layered protective cover enclosing the head and neck of the firefighters	1 . K.Palanikumar 2 . K.R.Bharat	201641044018	23-12-2016	INDIA	Published & FER Replied
2	Woven Aloe vera/Sisal/Kenaf Fibre Epoxy composites	1 . A. Shadrach jeya sekaran 2 . K Palani kumar	201641012809	01.06.2016	INDIA	Yet to be Granted

	for Corrugated Roof sheet					
1	A multi-layered natural fiber reinforced composite sheet laminate	1. K. Palani kumar 2 . S. Dilip kumar 3 . C. Amarnath 4 . C. Rakesh	201641036636	26-10-2016	INDIA	Published & FER Replied

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
17	Mechanical Properties of Flax-Cotton Fiber Reinforced Polymer Composites	A Sailesh , K Palanikumar	Green Composites Published by Springer, 393-411	2020
16	Influence of fibre arrangement on mechanical properties of glass fibre-reinforced aluminium sandwich laminates Glass Fibre-Reinforced Polymer Composites: Materials	K Palanikumar, GR Devi	Manufacturing and Engineering Walter de Gruyter GmbH & Co KG, 12, 17	2020
15	Preparation and properties of nanopolymer advanced composites: A review	NRR Anbusagar, K. PalaniKumar, A Ponshanmugakumar	Polymer-based Nanocomposites for Energy and Environmental Applications, 27-73	2018
14	Glass Fiber Reinforced Composite materials: Book Chapter in “ Composites in Helicopter industry”	K.Palanikumar	Published by Wood head Publications, UK –In Press.	2016
13	Development and Characterization of Nano Clay Reinforced Three-Phase Sandwich Composite Laminates.	N. R. R. Anbu Sagar, K.Palanikumar	Nanoclay Reinforced Polymer Composites 01/2016: pages 357-391; ISBN: 978-981-10-1952-4, DOI:10.1007/978-981-10-1953-1_16	2016
12	Machinability of Fibre-Reinforced Plastics. Machinability of Fibre-Reinforced Plastics	K. Palanikumar, T. Srinivasan, K. Rajagopal, J.P. Davim	chapter Drilling of high impact Polystrene Materials,	2015

11	Application of response surface method and desirability function for the optimization of machining parameters of hybrid metal matrix (Al/SiC/Al ₂ O ₃) composites. Metal Matrix Composites	Kayaroganam Palanikumar	Walter de Gruyter GmbH & Co KG, ISBN: 9783110315448	2014
10	Application of artificial neural network for the prediction of surface roughness in drilling GFRP composites	K.Palanikumar, B.Latha, V.S.Senthilkumar J.PauloDavim	Materials Science Forum, Trans Tech publications, DOI: 10.4028/www.scientific.net/MSF.766.21.	2013
9	Electrical discharge machining: Study on machining characteristics of WC/Co composites. Machining and Machine-Tools	K. Palanikumar, J. Paulo Davim	chapter Electrical discharge machining: study on machining characteristics of WC/Co composites,DOI:10.1533/9780857092199.135	2013
8	Application of Taguchi method with Grey fuzzy logic for the optimization of machining parameters in machining composites, Computational Methods for Optimizing Manufacturing Technology	K.Palanikumar, B.Latha, J.PauloDavim	Models and Techniques. IGI-GLOBAL Publishers,DOI: 10.4018/978-1-4666-0128-4.ch009.	2012
7	Analyzing surface quality in machined composites. Machining Technology for Composite Materials	Kayaroganam Palanikumar	chapter Analyzing surface quality in machined composites: pages 154-182; Wood Head,	2012
6	Surface Roughness Evaluation in Drilling Hybrid Metal Matrix Composites. Emerging Trends in Science, Engineering and Technology	T. Rajmohan, K. Palanikumar, G. Harish	,DOI:10.1007/978-81-322-1007-8_29	2012
5	Investigation of optimum parameters for multiple performance characteristics in drilling wood composites (MDF) using Grey-Taguchi method. Wood and Wood Products,	K. Palanikumar, S. Prakash, J. Paulo Davim	chapter Chapter 4: pages 87-108; NOVA,ISBN: 978-1-62081-973-9	2012
4	Optimization of machining parameters for multiple performances in drilling hybrid composites using	K. Palanikumar, T.Rajmohan, J. Paulo Davim	Chapter 8 (in press), in Davim, J.P (Ed.), Metal Matrix Composites, NOVA Publishers, New York,ISBN: 978-1-61209-771-8.	2011

	desirability-based approach			
3	Modelling and analysis on wear behaviour of metal matrix composites	K. Palanikumar, T.Rajasekaran, J. Paulo Davim	Chapter 7, (157-174) in Davim, J.P. (Ed.), Tribology of Composite Materials, NOVA Publishers, New York, ISBN: 978-1-61668-319-1	2010
2	Application of fuzzy logic in manufacturing: a study on modelling of cutting force in turning GRFP composites	K. Palanikumar, J. Paulo Davim	Chapter 7, (111-128) in Davim, J.P. (Ed.), Artificial Intelligence in Manufacturing: Research, NOVA Publishers, New York, ISBN: 978-1-60876-214-9	2010
1	Analysis of delamination in drilling wood composite medium density fibre boards. Drilling of Composite Materials	Kayaroganam Palanikumar, S. Prakash, C.V.Jayakumar, J. Paulo Davim	chapter 7: pages 121-136; Nova, ISBN: 978-1-60741-163-5	2009

15. Any other Information :

1. Published more than 100 papers in SCI journals and received the citation of over 8000 having google Scholar h-index: 48.
2. Received best researcher Award 2 times from Indian Society for Technical Education.
3. Coordinated 12 numbers of AICTE sponsored FDPs, STTPs in the recent past.
4. Coordinated DST – NIMAT Sponsored Entrepreneurship Programs (EAC, FDP & TEDP).
5. Received grant for setting up of Innovation and Entrepreneurship Development Centre from DSt-NSTEDB (47 lakhs)
6. Acted as resource person for more than 150 FDP, webinars under various Technical, Research and Administrative topics.
7. Guided, Motivated and actively involved in the following Community Development Activities Through Institute: 1. National Service Scheme (NSS) 2. Swachh Bharat mission Activities 3. Unnath Bharath Abhiyan (UBA) activities for Adopted villages. 4. Lions Club Activities. 5. Skill Development Programs For Unemployed youth coordinating through the PMKVY and other schemes. 6. Entrepreneurship development Activities for Village people and also the S&T institutions.
8. Guided 21 research scholars, out of that 18 were successfully completed the research in the area of composite materials, Friction welding, environmental friendly processes, etc..

Biography



Dr. A. Suresh, B.E., M.Tech., Ph.D works as the Associate Professor, Department of the Computer Science and Engineering in SRM Institute of Science & Technology, Kattankulathur, Chengalpattu Dist., Tamil Nadu, India. He has been nearly two decades of experience in teaching and his areas of specializations are Data Mining, Artificial Intelligence, Image Processing, Multimedia and System Software. He has published two patents and 90 papers in International journals. He has book authored “Industrial IoT Application Architectures and use cases” published in CRC press and edited book entitled “Deep Neural Networks for Multimodal Imaging and Biomedical Application” published in IGI Global. He has currently editing three books namely “Deep learning and Edge Computing solutions for High Performance Computing” in EAI/Springer Innovations in Communications and Computing, “Sensor Data Management and Analysis: The Role of Deep Learning” and “Bioinformatics and Medical Applications: Big Data using Deep Learning Algorithms” in Scrivener-Wiley publisher. He has published 15 chapters in the book title An Intelligent Grid Network Based on Cloud Computing Infrastructures in IGI Global Publisher and Internet of Things for Industry 4.0 in EAI/Springer Innovations in Communication and Computing. He has published more than 40 papers in National and International Conferences. He has served as editor / reviewer for Springer, Elsevier, Wiley, IGI Global, IoS Press, Inderscience journals etc... He is a member of IEEE(Senior Member), ISTE, MCSI, IACSIT, IAENG, MCSTA and Global Member of Internet Society (ISOC). He has organized several National Workshop, Conferences and Technical Events. He is regularly invited to deliver lectures in various programmes for imparting skills in research methodology to students and research scholars. He has published four books in Indian publishers, in the name of Hospital Management, Data Structures & Algorithms, Computer Programming, Problem Solving and Python Programming and Programming in “C”. He has hosted two special sessions for IEEE sponsored conference in Osaka, Japan and Thailand.

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Google Scholar: <https://scholar.google.com/citations?user=S374GVYAAAAJ&hl=en>

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5. Gender (M/F/T) M
6. Category Gen/SC/ST/OBC OBC
7. Whether differently abled (Yes/No) No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	Ph D	2021	Computer Science and Engineering	Bharathidasan University	-
2.	M.Tech	2017	Computer Science and Engineering	Bharathidasan University	First Class
3.	B.Tech	2015	Computer Science and Engineering	Bharathidasan University	Fisrt Class

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

A DEEP LEARNING CLASSIFIER AND HOMOMORPHIC ENCRYPTION FOR SECURE MULTIPARTY COMPUTATION FOR ANALYSIS OF CONFIDENTIAL DATA TECHNIQUES, Dr.M.Balamurugan, Bharathidasan University, 2021

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Sri Sai Ram Institute of Technology	2021	Till date	VI Pay Scale
2	Researcher Ph.D Full Time	Bharathidasan University	2008	2021	---

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1			
2			
3			

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	R. Udendhran M.Balamurugan	Towards secure deep learning architecture for smart farming-based applications	Complex and Intelligent. System , Springer	https://doi.org/10.1007/s40747-020-00225-5	1-5	2020
2.	Udendhran, R Annamalai Suresh, M Balamurgan	Enhancing image processing architecture using deep learning for embedded vision systems	Microprocessors and Microsystems, ELSEVIER	https://doi.org/10.1016/j.micpro.2020.103094	1-5	2020
3.	Annamalai Suresh, R Udendhran, M Balamurgan	Hybridized neural network and decision tree based classifier for prognostic decision making in breast cancers	Journal of Soft Computing, Springer	https://doi.org/10.1007/s00500-019-04066-4	1-5	2019
4.	Annamalai Suresh, R Udendhran, M Balamurgan	A Novel Internet of Things Framework Integrated with Real Time Monitoring for Intelligent Healthcare Environment	Journal of Medical Systems, Springer	https://doi.org/10.1007/s10916-019-1302-9	1-5	2018

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1						
2						
3						

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	BOOK - Deep Neural Networks for Multimodal Imaging and Biomedical Applications, IGI GLOBAL	R.Udendhran, Irfan Ahmed	Wiley Press and IEEE Press	2021
2	Deep Neural Networks for Multimodal Imaging and Biomedical Applications	A. Suresh, R.Udendhran, Irfan Ahmed	IGI GLOBAL Press	2020

15. Any other Information (maximum 500 words)

Mr. R. Udendhran, B.Tech, M.Tech. (PhD), works as Assistant Professor Department of the Computer Science and Engineering at Sri SaiRam Institute of Technology, Sairam College Rd, Sai Leo Nagar, Tambaram West, Chennai, Tamil Nadu 600044, Tamil Nadu, India. He is a dignified computer science research scholar focusing on Deep Learning. He worked as a data scientist and presented research work in international conference held at University of Cambridge which is available in ACM digital library and published around 5 research papers indexed in web of science and 11 research papers in Scopus database.

Dr. P. Sivakumar BE (IT)., ME(CSE).,Ph.D., MISTE.,

Associate Professor,
 Department of Computer Science and Engineering,
 SRM Institute of Science and Technology,
 Delhi NCR Campus, Modinagr,
 Ghaziabad, Uttar Pradesh- 201204.
 Email-Id: drsivakumar.p@gmail.com ,ps@srmist.edu.in



CURRICULUM VITAE

Total Experience : **12 Years 9 Months**
 Before PG : 3 Months
 After PG : 5 Years, 9 Months
 After Ph.D : 6 Years 9 Months,
Nationality : Indian
Languages Known : English, Tamil.
Marital Status : Married

Award : Professional Awards & Honors – 2016, Chennai, “Innovative Professional Award” organized by Society of Professional Engineers (India) & Engineering Today,29-August-2016.

Patent Registered : Registered the application for grant of patent titled “Wireless Mesh Networks lifetime maximization for machine Communication”, The application no. E-12/2688/2019/CHE.

Research Supervisor : 1) Anna University, Chennai (**Number Scholar :03**)

Area of Interest: Data Mining, Computer Network, Web Technology

Research and Funding Agency (R&D): 03

Number of Research Project Applied : 01 (DST-SERB)
 Number of Workshop Grand Applied : 01 (DST-SERB)
 Number of Seminar Grand Applied : 01 (Deity)

Education Background :

<i>Course</i>	<i>Institution</i>	<i>University/ Board Type: Government/ Private</i>	<i>Year of Passing</i>	<i>% Aggregate</i>
Ph.D (Information & Communication Engineering)	Anna University, Chennai. Tamilnadu, India.	Anna University, Chennai Government	August 2013	-
M.E (Computer Science and Engineering)	Annai Mathammal Sheela Engineering College, Namakkal, Tamilnadu, India.	Anna University, Chennai. Government	2005-2007	75%
B.E (Information Technology)	Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu, India.	Bharathiyar University, Coimbatore. Government	2000-2004	65%

Teaching Experience : 13 Years

Patent Published : 01

Patent Registered : 03

Consultancy Projects : 02

Book published : 01

No Phd Students produced : 03

Membership : 09

Sessions/Symposium chaired Organized : 03

Faculty Development Program Organized : 01

National Conference Organized : 02

International Conference Organized : 01

International Workshop Organized : 01

Seminar / Workshop / FDP attended : 26

Journal Editorial and Reviewer : 14

International Journal Publications : 20

International Conferences : 07

National Conferences : 10

Total Research Paper published : 06

Project guided for Post Graduate level : 03

Project guided for Under Graduate level : 06

Mini Project guided for Under Graduate level: 03

Number of PhD Scholars

<i>SRL. NO</i>	<i>Status</i>	<i>Research Area</i>	<i>Title of the Thesis Work</i>	<i>Register Number</i>	<i>Name of the Scholar</i>	<i>University</i>
1	Completed 02/03/ 2017	Data Mining	An Improved Hybrid Honey Bee Mating Optimization of k-Means Algorithm for Medical Document Clustering	11160111035	Vengateshkumar.P	Anna University, Tamilnadu
2	Completed 05/06/2018	Grid Computing	Efficient Scheduling of Tabu Search, Round Robin, Earliest Deadline and First Come First Serve with Genetic Algorithm	71070621026	Rajagopal R	Anna University, Tamilnadu
3	Completed 28/12/2018	Web Mining	A Paradigm for Proficient information retrieval using trust based automatic web document classification framework	71070621042	Sridharan K	Anna University, Tamilnadu

Consultancy Projects

<i>S.No</i>	<i>Name of the Project</i>	<i>Client</i>	<i>Faculty members involved</i>	<i>Period</i>	<i>Amount generated (In Rs.)</i>
1	Cloud Based Data Collection and storage in Web portal	Techno soft salutation, Coimbatore	Dr.P.Sivakumar	2013-14	Rs.30,000 (Completed)
2	Design, Development and Maintenance of the web portal for Raja Textiles	Raja Textiles, Erode	Dr.P.Sivakumar	2014-15	Rs.1,00,000 (Completed)

Positions Held

<i>SRL. NO</i>	<i>Designation</i>	<i>Name of the college / University</i>	<i>Teaching Experience</i>			<i>Overall Years</i>
			<i>Start</i>	<i>End</i>	<i>Total years</i>	
1	Associate Professor	SRM NCR,Campus , Delhi	07-09-2020	Till Date	0.0	13.00
2	Associate Professor	Sree Vidyanikethan Engineering College (Autonomous),	13-08-2019	28.08.2020	1.0	13.00
3	Assistant Professor	Saudi Electronic University, Riyadh ,Saudi Arabia	22-03-2017	29-07-2019	2.3	12.00
4	Associate Professor	Sree Vidyanikethan Engineering College (Autonomous),	01-06-2016	31-01-2017	0.8	09.09
5	Assistant Professor	K.S.R. College of Engineering (Autonomous)	01-06 -2011	31-05-2016	5.0	09.01
6	Lecturer	Annai Mathammal Sheela Engineering College, Namakkal	15- 07- 2007	31-05- 2011	3.10	04.01
7	Lecturer	Annai Mathammal Sheela Engineering College, Namakkal	14-06-2005	15-09-2005	0.3	00.03

Research Publications

International Journal Publications **SCI Indexed : 2 and Scopus Indexed : 08**

- [1]. **Dr.P.Sivakumar**, “Implementing The Model For Software Quality Based On Interaction Between User And Developer”, Journal of Critical Reviews ,ISSN- 2394-5125 VOL 7, ISSUE 15, 2020. **(Scopus)**
- [2]. **Dr.P.Sivakumar**, “Exploring The Trajectory Prediction Using Lstm And Extreme Machine Learning”, journal of critical reviews, issn- 2394-5125 vol 7, issue 10, 2020. **(Scopus)**
- [3]. **Dr.P.Sivakumar**, “Design and analysis the performance of real time content delivery network using beam scanning” journal of critical reviews, ISSN- 2394-5125 VOL 7, ISSUE 04, 2020. **(Scopus)**
- [4]. **Dr.P.Sivakumar**, “Fit for Life: Home Personal Coach”, Bonfring International Journal of Software Engineering and Soft Computing, Vol. 8, No. 2, April 2018.

- [5]. **Dr.P.Sivakumar**, “A Systematic review on Techniques of Feature Selection and Classification for Text Mining”, International Journal of Business Information Systems, Vol. 28, No. 4, 2017. Print –ISSN : 17460972 (**Scopus**)
- [6]. **Dr.P.Sivakumar**, “Trust Factors based Hierarchy Key Distribution Security Protocol in Grid Computing by means of Elliptic Curve Cryptography” Asian Journal of Research in Social Sciences and Humanities. ISSN:2249-7315 (ONLINE) 2250-1665, Jan,2017.
- [7]. **Dr.P.Sivakumar an Mr.K Rajagobal**, ‘Object Based Ring Routing Path Management Algorithm for Energy Efficient Nest Node of Sensor Network’, Journal of Computer and System Sciences, Volume 83, Issue 3, ISSN: 0022-0000, 2017, Pages 3-21. (**Scopus Indexed**)
- [8]. **Dr.P. Sivakumar**, ‘Efficient Job Scheduling of Genetic Algorithm with Tabu Search and Round Robin’, International Journal of Printing, Packaging & Allied Sciences, (ISSN 2320-4387), vol. 4, no. 4, pp. 2864-2878,2016.
- [9]. Dr.P. Sivakumar, “Mobile Agents based Reliable and Energy Efficient Routing Protocol for MANET”, International Journal of Intelligent Engineering and Systems 9(3):110-116 · September 2016(**Scopus Indexed**)
- [10]. **Dr.P.Sivakumar**. “Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, International Journal of Innovations & Advancement in Computer Science (IJIACS), Vol.5, Issue No: 6, June 2016.
- [11]. Dr.P.Sivakumar, “An Integration of Web Mining and Security for Ensuring the E-Marketing Websites”, Asian Journal of Research in Social Sciences and Humanities Vol. 6, No. 12, December 2016, pp. 975-991.
- [12]. **Dr.P.Sivakumar**. “Web Forum Questions using Answers Retrieval Information”, journal of computer science and technology, Vol.5, Issue No: 6, June 2016.
- [13]. **Dr.P. Sivakumar**, “Effectual Web Content Mining is using Noise Removal from Web Page”, Wireless Personal Communications, Vol .84, pp.89-121, 2015, **ISSN: 0929-6212,(SCI & Scopus Indexed) Impact Factor : 1.20.**
- [14]. **Dr.P.Sivakumar**,. “Efficient Methods for Distinction Preclusion in Data Mining”, International Journal of Applied Engineering Research, Special issue Vol.10, Issue.55, pp.2212-2215, 2015.
- [15].**Dr.P.Sivakumar**,. “Ensure and Energy Efficient Data Forwarding in Cluster Based Wireless Sensor Network”, IJSRD -International Journal for Scientific Research & Development , Vol. 2, Issue 12, Pages: 2321-0613,March 2015.
- [16]. **Dr.P.Sivakumar**,. “Multimodal Mobile Visual Search Using Region-Based Matching Algorithm”, International Journal of Current Research Vol. 6, Issue, 01, pp.4750-4753, 2014.
- [17]. **Dr.P.Sivakumar**,. “Interactive Mobile Visual Search using Pixel based Matching Algorithm”, International Journal of Engineering Associates (IJEA), Vol. 3, Issue, 04, pp.20-23, 2014.
- [18]. **Dr.P.Sivakumar**,. “An Efficient Interactive Mobile Visual Search Using Multipart Region based Matching (MRM) Algorithm”, Australian Journal of Basic and Applied Sciences”,Vol 8,Issue,10, Pages: 7-11,July 2014., Print-ISSN : 19918178 (**Scopus Indexed**)
- [19]. **Dr.P.Sivakumar**,. “Verifying Integrity and Availability in Multi-Cloud Using PDP”, International Journal of Computer Science and Mobile Computing, Vol. 2, Issue, 4, 2013.

- [20]. **Sivakumar, P.** and Parvathi, R. M. S. "JC- Automatic Manifold Related Pages Reviewed by Jaccard's Coefficient", International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 2, No. 2, pp. 230-232, 2012.
- [21]. **Sivakumar, P.** and Parvathi, R. M. S. "Mainly Significant Content Mining of Entire Web Page", International Journal of Engineering Research and Applications, Vol. 2, No. 2, pp. 719-722, 2012.
- [22]. **Sivakumar, P.** and Parvathi, R. M. S. "Neural Networking using Multiple Web Page Noise Removing Method", International Journal on Computer Science and Technology (IJCST), Vol. 3, No. 1, pp. 336-338, 2012.
- [23]. **Sivakumar, P.** and Parvathi, R.M.S. "Eliminating of Picture Animation from Web Sheet", International Journal of Current Research, Vol. 4, No. 4, pp. 212-215, 2012.
- [24]. **Sivakumar, P.** and Parvathi, R. M. S. "An Efficient Approach of Noise Removal from Web Page for Effectual WCM", European Journal of Scientific Research, Vol. 50, No. 3, pp. 340-351, 2011, Print-ISSN: 1450202X, (**Scopus Indexed**)
- [25]. **Sivakumar, P.** and Parvathi, R. M. S. "Sketching-Din Elimination of Web Page", Journal of Computer Science, Vol. 7, No. 12, pp.1888-1893, 2011, print-ISSN: 15493636, (**Scopus Indexed**)

International Conferences

- [1]. **Dr.Sivakumar Ponnusamy**, Mohsen Ba Omar, Fahad Alshunaybir, Mohsen Alanazi, Mwaz Alzebak, "Fit for Life: Home Personal Coach" ICICS'2018, International Conference on Information and Computational Science (ICICS-2018), KSR College of Engineering, Tiruchengode, Tamilnadu, India, Conference Date :27.03.2018 to 28.03.2018.
- [2]. **Dr.P.Sivakumar.** "Web Forum Questions using Answers Retrieval Information", International Conference on "Latest Concepts in Science, Technology and Management (ICLCSTM-16), is organized by Conference info and Academic Science at The Institutions of Electronic and Telecommunication Engineers (IETE), Institutional Area, Lodhi Road, New Delhi 110003, Date: 19 June, 2016.
- [3]. **Dr.P.Sivakumar.** " Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks", International Conference on "Latest Concepts in Science, Technology and Management (ICLCSTM-16), is organized by Conference info and Academic Science at The Institutions of Electronic and Telecommunication Engineers (IETE), Institutional Area, Lodhi Road, New Delhi 110003, Date: 19 June, 2016.
- [4]. **Dr.P.Sivakumar.** "Web Forum Questions using Answers Retrieval Information (IJCMS)", International Journal of Computer & Mathematical Sciences, Vol.5, Issue No:6, June 2016.
- [5]. **Sivakumar,P.** "Efficient Methods for Distinction Preclusion in Data Mining", International Conference on Advances in Applied Engineering and Technology - 2015 (ICAAET'15). The ICAAET'15 is organized by Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India, May 14-16, 2015.
- [6]. **Sivakumar, P. and Parvathi, R.M.S.** "LS-SVM: Text Document Classification for Particular Value Decomposition", International conference on Recent Advances and Trends in computer Engg, Management and Security, Vivekanandha College of Engineering for Women, Elayampalayam, Tiruchengode, Tamilnadu, India, pp.85, March 2012.

- [7]. **Sivakumar, P. and Parvathi, R. M. S.** “An Efficient Approach of Noise Removal from Web Page for Effectual Web Content Mining”, International conference on Advanced Computer Technology, J.K.K.Nattraja College Of Engineering and Technology Komarapalayam ,Namakkal, Tamilnadu, India, pp.919-922, July 2011.

National Conferences

- [1]. **Sivakumar.p**, “Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March, 2016.
- [2]. **Sivakumar.p**, “A Hierarchical Fuzzy relational Clustering Algorithm for sentence Level Text Clustering” National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March 2016.
- [3]. **Sivakumar.p**, “Web Forum Questions using Answers Retrieval Information”, National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March, 2016.
- [4]. **Sivakumar.p** ,”An Energy Aware data Forwarding using MD5 in Cluster based Wireless sensor Network”, National Conference on Big Data Cloud Computing (NCBDC’15), National Institute of Technology,Tiruchirappalli,2015.
- [5]. **Sivakumar.p** , “Interactive Mobile Visual Search using Matching Algorithm”, National Conference on Knowledge based Scientific Research and Communication Engineering (NCKSRCE’14), K.S.R. College of Engineering,2014.
- [6]. **Sivakumar, P.** and Parvathi, R. M. S. “A Syntactic categorization based Web Page Rating Algorithm”, National Conference on Frontiers of Future Generation Computer Systems and Engineering, KSR College of Engineering, Tiruchengode , pp.36, February 2012.
- [7]. **Sivakumar, P.** and Parvathi, R. M. S. “Most Improvement Content Mining from complete web pages”, National Conference on Advances in Computing, Communication, Electrical and Network Technologies, Sengunthar Engineering College, Tiruchengode pp.160-165, March 2012.
- [8]. **Sivakumar, P.** “Scalable Peer-To-Peer File Sharing System in Hybrid Model”, National Conference on Advances in Communication and Computing (NCACC-2011), Karpagam College of Engineering(Autonomous),October 2011.
- [9]. **Sivakumar, P.** “Scalable Peer-To-Peer File Sharing System in Hybrid Model”, Seventh National Conference on Recent Trends in Advanced Computing (RTAC-2011),SNS College of Technology, October 2011.
- [10]. **Sivakumar,P** “Improved Context Based data Access”, First National Conference on Network , Intelligence and Computing System, SNS College of Technology, Coimbatore, Feb 2007.

Journal Editorial Member and Reviewer

- [1]. Reviewer of International Journal of Computer Science and Network (IJCSN)
- [2]. Reviewer of International Journal of Scientific & Engineering Research (IJSER)
- [3]. Reviewer of International Journal of Advances in Engineering and Technology(IJAET)
- [4]. Reviewer of International Journal of Research in Engineering and Technology (IJRET)
- [5]. Editorial Board Member of International Journal of Research in Science & Technology (IJRST).
- [6]. Reviewer of International Journals of Engineering and Sciences (IJENS)
- [7]. Editorial Board Member of Taraksh International Journal of Information Systems (TIJIS)
- [8]. Editorial Board member of Taraksh Journal of Cultural Studies(TJCS)
- [9]. Reviewer of International Journal of Scientific Engineering and Technology (IJSET)
- [10].Editorial Board Member of International Journal of Advances in Engineering Research (IAER)

- [11].Editorial Board Member of International Journal Of Innovations In Applied Sciences & Engineering (IJIASE)
- [12].Editorial Board Member of International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS) ,SVEC.
- [13].Editorial Board Member of International Journal of Advanced Research in Biology, Engineering, Science and Technology((IJARBEST),SVEC
- [14].International Journal of Advanced Research Trends in Engineering and Technology(IJARTET), SVEC.

Professional Society Membership

Life Member

- Indian Society for Technical Education (ISTE)
Member No: LM 81589
- International Society For Research And Development (ISRD)
Member NO :SR4150900222
- Global Research & Development Services (GRDS)
Membership ID: WASRTI-M16101

Senior Member

- International Association of Computer Science and Information Technology (IACSIT)
Member NO: 80347977

Member

- International Association of Engineers (IAENG)
Member NO: 137474
- International Journal of Engineering Trends and Technology
Member ID: SSRG - IJETT-1500 . SVEC.

Member of Societies

- IAENG Society of Computer Science
- IAENG Society of Data Mining
- IAENG Society of Software Engineering

National Conference Organized

- Fourth National Conference on Knowledge Based Scientific Research and Communication Engineering - 2014 (NCKSRCE'14), held on 15th March 2014”, K.S.R. College of Engineering, (Autonomous).

Guest Lecturing

- Act as a Resource person “One Week Faculty Development Programme on Advanced Tools for Data Analytics” 23th November, 2016, Under TEQIP-II, Conducted by Sree Vidyanikethan Engineering College (Autonomus),Tirupathi,on 24-25 October, 2016.
- Acut as a judge of CODE-A-THON “ Mantra- A National Level Techno – Cultural Fest” Conducted by Sree Vidyanikethan Engineering College (Autonomus),Tirupathi,on 6-7 October, 2016.
- Act as a Resource person on 11th Dec 2014 for Anna University Sponsored Faculty development Training Programme on “CS6402 Design and Analysis of Algorithms” organized at K.S.R College of Engineering.
- Act as a Resource person on 13th Dec 2014 for Anna University Sponsored Faculty development Training Programme on “CS6402 Design and Analysis of Algorithms” organized at Kongunadu College of Engineering and Technology

Technical Program Committees

- 7th IEEE International Advance Computing Conference (IACC-2017), Organized by IEEE Computer Society Chapter of India Council & VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India.
- First International Conference on Innovations in Electrical, Information and Communication Engineering (ICIEICE) to be conducted during March 24 and 25 of 2017, Kongunadu College of Engineering and Technology (KNCET), Namakkal - Trichy Main Road Tholurpatti, Thottiam, Trichy District, Tamilnadu, India.

List of R & D Project Work

S.No	Workshop / Seminar / Funded Projects	Name of the agency	Title of the Programme	Applied Date	Status
1.	Seminar	SERB Seminar Grant Proposal	Statistically Open Data Applications and Challenges	July 2019	Applied
2.	Funded Projects	SERB (Empowerment and Equity Opportunities for Excellence in Science)	Security Track: Bluetooth module with Smartphone Sensing Platform for Emergency Disaster Management	August 2019	Applied
3.	Workshop	DeitY Sponsored A Two Day National Seminar	Open Data Applications and Challenges	August 2019	Applied

List of Project work

S.no	Title of the Project	Purpose of the Project	Software used
1.	Improved Context Base Mobile data access	Mobile using to access All kind of data information with data format	JSP, Ms-Access, J2ME
2.	Location Identification	Mobile using identify the particular location and also nearest location with map	J2ME, JSP, SQL
3.	Mobile Billing System	Online Mobile Billing System	VB, Ms-Access
4.	Student Information	Each students Bio data and also mark statement	VB, Ms-Access

List of Patent

S.No	Title of the Patent	Application Number	Data of Published / eFiling	Status
1	Wireless mesh networks lifetime maximization for machine to Machine communication	201941052842	27/12/2019	Published
2	A novel Multiple-Access Edge Computing technique for ultra-reliable low-latency communication (URLLC), and massive Internet of Things (IoT) in	202041014796	15/05/2020	Published

	5G networks			
3	Automated vegetation mapping approach of crops through satellite image fusion and convolution neural networks-based classification	202041014696	15/05/2020	Published
4	A method to emotional component and Intrapersonal cognitive detection of a person using machine learning.	202041014970	22/05/2020	Published
5	Voice Assisted Neuro-Fuzzy Deep Learning Technique to Elderly and Disabled for Flexible and Secure Navigation	2020100866	27/05/2020	Published
6				

List of Book published

S.No	Title of the Book	Book ISBN	Year of publication	Publisher
1	WEB CONTENT MINING AND NOISE FREE WEB PAGES	978-81-932882-0-7	2016 November	IRA PUBLICATIONS

Programming Knowledge

Language : C, C++, Visual Basic and Java

Database : Oracle 8, My SQL, Ms-Access

Web Design : HTML, DHTML, Scripting, Style Sheet, ASP,PHP.

Title of Ph.D Thesis

Noise Free Information Retrieval Using Web Content Mining on Web Pages

Seminar / Workshop / Faculty Development Programme Attended

1. The webinar on "Identification of Internet Suspect Criminals using Forensic Field True Traveller Kit" by Dr.R.Ravi, Professor - IT, FXEC, Organized by Department of Information Technology, Francis Xavier Engineering College, Tirunelveli, Tamil Nadu on 27th May, 2020.
2. The webinar on "A Kaleidoscopic view of AI" organized by Department of Computer Science and Engineering, Panimalar Institute of Technology on 24.05.2020.
3. The Live Webinar PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY, Organized By CSE Dept in association with Computer Society of India VVIT chapter Held On 27.05.2020 .
4. "One-Day Online FDP on Data Science Using Machine Learning Algorithms" on 26th May 2020.
5. The one week Faculty Development Program on Advances in " Python(Django and Flask), Python for Data Science and Cyber Security" in association with IIT, organized by the Department of Computer Science and Engineering, Chadalawada Ramanamma Engineering College, Tirupati Bombay during 21st to 27th May 2020.
6. The Research Structuring and Writing Process', Organized By Department of Commerce IV, Rathinam College of Arts and Science, Coimbatore, May 27, 2020.
7. The CMOS Transceiver Design for 5G Communication" Organized By Department of Commerce Dhanalakshmi Srinivasan Institute of Technology on May 26, 2020.
8. The webinar on virtual class Room Teacher Organized By Skillnet on May 27, 2020.

9. The Five Day Faculty Development Programme (FDP) on “Cyber Security”, Conducted by the Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College in association with Supraja Technologies & Computer Society of India Vijayawada Chapter, from 23-05-2020 to 27-05-2020.
10. The NUPRO’2020 Round 1 and participated NUPRO’2020 Round 2 from 21/05/2020 to 25/05/2020 organized by Department of Information Technology, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam .
11. The Faculty Development Programme on Python Programming and Machine Learning Techniques, Department of Computer science and Engineering , K.S.R College of Engineering , Namakkal on 18-05 2020 to 29-05-2020.
12. The Faculty Development Programme on "Web Application Security", Jeppiaar Institute of Technology on 27-05-2020 to 28-05-2020.
13. The “NUPRO’2020 – NURTURE THE PROGRAMMING CONTEST ROUND - 1” organized by Department of Information Technology, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam – 611 002 from 11/05/2020 to 20/05/2020
14. Three Day Online Workshop on "Source Code Management and Technical Documentation" hosted by Sree Vidyanikethan Engineering College in association with APSSDC on 20/05/2020 to 22/05/2020.
15. The Research & Development (R&D) Cell and Institution’s Innovation Council (IIC) of Vivekanandha College of Engineering for Women (Autonomous) are organizing from 13th May 2020 to 20th May 2020.
16. The Eight Days Online Java Programming Course, Conducted by AARON Technology, Salem Tamilnadu on 20th April to 27th April 2020.
17. The One Day Online Webinar on Levers of Digital Industry Presented, Dr.S.D.Sударасan, Group Manager, ABB Corporate Research organized by Chennai Institute of Technology on 01 May 2020.
18. The One Day Online National Workshop on “ Blockchain Technology , conducted by Dr. Kalpesh Parikh on 2nd May, 2020.
19. The Online International Level COVID-19 Awareness Quiz held in May 2020 organized by students of National Service Scheme (NSS) unit of Ashoka Center for Business and Computer Studies, Chndsi, Nashik.
20. The online EQuiz Exam for Data Structure Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 6th May 2020.
21. The online EQuiz Exam for DBMS Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 7th May 2020.
22. The online EQuiz Exam for Compiler Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 8th May 2020.
23. The online Faculty Development Program on "RESEARCH, FUNDING & IPR" jointly organized by Department of Electronics & Telecommunication, IQAC AND R & D Cell, K. C. COLLEGE OF ENGINEERING & MANAGEMENT STUDIES AND RESEARCH, THANE (EAST) in association with under the banner of IETE and Institution's Innovation Cell (IIC) on 7th May-10th May, 2020.
24. The online WEBINAR on Opportunities for Start Ups in current Situation”, organized by Chennai Institute of Technology for registering on 8th may 2020.
25. The online Python Webinar hosted” by Sarada College for Women and Aaron Technologies on "Enhance your coding skills through Python" on 8th may 2020.
26. The 5 Day Online Faculty Development Programme on Python Programming Organized” by Madanapalle Institute of Technology & Science in association with IIT BOMBAY SPOKEN TUTORIAL - to be held during 4th May to 8th May,2020.
27. The 5 Day Online Faculty Development Programme on R Programming” Organized by St.Joseph's College,(Autonomous), Irinjalakuda in association with IIT BOMBAY SPOKEN TUTORIAL - to be held during 4th May to 8th May,2020.
28. The 2 day online Webinar for How to write a Research Proposal”, Organized By: Research and Development Cell, Excel Engineering College, Komarapalayam - 637303, TamilNadu on 04 May to 05 May 2020.
29. The Seven Days Online Faculty Development Program on "Scope of Artificial Intelligence and Machine Learning in Automation" from 11th May 2020 to 17th May 2020.
30. The Introduction to image quality measures”, organized by Chennai Institute of Technology for registering on 13th may 2020.
31. The Star Ethical Hacking Expert (EHE)”, organized by star certification, United States on May 14, 2020.

32. The Ethical Hacking Webinar” Conducted by IT Dept of Sengunthar College of Engineering, on 13 May 2020.
33. A one Week Faculty Development Programme on “Advances in Python Programming” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 27th - 28th November, 2016.
34. One week Faculty Development Programme on “Advanced Tools for Data Analytics” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 21st - 25th November, 2016.
35. A Two Day Research Oriented Faculty Development Programme on “Open Source Technologies”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 26-27 September, 2016.
36. DST-SERB Sponsored Two Day National Seminar on “Internet of Things(IoT) : Scope for Future Research and Business”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 24-25 October, 2016.
37. A Three Day Faculty Development Programme on “IBM Certified Application Developer – Cloud Platform”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 14-16 November, 2016.
38. DST-SERB Sponsored Two Day National Seminar on “Recent Advances in Bioinformatics and Medical Image Analysis” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 18-19 November, 2016.
39. National Workshop on “Blooms Taxonomy and its Assessments”, Conducted at K.S.R College of Engineering, on 20th March 2015.
40. Two Week ISTE STTP on “Introduction to Design of Algorithms” conducted by Indian Institute of Technology Kharagpur from 27th April to 30th May 2015.
41. International Level Workshop on “Journal Paper Writing and Preparation of Winner Research proposal”, Conducted at K.S.R college of Engineering, 2015.
42. The SERB Sponsored National Level Seminar on “Data Mining trends & development for Geospatial technology and its Applications” during 7th January 2015 to 9th January 2015.
43. ISTE – SRM Short Term training Programme on “Big Data Analytics and its Applications” organized by K S R Institute for Engineering and technology and sponsored by Indian Society for Technical Education, New Delhi and SRM University, Chennai, during 5th May 2014 to 10th May 2014.
44. Two week ISTE Workshop on Cyber Security conducted by Indian Institute of Technology Bombay from 10th July to 20th July 2014.
45. AICTE sponsored Two Weeks Faculty Development Programme on “Security Issues in Utility Computing” from 17th May 2013 to 30th May 2013, Organized by K.S.R college of Engineering.
46. AICTE sponsored Staff Development Programme on “Research initiatives in Data Mining for web intelligence” , from 22nd June to 03rd July 2012, Organized by K.S.R college of Engineering.
47. Two Days hands on Training on “Enterprise Computing Lab” held on 2nd and 3rd December 2011, K.S.R. College of Engineering.

48. Workshop on Hardware and Networking from 23^{ed} August 2011 to 25st August 2011 at K.S.R College of Engineering .
49. One Day Workshop on “Data Mining: Challenges and Issues” held on 26th August 2011 at Anna university of Technology Tiruchirappalli.
50. Workshop in “Java and struts frame work” from 23^{ed} April to 24th April 2010 at Annai Mathammal Sheela Engineering College, Namakkal, India.
51. One day orientation programme on Microsoft Corporation on Advanced technology, during 31st July 2009, Gnanamani College of Technology, Namakkal, India.
52. Staff Development Programme in Computer network Design Security and Management, Organized by Vivekanadha College of Engineering For Women, Elayampalam, Namakkal, from 22nd June to 4th July, 2009, Sponsored by AICTE.
53. Faculty Development Programme in Data Warehousing and Data Mining, Organized by Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 16th June to 20th June, 2008, Sponsored by AICTE.
54. Faculty Development Programme in Data Mining and Data Warehousing, Organized by Anna university, Chennai, from 25th May to 1st June, 2008, Sponsored by AICTE.
55. Staff Development Programme in Computer R & D Division of ECE , Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 19th May to 23^{ed} May, 2008, Sponsored by AICTE.
56. Faculty Development Programme in Principles of compiler design, Organized by PSNA Engineering College, Dindigal, from 26th November to 8st December, 2007, Sponsored by AICTE.
57. Faculty Development Programme in Theory of computation, Organized by SSN Engineering College, Chennai, from 21th May to 2nd June, 2007, Sponsored by AICTE.
58. Tutorials on Effective teaching-learning management and student personnel management at Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 7th December to 9th December, 2005, Sponsored by AICTE.

GOOGLE SCHOLAR PAGE

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Associate Professor, Department of IT, Sree Vidyanikethan Engineering College
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FOLLOWING

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Citations	22	13
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2013	6
2014	1
2015	0
2016	3
2017	2
2018	2
2019	6

Co-authors [EDIT](#)

Parvathi RMS
Professor & Dean - PG, Sri Rama...

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<https://publons.com/researcher/1704378/kallam-suresh/>

<https://vidwan.inflibnet.ac.in//profile/214276/MjE0Mjc2>

scopus id: 57202595661

EDUCATION AND ACADEMIC QUALIFICATIONS

SL. NO	QUALIFICATION	SPECIALIZATION	Year	CLASS	UNIVERSITY/BOARD
1	Ph.D.	Computer Science and Engineering	2016	-	VIT University, Vellore, TN.
2	M.Tech.	Information Technology	2009	First Class with distinction	JNTUH College of Engineering. Kukatpally, Hyderabad, A.P
3	B.Tech.	Computer Science & Information Technology	2005	First Class	AITS, Rajampet.
4	D.EC.E	Diploma in Electronics and Communication	2002	First Class	S.V.Govt.Polytechnic College, Tirupati.
5	S.S.C	-	1999	First Class	Z.P.HighSchool,Tiruchanoor, Tirupati

Experience

SL. NO	DESIGNATION	DEPARTMENT AND COLLEGE /UNIVERSITY	FROM	TO
1.	Associate Professor	Department of CSE, Sreevidyanikethan Engineering College, Autonomous, Tirupati, AP.	2019	Tilldate
2.	Professor	SCSE, Galgotias University, Greater Noida	2017	2019
3.	Associate Professor	Computer Science and Engineering, AITS, Autonomous, Rajampet, AP	2016	2017
4.	Assistant Professor	Information Technology, AITS, Autonomous, Rajampet, AP, India	2011.	2016
5.	Foreign Faculty	Software College, EAST CHINA TECHNICAL UNIVERSITY, P.R.CHINA	2010	2011
6.	Visiting Faculty	Jiangxi Normal University, Nanchang, Jiangxi 330022, P.R.CHINA.	2010	2011
7.	Assistant Professor	Information Technology, AITS, Autonomous, Rajampet, AP, India	2009.	2010
8.	ASSISTANT PROFESSOR	Information Technology, AITS, Autonomous, Rajampet, AP, India	2005.	2007

SPECIALIZATION

Internet of Things (IoT), Cyber-physical system, intelligent systems, smart environments and Health care using IoT.


PUBLICATIONS

1. M S, Mekala; DHIMAN, GAURAV; Patan, Rizwan; Kallam, Suresh; Ramana, Kadiyala; Yadav, Kusum; Alharbi, Ali O, "Deep Learning-influenced Joint V2I and V2V Communication Approach for Internet of Vehicles (IoV) "Expert Systems, Willy Publications, Accepted, June, 2021.
2. **Kallam Suresh**, Rizwan Patan, Tathapudi V. Ramana, Amir H. Gandomi "Linear Weighted Regression and Energy-Aware Greedy Scheduling for Heterogeneous Big Data" Journal Electronics, MDPI Publisher, SCI, Manuscript ID:

Electronics-1066832, https://www.mdpi.com/journal/electronics/special_issues/ML_BDA.
[Accepted Feb.2021](#).

3. Subhashini Peneti, M. Sunil Kumar, **Suresh Kallam**, Rizwan Patan, Vidhyacharan Bhaskar, Manikandan Ramachandran” BDN-GWMNN: Internet of Things (IoT) enabled secure smart city applications” *Wireless Personal Communications*, Springer, Accepted FEB,2021.
4. V. Mydukuri, Rathnamma; **Kallam, Suresh**; Patan, Rizwan; Al-Turjman, Fadi; Ramachandran, Manikandan ” Deming Least Square Regressed Feature Selection and Gaussian Neuro-Fuzzy Multi-Layered Data Classifier for Early Covid Prediction ”, *Expert Systems*, Wiley,FEB 2021, Accepted. **SCI**,Impact factor : 1.546. Manuscript ID EXSY-Dec-20-854.
5. Ramesh.S, **Suresh Kallam**, Rizwan Patan , Ramachandran Manikandan and *Fadi Al-Turjman*,” 5G Integrated Spectrum Selection and Spectrum Access Using AI-Based Framework for IoT Based Sensor Networks ”,*Computer Networks*, Elsevier, **Volume 186, 26 February 2021, 107649, SCI**,Impact factor :3.1.
6. Sunil kumar Malchi, **Suresh Kallam**, *Fadi Al-Turjman* Rizwan Patan ,” A trust-based fuzzy neural network for smart data fusion in Internet of Things ”, *Computers and Electrical Engineering*, Elsevier,Jan 2021, Published. **SCI**,vol.89,Impact factor :2.6 <https://doi.org/10.1016/j.compeleceng.2020.106901>.
7. Nalliyanna V. Kousik, Yuvaraj Natarajan, R. Arshath Raja, **Suresh Kallam**, Rizwan Patan and Amir H. Gandomi,” Improved salient object detection using hybrid Convolution Recurrent Neural Network ”,*Expert Systems with Applications*, Elsevier,15 March (2021),Vol 166,pp: 114064. **SCI**,Impact factor :5. 4, doi.org/10.1016/j.eswa.2020.114064.
8. Nalliyanna Goundar Veerappan Kousik , Yuvaraj Natarajan, **Kallam Suresh** , Rizwan Patan and Amir H. Gandomi,”Improving Power and Resource Management in Heterogeneous Downlink OFDMA Networks”,*Information journal*,MDPI Publication,10 April (2020). *Web of Science*,Impact factor :1.88,*Information* 2020, 11(4), 203; [doi:10.3390/info11040203](https://doi.org/10.3390/info11040203).
9. *Venkata Subbaraju Dommaraju, Karthik Nathani, Usman Tariq, Fadi Al-Turjman, Suresh Kallam, Praveen Kumar Reddy M, Rizwan Patan*, ”ECMCRR-MPDNL for Cellular Network Traffic Prediction with Big Data”,**IEEE Access**, published 27 May 2020.Vol:8 (SCI IF-4), [10.1109/ACCESS.2020.3002380](https://doi.org/10.1109/ACCESS.2020.3002380).
10. Dr.O.Obulesu, **Dr.K.Suresh**, and B.VenkataRamudu ” Diabetes Prediction using Machine Learning Techniques”, *Helix journal*,30 April (2020). *Web of Science*,2020, Volume and Issue: 10 (2):Page: 136-142; [doi:https://doi.org/10.29042/2020-10-2-136-142](https://doi.org/10.29042/2020-10-2-136-142).
11. Haftu Tasew Reda, Abebe Diro, Naveen Chilamkurti, **Suresh Kallam** ” Firefly-inspired stochastic resonance for spectrum sensing in CR-based IoT communications ”,*Neural Computing and Applications*,10 November (2019), **32**, pages16011–16023. Springer ,**SCI**,Impact factor 4,<https://doi.org/10.1007/s00521-019-04584-0>.
12. *kaushik.sekaran,a.h.gandomi,parimalavk,S.,P.Rizwan and Suresh Kallam*, ”Improving the Response Time of M-Learning and Cloud Computing Environments Using a Dominant Firefly Approach”,**IEEE Access**,2019.vol.7Page number, 30203 - 30212(**SCI IF-4**),[10.1109/ACCESS.2019.2896253](https://doi.org/10.1109/ACCESS.2019.2896253).
13. Ravi Kumar Poluru, M Praveen Kumar Reddy, Syed Muzamil Basha, Rizwan Patan and **Suresh Kallam** “Enhanced Adaptive Distributed Energy-Efficient Clustering (EADEEC) for Wireless Sensor Networks”, *Recent Advances in Computer Science and Communications, Formerly Recent Patents on Computer Science (2019)*, Volume: 13.,Issue 2.,DOI: 10.2174/2213275912666190404162447. (**Scopus**)

14. *S. Vijaykumar, P. Rizwan, S. Khanand, Suresh Kallam, "Reliable and Energy-Efficient Emergency Transmission in Wireless Sensor Networks", Internet Technology Letters, Wiley Publications, 2019, doi: 10.1002/itl2.91(SCI), VOLUME 2 ISSUE 2. PP 1-6.*
15. *O. Obulesu, Kallam Suresh, M Mahendra and M. Rajasekhara Babu, "Energy Saving using Green Computing Approach for Internet of Thing (IoT) based Tiny Level Computational Devices", Recent Advances in Computer Science and Communications Formerly Recent Patents on Computer Science (2020) 13: 6. <https://doi.org/10.2174/2213275911666181030110313>.(Scopus)*
16. *Suresh Kallam, Rajasekhara Babu Madda, Chi-Yuan Chen, Rizwan Patan, Dhanaraj Cheelu "Low energy aware communication process in IoT using the green computing approach", IET Networks, 2018, Volume: 7, Issue: 4 Pages: 258 - 264, doi: 10.1049/iet-net.2017.0105.(ESCI)*
17. *Rizwan Patan, K.Suresh and Dr.M.RajasekharaBabu "Design and development of low investment smart hospital using internet of things through innovative approaches. "Biomedical Research 2017; 28 (10):ISSN:0970-938X.(SCI)*
18. *K.Suresh and Dr.M.RajasekharaBabu "SOSIoT: SOS Optimization to leverage the Energy Efficient Internet of Things(IoT) based on Route Search Optimization "International Journal of Computer Aided Engineering and Technology, 2018 Vol.10 No.5, pp.530 – 542, published by Inderscience Publishers. (Scopus indexed).DOI:10.1504/IJCAET.2018.094331.*
19. *K.Suresh and Dr.M.RajasekharaBabu "Emerging Biomedical Health Care System by Using Internet of Things "JBBB, Journal of Biomimetics, Biomaterials and Biomedical Engineering (JBBBE), Vol.27, (2016), pp103-112. (Scopus Indexed journal, Published).ISSN:2296-9845. doi:10.40228/www.scientific.net/JBBB.27.103*
20. *K.Suresh and Dr.M.RajasekharaBabu "Towards Effective Communication Technique for Energy Efficient Internet of Things "International Journal of Engineering Research in Africa Vol. 21 (2016) pp 184-190 JERA, Trans Tech Publications, Switzerland(Scopus indexed)doi:10.4028/www.scientific.net/JERA.21.184*
21. *K.Suresh, Elizabeth Isaac and Dr.M.RajasekharaBabu "High Performance Computing on Heterogeneous/ Multiprocessors System Energy-Aware Design "International Journal of Applied Engineering Research IJAER ISSN: 0973-4562 Volume: 72 No.01 | 10 Feb-2015, Volume 10, Number 3 (2015) pp. 8841-8853 (Scopus indexed)http://www.ripublication.com/ijaer10/ijaerv10n4_41.pdf*
22. *K.Suresh, Dr.M.RajasekharaBabu, "Power-Aware System Design For Multiprocessors And Voltage Scaling/Frequency " Journal of theoretical and applied information technology JATIT ISSN: 1992-8645 | eISSN: 1817-3195 Volume: 72 No.01 | 10 Feb-2015, page 149-154, Available @ <http://www.jatit.org>(Scopus indexed)<http://www.jatit.org/volumes/Vol72No1/18Vol72No1.pdf>*
23. *K.Suresh, L.Gangadhar and M.Vidya "Medical Imaging Computing Based On Graphical Processing Units For High Performance Computing "IJRET: International Journal of Research in Engineering and Technology eISSN: 2319-1163 | pISSN: 2321-7308 Volume: 03 Special Issue: 05 | May-2014 | NCEITCS-2014, Available @ <http://www.ijret.org>.*
24. *O.Obulesu, Dr.A.Rama Mohan Reddy and K.Suresh "Finding Maximal Periodic Patterns and Pruning Strategy in Spatiotemporal Databases "International Journal of Advanced Research in Computer Science and Software Engineering IJARCSSE Volume 2 Issue 4 april 2012 ISSN: 2277 128Xhttp://www.ijarcsse.com/docs/papers/April2012/Volume_2_issue_4/V2I40038.pdf*

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25. K.Ramana,Dr.A.Subramanyam and **K.Suresh**“A Survey on Cloud Computing and Service Oriented Architecture”VSRD International Journal of Computer science and Information technology ,VSRD-IJCSIT, Vol. 1 (9), 2011, 656-665,ISSN NO:2231-2471http://www.vsrjournals.com/CSIT/Issue/2011_11_Nov/Web/2011_11_Nov.html.
 26. K.Ramana, ,Dr.A.RamamohanReddy,M.Subba Rao ,**K.Suresh** and S.Fahimuddin”Performance Analysis of Load Balancing Algorithms using Qualitative Parameters: A Review ” CiiT International Journal of Networking and Communication Engineering,September 2011,Volume 3 ,Issue 4, ,Print: ISSN 0974 – 9713 & Online: ISSN 0974 – 9616.
 27. K.Ramana,M.Subba Rao ,**K.Suresh** and O.Obulesu “Performance Analysis of Load Balancing “International Journal of Advanced Research in Technology Vol. 1 Issue 1, Sep 2011,ISSN NO: 6602 312,<http://www.ijart.org/2011/IJART007.pdf>
 28. **K.Suresh**,R.MadanaMohana and Dr.A.RamaMohan Reddy “Improved FCM algorithm for Clustering on Web Usage Mining”, **IJCSI International Journal of Computer Science Issues**, Vol.8 Issue 1, January 2011,ISSN(Online):1694-0814. <http://www.ijcsi.org/papers/IJCSI-8-1-42-45.pdf>
 29. **K.Suresh**,R.MadanaMohana and Dr.A.RamaMohan Reddy “Improved FCM algorithm for Clusteringthe IRIS data”, **IJCSE International Journal on Computer Science and Engineering**, Vol.3,No 1, January 2011, pp 323-326 ,ISSN 0975-3397. <http://www.enggjournals.com/ijcse/doc/IJCSE11-03-01-088.pdf>
 30. R.MadanaMohana, **K.Suresh** and Dr.A.RamaMohan Reddy “crime analysis using data mining”, **IJEECT International Journal of Electrical ,Electronics and Computing Technology**, Vol.1(2), Jan-April, 2011, pp 58-63 ,ISSN 2229-3027.
 31. **K.Suresh** “a Closed Sequence Pattern Mining without Candidate Maintenance on Time Series Data”, **IJENGG International journal of Engineering and Technology**, Volume 2, Number 4, December 2009.pp 51-57,ISSN: **0974-5246**. <http://eashwarpublications.com/doc/suresh1.pdf>

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1. Mekala M.S , , Rizwan Patan, *Fadi Al-Turjman*, **Kallam Suresh**, korhancengiz, jaroslav.frnda” RFTRS: Reinforcement Learning based Flexible Task and Resource Scheduling Approach for Heterogeneous Fog Environment” Manuscript ID Access-2020-58212, IEEE Access, Dec,2020.
2. Sathish K, Narayana Y.V ,Mekala M.S, Rizwan Patan **Suresh Kallam**, ” Efficient Tumor Volume Measurement and Segmentation Approach for CT Image based on Twin Support Vector Machines” Manuscript ID Access-2020-58212, Neural Computing and Applications, Springer, Dec,2020.
3. K. Deeba, , Amutha Balakrishnan,kadiyala Ramana, Vidhyacharan Bhaskar, **Suresh Kallam**, ” Deep learning and IOT based system for Leaf disease classification in Smart Agriculture” Wireless Personal Communications, Springer, Sep.,2020
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5. Amutha Balakrishnan, Kadiyala Ramana, Karthick Nanmaran, Manikandan Ramachandran, Vidhyacharan Bhaskar, **Suresh Kallam**” RSSI based Localization and Tracking in a Spatial Network System using Wireless Sensor Networks” Wireless Personal Communications, Springer, Aug.,2020

Ph.D Thesis Evaluation

- “AN EFFICIENT OPINION BASED RECOMMENDER SYSTEM WITH QUICK ACCESS MEMORY AND COLLABORATIVE FILTERING”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “An Efficient Intrusion Detection System with Feature Selection, Classification and Optimized Rule Generation Algorithms for Network Security”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “EARLY DETECTION OF AUTISM SPECTRUM DISORDER USING RECURRENT NETWORK CLASSIFIERS FROM GENOME SEQUENCE” BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “ Design of Geographical Zone based Traffic Aware Routing Algorithms for Efficient Data Transmission in Vehicular Ad Hoc Network”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.

Editorship

- **Science Publishing Group**, USA, *Engineering and Applied Sciences* journal ,Special Issue Guest Editor for *Engineering Projects and Studies Using Raspberry Pi*.
- **Indersciencejournal**(World Review of Science, Technology and Sustainable Development ,Special Issue on: "The Emergence of Sustainable Development and Technology for Innovation Using Green Computing")(Free Scopus Journal).
- **Benthamsience**(Recent Patents on Computer Science ,Special Issue on: "Recent advances in Internet of Things using Computing Intelligence") (Free Scopus Journal).

Copyright Register

1. “NEURAL NETWORKS FOR SMART DATA STORAGE USAGE IN INTERNET OF THINGS” 29 April 2020 Registration Number :L-90786/2020.
2. “Performance Improvement of Internet of Things Applications for Smart Cities through Real-Time Big Data Computing” 18 June 2021, **Registered Number** :L-11191/2021-CO/L.
3. “INTERNET OF THINGS (IOT) ENABLED SECURE SMART CITY APPLICATION” ,**Registered 6 June 2021**,3097/2021-CO/L
4. “Blockchain Defined Network (BDN) based secure transaction in IOT environment” March 2021,Diary no. is 6954/2021-CO/L.
- 5.



Patent filled

1. “Computer Implemented method for detection text based cyber stalking in data transmission using machine learning”,patent application number 202041028541, Patent published on 17.07.2020.
2. “System for walking Assistance device for visually impaired person using machine learning”,patent application number 202041007351, Patent published on 28.02.2020.
3. “IOT Sensors based multi functional and intelligent walk guiding stick for visual disabled person”,patent application number 201941051603, Patent published on 20.12.2019.
4. “Method of lung cancer detection using machine learning based CT-SCAN image processing”,patent application number 201941050453, Patent published on 13.12.2019.
5. “Method of Load Distribution Balancing For Fog Cloud Computing In IoT Environment”,patent application number 201941044511, Patent published on 15.11.2019.
6. “System and Method for data security using DNA cryptography based encryption”, patent application number 201941039845, Patent published on 01.10.2019.
7. “Method for maximum energy utilization in Internet of Things”, patent application number 201941040703, Patent published on 09.10.2019.
8. “System of Intelligent parking management using cloud computing”, patent application number 201911026316, Patent published on 12.07.2019.
9. “Fuzzy Neural Network Based PID control system and method thereof for industrial process control” patent application number 201941024479, published on 28.06.2019
10. “Computer Implemented system for Optimizing placement and routing in very largescale integrated circuit design”,201941021599,published on 09.08.2019.
11. “Patient Monitoring System“Application number 201811027264, applied on 20.07.2018.

Patent Grant/Accepted (International)

1. “QUANTUM MACHINE LEARNING BASED SENSOR CONSOLIDATION APPRAOCH FOR IIOT” ”,patent application number 2020102437, Patent Granted on 28.10.2020.
2. “EARLY COVID PREDICTION: NEURO FUZZY MULTI-LAYERED DATA CLASSIFIER” ”,patent application number 2020102448, Patent Granted on 28.10.2020.
3. “SPATIO-TEMPORAL MODELLING TECHNIQUES FOR PREDICTING COVID-19 INFECTION RISKTHROUGH WEARABLE” ”,patent application number 2020102363, Patent Granted on 21.10.2020.
4. “**Smart COVID Mask: AI-based mask with attachment to auto-detect and kill the COVID-19 virus** ”,patent application number 2020102080, Patent grant on 30.09.2020.
5. “**Smart COVID Scanner: Portable and Affordable Scanner to Detect COVID-19 Virus**”,patent application number 2020101728, Patent Granted on 02.09.2020.
6. “**INDUSTRIAL DIGITAL ASSISTANTS (IDA): DESIGNING AND REORGANIZING THE WORKPLACE LAYOUT FOR THE INDUSTRIES THROUGH AI TECHNIQUES DURING LARGE**

- SCALE PANDEMICS**”,patent application number 2020101596, Patent Granted on 26.08.2020.
7. **“Customized Identity Management Systems (CIMS) for Smart City Infrastructure Platform through Blockchain”**,patent application number 2020101845, Patent Accepted on 15.08.2020.
 8. **“SMART QUARANTINE SHELTERS FOR POTENTIAL RISK PATIENTS USING IOT”**,patent application number 2020101145, Patent Granted on 30.07.2020.
 9. **“ADVANCE METERING INFRASTRUCTURE SYSTEM FOR LARGE SCALE IOT NETWORKS DATA COLLECTION BY STREAMING”**,patent application number 2020101173, Patent Granted on 22.07.2020.
 10. **“LARGE SCALE IoT PILOT STRUCTURE FOR SMART CITY PLAN AND DEVELOPMENT”**,patent application number 2020101211, Patent Granted on 22.07.2020.


Reviewer

- IEEE Access
- IET Networks(Scopus,Web of Science)
- Wireless Personal Communication
- Ambient and humanoid journal
- Computer Communication, Elsevier
- Inderscience Journal (Scopus)
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- Betham Science Journal(Scopus)
- Elsevier Journal(Scopus)
- Journal of Ambient Intelligence and Humanized Computing
- The Computer Journal, The Oxford Academic,SCIE and Scopus journal.

AWARDS AND RECOGNITION

i) Academic and Research Awards

- 2018**“Best Faculty Award -2018”** by the Academic Brilliant Awards ,28 January 2018, at Noida, Uttar Pradesh, India.
- 2017 **“Young Scientist Award -2017”** by the CERG ,8 December 2017, at Delhi, India.
- 2017 **“Young Faculty Award in Computer Science and Engineering-2017”** by the. “Venus International Foundation”,8 July 2017, at Chennai, India
- 2016 **Got who is who award, 2000 Outstanding Intellectuals of the 21st Century from The International Biographical Centre, of Cambridge, England. 12, August 2016.**
- 2016 Got Research Award from VIT University in the year 2016 for highest contribution of paper published at SCOPE, VIT University ,Vellore, Tamilnadu.



2012	Got Second winning team International Consortium for Affordable Medical Technologies (CAMTech) was mentored by Dr Ted Moallem and Dr Data Santorino. The conclave, which was organised for the first time in India.
2008	Best paper Award (First Prize), First Prize in National Technical Paper meet event SANKETHIKA-08 at Sreenidhi institute of technology and sciences, Gatkeswar, Hyderabad on march 2008.
2006	Best Paper Award in Emerging Technologies and Applications ETA-06 at Sarasota University, Rajkot on 2006.

Workshop Resource Person/Organized

- ATAL workshop on Smart grid automation using Machine learning, Global Institute , Bangalore , Dec ,2020.
- AICTE 1 week STTP programme on Recent Trends in Industry 4.0 Technologies, Don Basco College of Engineering, Goa, July 2020 ,
- Saveetha Engineering College, Tamilnadu, India.
- 10 July , ITS Engineering College, G. Noida, UP, India.
- 19 March 2018, Majan College, Oman.
- 21 March 2018, Mazoon college, Oman.
- 4 March 2018 , Galgotias University , India.

Guest Lectures/Talks

- Annamacharya Institute of Technology and Sciences ,Kadapa on “Recent trends in IoT” 22 march ,2019.
- Priyadarisini Engineering college, Hyderabad on “Data mining” June ,2017

Event Judge /Reviewer for Student activities

- Judge for paper Presentations in ACM Students Convention on “Current and Emerging technologies in Engineering” on 21 January 2020 at Sree vidyanikethan Engineering College , Tirupati.
- Judge for Mock Interview in Mohan Mantra Students Convention 27 and 28 Sep. 2019 at Sree vidyanikethan Engineering College , Tirupati.

1. Editorial board member International Journal of Latest Technology in Engineering, Management & Applied Science,2018.
2. Scientific Program Committee member for IIR Virtual Conference on Science, Engineering and Technology Applications held on April 14, 2016 (IIR-VCSETA-2016) <http://iirvcseta.org>
3. Scientific Program Committee member for IIR International Conference on Science, Engineering and Technology Applications, July 8-10, 216 (IIRICSETA-2016)<http://icseta.org>
4. Scientific Program Committee member for 2nd International Conference on Computing Paradigms held on July 22-24, 2016 (ICCP-2016) <http://iccpconferences.org>
5. The Third International Conference on Electrical, Electronics, Computer Engineering and their Applications (EECEA2016) that will be held in Lebanon, on April 21-23, 2016. <http://sdiwc.net/conferences/eecea2016/program-committees/>
6. The International Conference on Database, Data Warehouse, Data Mining and Big Data (DDDMBD2015) Surya University, Indonesia on September 10-12, 2015. <http://sdiwc.net/conferences/dddmbd2015/program-committee/>
7. International Conference on Informatics and Advanced Computing (ICIAC-15) that will be held during May 27-28, 2015 London, United Kingdom. <http://iciac.org/committee.php>
8. International Conference on Computer Science and Information Systems (ICCSIS-15) April 24-25, 2015 Pattaya, Thailand, <http://iccsis.org/committee.php>
9. Technical Program Committee member for International conference on Human computing & learning with technologies(ICHCLWT 2015). <http://www.ichclwt.com/committee.php>
10. International Conference on Electronics Systems and Information Technology (ICESIT-15) March 14-15, 2015 Dubai, UAE, <http://icesit.org/committee.php>
11. Technical Program Committee member for Second a conference on computer supported education & Information technology(ICCSEIT 2015). <http://www.iccseit.com/programcommittee.php>
12. International Conference on Network security & Computer Science (ICNSCS-15) Feb. 8-9, 2015 Kaula Lumpur, Malaysia. <http://icnscs.org/committee.php>
13. International conference on E-Learning Management & Computing System (ICEMCS2015), April 25-26,2015,Amsterdam,The Netherland.
14. <http://www.icemcs.com/programcommittee.php>
15. The Second International Conference on Data Mining, Internet Computing, and Big Data (BigData2015) June 29- July 1, 2015 » Reduit, Mauritius ,University of Mauritius
16. <http://sdiwc.net/conferences/bigdata2015/>
17. International Conference on Innovations in Intelligent Systems and Computing Technologies (ICIISCT2015) September 18-20, 2015 » India Rajasthan Vidyapeeth (D) University
18. <http://sdiwc.net/conferences/iciisct2015/program-committees/>
19. Technical Program Committee member for Second a conference on advanced in computing, engineering & learning technologies,(ICACELT 2014).<http://www.icacelt.com/committee.php>
20. Reviewer for the international conference on E-Technologies and Business on the Web(EBW2013) ,Bangkok,Thailand on may 7 to 9 ,2013. <http://sdiwc.net/conferences/2013/ebw2013/program-committees/>
21. Committee member for ICAISED 2013 - 2nd International Conference on Advance Information System, E-Education & Development (ICAISED 2013) ,Malaysia.<http://www.icaised.com/committee.php>

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22. The Second International Conference on Digital Information and Communication Technology and its Applications (DICTAP2012)Thiland may 16-18 ,2012.
 23. The International Conference on Informatics and Applications (ICIA2012) <http://sdiwc.net/icia2012/page.php?id=6> Malaysia, June 3-5, 2012
 24. The International Conference on Cyber Security, Cyber Warfare and Digital Forensic (CyberSec2012) Malaysia, June 26-28, 2012
 25. The Second International Conference on Digital Information Processing and Communications (ICDIPC2012) Lithuania, July 10-12, 2012
 26. The Second International Conference on Digital Enterprise and Information Systems (DEIS2012) Czech Republic, July 16-18, 2012
 27. The World Congress on E-Commerce and Business on the Web (WCEBW2012) United Kingdom, Aug. 27-29, 2012
 28. The International Conference on E-Learning and E-Technologies in Education (ICEEE2012) Poland, Sept. 24-26, 2012
 29. The International Conference on Computing, Networking and Digital Technologies (ICCNDT 2012) Bahrain, Nov. 11-13, 2012,<http://iccndt2012.sdiwc.us/page.php?id=6>.

PROFESSIONAL QUALIFICATION/Certificates

1. MAT Lab basics
2. IBM Bluemix Cloud Computing
3. Microsoft Virtual Academy Certificate of Completion on 20 June 2016.
4. IBM DB2 certified
5. IBM RAD certified.

NPTEL certifications:


- 1."Teaching and learning in Engineering (TALE) "with Elite grade on March 2019.
- 2."Introduction to Internet of Things" with Elite grade on march 2019.
- 3."Python for Data Science" on Sep. 2019.

Courseracertifications:

1. Course Completed "Machine Learning for All "course authorized byUniversity of Londonand offered through Coursera ,Course Completed on 11.07.2020.
2. Course Completed "Internet of Things: Communication Technologies "course authorized byUniversity of California San Diego and offered through Coursera ,Course Completed on 11.07.2020.
3. Course Completed "Successful Career Development "course authorized by University System of Georgiaand offered through Coursera ,Course Completed on 09.07.2020.
4. Course Completed "Interfacing with the Arduino "course authorized byUniversity of Californiaand offered through Coursera ,Course Completed on 09.07.2020.
5. Course Completed "Cybersecurity and the Internet of Things "course authorized byUniversity System of Georgiaand offered through Coursera ,Course Completed on

09.07.2020.

6. Course Completed **“Introduction to Cloud Identity** “course authorized by Google Cloud and offered through Coursera ,Course Completed on 05.07.2020.
7. Course Completed **“Introduction to Psychology** “course authorized by Yale University and offered through Coursera ,Course Completed on 04.07.2020.
8. Course Completed **“Cloud Computing Basics (Cloud 101)**“course authorized by LearnQuest and offered through Coursera ,Course Completed on 04.07.2020.
9. Course Completed **“Work Smarter, Not Harder: Time Management for Personal & Professional Productivity!** “course authorized by University of California, Irvine and offered through Coursera ,Course Completed on 04.07.2020.
10. Course Completed **“Blockchain: Foundations and Use Cases** “course authorized by ConsenSys Academy and offered through Coursera ,Course Completed on 03.07.2020.
11. Course Completed **“Machine Learning: Clustering & Retrieval** “course authorized by University of Washington and offered through Coursera ,Course Completed on 03.07.2020.
12. Course Completed **“Fundamentals of Network Communication** “course authorized by University of Colorado System and offered through Coursera ,Course Completed on 03.07.2020.
13. Course Completed **“Introduction to the Internet of Things and Embedded Systems** “course authorized by University of California, Irvine and offered through Coursera ,Course Completed on 02.07.2020.
14. Course Completed **“IoT (Internet of Things) Wireless & Cloud Computing Emerging Technologies**“course authorized by Yonsei University and offered through Coursera ,Course Completed on 01.07.2020.
15. Course Completed **“Machine Learning: Classification** “course authorized by University of Washington and offered through Coursera ,Course Completed on 01.07.2020.
16. Course Completed **“MOOC: How to make a MOOC?”**“course authorized by Novosibirsk State University and offered through Coursera ,Course Completed on 01.07.2020.
17. Course Completed **“Machine Learning Foundations: A Case Study Approach** “course authorized by University of Washington and offered through Coursera ,Course Completed on 28.06.2020.
18. Course Completed **“Graph Analytics for Big Data** “course authorized by University of California San Diego and offered through Coursera ,Course Completed on 20.06.2020.
19. Course Completed **“Big Data Modeling and Management Systems** “course authorized by University of California San Diego and offered through Coursera , Course Completed on 20.06.2020.
20. Course Completed **“Big Data Integration and Processing** “course authorized by



University of California San Diego and offered through Coursera, Course Completed on 24.06.2020.


21. Course Completed “**Big Data - Capstone Project**” “course authorized by University of California San Diego and offered through Coursera, Course Completed on 24.06.2020.
22. Course Completed “**Introduction to Cybersecurity Tools & Cyber Attacks**” course authorized by IBM and offered through Coursera on 17.06.2020.
23. Course Completed “**Introduction to Big Data**” “course authorized by University of California San Diego and offered through Coursera on 17.06.2020.
24. Course Completed “**Machine Learning With Big Data**” “course authorized by University of California San Diego and offered through Coursera on 17.06.2020.
25. Programming for Everybody (Getting Started with Python)” an online course authorized by University of Michigan and offered through Coursera completed on 01.06.2020.
26. “**AI For Everyone**” an online course authorized by deeplearning.ai and offered through Coursera completed on 31.05.2020.

Online course Certificates/Webinars/workshops/Seminars/Talks

1. Dr.K.Suresh attended Online Faculty Development Program on “Artificial Intelligence and Data Analytics for Automation”, organized by the Department of Robotics Engineering, Karunya Institute of Technology and Sciences, Coimbatore, held from 27th July to 31st July 2020.
2. Dr.K.Suresh attended Online Faculty Development Program on “Artificial Intelligence :Theory and Applications”, organized by Kamla Nehru Institute of Technology and Sciences, U.P, held from 25th July to 29th July 2020.
3. Dr.K.Suresh attended Online Faculty Development Program on “Latex and its Applications for Researchers”, organized by the Department of IS&E, VidyaVardhaka College of Engineering, Mysuru, held from 20th July to 24th July 2020.
4. Dr.K.Suresh attended Online Faculty Development Program on “vision beyond 5G with blockchain and AI”, organized by the Department of IS&E, SRM, Chennai, held from

23rd July to 25 th July 2020.

5. Dr.K.Suresh attended Online Faculty Development Program on “Attended a Three Day Workshop on "Introduction to Web Development” during 17th- 19th July 2020, Organized by SkilltoHire.
6. Dr.K.Suresh attended Online Faculty Development Program on “Artificial Intelligence and its applications through machine learning”, organized by the Department of CSE, BITS, Warangal, held from 14 th July to 18 th July 2020.
7. Dr.K.Suresh attended Online Faculty Development Program on “Evolution of IoT and its real time applications”, organized by the Department of CSE, Malla Reddy Institute of Technology and Science, Hyderabad, held from 13 th July to 17 th July 2020.
8. “BLOCK CHAIN TECHNOLOGY And CYBER SECURITY” conducted by VIKAS Group of Institutions from 09-07-2020 to 12-07-2020.
9. “Security Issues in Internet of Things” conducted by St.Mother Theresa Engineering College, Chennai on 06.07.2020.
10. “Machine Learning With Deployment” conducted by SRI VASAVI ENGINEERING COLLEGE, Tadepalligudem, AP, on 03.07.2020 to 05.07.2020.
11. “Recent Trends in Computer Science” conducted by SITAMS, Chittoor on 28.06.2020 to 02.07.2020.
12. “Block Chain Technology” conducted by Mallareddy Institute of Technology and Science, Hyderabad on 02.07.2020.
13. “Effective usage of educational technology in teaching learning process as a part of NBA” conducted by M.S.Ramaiah Institute of Technology, Bangalore on 22.06.2020 to 26.06.2020.
14. “Big data management : An End-to End- perspective” conducted by M.S.Ramaiah Institute of Technology, Bangalore on 15.06.2020 to 19.06.2020.
15. “Cyber Forensics and Cyber Security” conducted by G. Narayanamma Institute of Technology and Science, Hyderabad on 15.06.2020 to 19.06.2020.
16. “MACHINE LEARNING AND RESEARCH OPPORTUNITIES” conducted by SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU from 15.06.2020 to 19.06.2020.
17. “Data Science Using R programming” conducted by Mahaveer Institute of Science and Technology, Hyderabad on 12.06.2020 to 17.06.2020.
18. “Raspberry Pi-An IoT Magic Box: Introduction and applications” conducted by Anand International COLLEGE OF ENGINEERING, Jaipur on 13.06.2020.

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19. "TO FIGHT COVID-19 USING ROBOTICS & IOT" conducted by Mahendra Engineering College, Chennai on 06.06.2020.
 20. "Online 5 days FDP on" Cloud Infrastructure and virtualization" " " conducted by Institute of Aeronautical Engineering, Hyd. from 25-05.2020 to 29-05-2020.
 21. "Introduction to Data Science" conducted by Guntur Engineering College, Guntur with association of Code gnan IT Solutions from 18-05.2020 to 22-05-2020.
 22. World Telecommunication & Information Society Day (WTISD) 2020, organized by Department of Information Technology, Babu Banarasi Das Northern India Institute of Technology, Lucknow in association with The Institution of Engineers [IEI] UP State Centre on Sunday, May 17, 2020.
 23. "Cyber securities for beginners" conducted by Palimanan Institute of technology, Chennai on 16.05.2020.
 24. "Building support vector machine learning model" conducted by Code gnan IT Solutions on 16.05.2020.
 25. "INDUSTRY PERSPECTIVE ON DATA SCIENCE AND CLOUD COMPUTING" conducted by Muscat College, Oman and Sathyabama Institute of science and Technology from 14.05.2020 to 16-05-2020.
 26. "Engineering-Real world application" conducted by Sri venkataswaraa College of Technology, Chennai on 15.05.2020.
 27. "IPR and IP Management for Innovation and Start-ups" conducted by R.M.K. ENGINEERING COLLEGE, Chennai on 15.05.2020.
 28. "Data visualization with R programming" conducted by Code gnan IT Solutions on 15.05.2020.
 29. "How to conduct a search to know the uniqueness of your Idea" conducted by Questel India on 14.05.2020
 30. "Digital teaching for digital learning" conducted by nilagiri college of arts and science on 14.05.2020.
 31. "How to fast track your social distance" conducted by Sri venkataswaraa College of Technology, Chennai on 14.05.2020.
 32. "Faculty Program on NBA" conducted by Bharati Vidyapeeth College Of Engineering, Navi Mumbai on 15.05.2020.

33. "E-QUIZ ON TEACHING APTITUDE" conducted by Jamal Mohamed College (Autonomous), Tiruchirappalli on 14.05.2020.
34. "POST COVID-19 Way Forward" conducted by Prathyusha Engineering College , Thiruvallur. on 12-05-2020.
35. "Ruby Programming" conducted by VIT Chennai with association of ICT ,IIT Bombay from 11-05.2020 to 12-05-2020.
36. "Lean for learners days" conducted by Sri venkataswaraa College of Technology,Chennai on 11.05.2020.
37. One Week Online FDP on Internet of Things (IoT) for Emerging Applications" organized by the Department of Electronics and Computer Engineering, KITS Warangal with associate with Cloud Chip Technologies held on 10th-14th May, 2020.
38. "Machine Learning and its Applications" conducted by SVCET, Chittoor on 9th May, 2020
39. "Building Decision Tree from scratch using python webinar" conducted by Code gnan IT Solutions on 9th May, 2020.
40. "Gamification Tools in Teaching" conducted by Internal Quality Assurance Cell, St. Xavier's College for Women, Aluva on 07-05-2020.
41. "building a mobile App for machine learning model webinar" conducted by Code gnan IT Solutions on 5th May, 2020.
42. "One Week Online Faculty Development Programme on Python 3.4.3" conducted by Sathyabama institute of Science and Technology, Chennai, In Association with Spoken Tutorial, Indian Institute of Technology,Bombay, IIT Bombay, funded by the National Mission on Education through ICT, MHRD, Govt. of India. From 04.05.2020 to 08-05-2020.
43. "One Week Online Faculty Development Programme on LaTeX" conducted by Poornima University, Jaipur, In Association with Spoken Tutorial, Indian Institute of Technology,Bombay, IIT Bombay, funded by the National Mission on Education through ICT, MHRD, Govt. of India. From 04.05.2020 to 08-05-2020.
44. "Machine learning for Beginners" conducted by Indian Servers on 3rd May, 2020.
45. "guidance,navigation&control of autonomous vehicles" conducted by Enflare Technologies on 03.05.2020.
46. "Web Development in Ruby on Rails" conducted by KarpagaVinayaga College of Engineering and Technology on 3rd May, 2020.
47. National Workshop on " Blockchain Technology " conducted by Ganpat University on 2nd May, 2020.
48. "UNIVERSITY INDUSTRY LINKAGE-DIFFERENT MECHANISMS" conducted by



Audisankara Group Of Institutions on 2nd May, 2020.

49. "machine learning with Scikit learn webinar" conducted by Code gnan IT Solutions on 1st May, 2020.
50. "IPR & PATENT", received certificate from BALAJI INSTITUTE OF TECHNOLOGY & SCIENCE on 28. April, 2020.
51. "Developing thinking Abilities relevant for engineering education" on 28 April 2020, received certificate from Face Prep Help.
52. "Intellectual Property and Technological Innovation in COVID 19 and Role of University R&D Spill Over Societal Benefits" on the Occasion of World Intellectual Property Day April 26, 2020, GIET University, Gunupur, Odisha.
53. "EMPLOYABILITY SKILLS IN CURRICULUM DESIGN" on 25. April, 2020, received certificate from Audisankara College Of Engineering & Technology.
54. "building simple" classifier using sklearn webinar on 25. April, 2020, received certificate from Codegnan.
55. "A 4-Day Online FDP on Data Science and Machine Learning using Python" organized by the Department of Electronics and Computer Engineering, K L University held on 20th-23th April 2020.
56. linear regression using python webinar classifier using sklearn webinar on 23 April, 2020, received certificate from Codegnan.
57. "Virtual Reality" on 20. April, 2020, received certificate from bhagwan Mahavir University, surat.
58. "How to become an Online Teacher" on 15. April, 2020, received certificate from Amity University.
59. "Web seminar: Research Proposal Writing" on 14 April 2020 on IEEE Hyderabad section.
60. "Intellectual Property by crash course" on 04 april, 2020 on Cursa and received certificate.
61. "BECOME AN IOT DEVELOPER" on 04 april, 2020 on Samrtbridge and received certificate.

PROFESSIONAL ACTIVITIES

- ❖ Life Member for Centre for Education Growth and Research (LT610)
- ❖ Member of Institute of Electrical and Electronics Engineers (IEEE) :92590725
- ❖ Member of Computer Science India(CSI) ,registration number :L3A073
- ❖ Associate Member on *Universal Association of Computer and Electronics Engineers*.
Membership no.AM1002432
- ❖ Senior member International Association of Engineers and Scientists (IAEST) membership
number:011084275.
- ❖ Member of International Journal of Computer & Organization trends(IJCOT),membership
no:SSRGJ-IJCOT-13152
- ❖ Member of International Association Computer Science and Information
Technology(MIACSIT),membership no:102175.
- ❖ Member of computer science teacher association CSTA
- ❖ Member of International Association of Engineers.
- ❖ Board member of Seventh Sense Group Journals Membership ,Id :SSRGJ-IJCTT-097
- ❖ Member of i-Xplore International Research Journal Consortium (IIRJC) Your Membership
ID is 12220
- ❖ Member <http://ijctjournal.org/boardmembers/k.suresh.pdf>

ADMINISTRATIVE RESPONSIBILITIES

1. Division Head for Data Analytics Division(2018 -2019)
2. Chairman for Project Based Learning(Aug 2018 –2019)
3. Program Chair for M.Tech.(Jan 2018-Nov 2018)
4. Board of Studies Member(BOS) ,AITS,Rajampet,AP (2012 - 2014)
5. Department Coordinator, Research and Development(2013- 2017)
6. Member, Internal Quality Assurance Cell(IQAC)(2014-2017)
7. Organizing Convener for one day workshop on cloud computing, conducted by IT at AITS,
Rajampet, 29 January, 2013.
8. Organizing Member for IEEE International Conference on Advanced Computing Technologies
(ICACT-13) going to conduct on Aug 11 and 12 2013.
9. Organized National Conference on Networking and IT ,12and 13 Oct. .2012
10. Teaching Research Assistant in East China University of technology in 2010 to July 2011.
11. Visiting Faculty for different universities in China.
12. Organize Member for National Level Paper Presentation ATM- 2010.

13. Organized National level Research Program conducted University in India level at JNTU Hyderabad 2008.
14. Conducted National Workshops at JNTU Hyderabad 2008.

Ph.D Guidance

- PhD (Computer Science)at Galgotias University,UP,India.
Mr.Jayanth Kumar Singh,17SCSE302004,2017-18.
- PhD (Computer Science and Engineering)at Galgotias University,UP,India.
Mr.Raju .B,18SCSE302003,2018-19.
- PhD (Computer Science and Engineering)at Galgotias University,UP,India.
Mr.Shrikanth Patel ,2019-20.
- PhD (Computer Science and Engineering)at Galgotias University,UP,India.
Mr.Gopi.A,2019-20.

Ph.D(Doctoral Committee Member)

- PhD –as External Doctoral committee Member
1.M.Praveen Kumar ,SCOPE,VIT University, Vellore,India.
2.Jothymee ,SCOPE, VIT University, Vellore,India.

Conference Keynote

1. “Cyber Physical System for Higher Education” ,2 day conference on “National Conference on Academia Digital Transformation [Challenges and Opportunities] (NCADT-2017) during 15-16 December 2017.
2. “Digital Tools for Teaching” National Conference on ICT Empowered Teaching, Learning and Evaluation (NCICT-2016) , on 16-17 December 2016 at SSBN College,AnatapurAP

Conference Organized

1. International Conference On Computing, Power And Communication Technologies 2018,Galgotias University,Greater Noida.
2. National Conference on Newtork and Information Technology (N²IT-2013) during ,2012 at AITS,Rajampet,AP.

3. National conference on Advanced Computing (NCAC-2011) during ,2011, at AITS,Rajampet,AP.



Text Book Publication

1. Dr.Kallam Suresh," A novel BBICR Technique in Vehicular Ad-hoc Networks" ISBN-13: 9786202317696, Publisher, KS Omniscriptum Publishing, May 2021,Scholar's Press. <https://www.barnesandnoble.com/w/a-novel-bbicr-technique-in-vehicular-ad-hoc-networks-kallam-suresh/1139441420>
2. Dr. M.Sunil Kumar Dr.V.Anantha Natarajan, and Dr.**Suresh Kallam** as an editor &Author"Empirical study for Assessing Requirement Engineering using Machine Learning Techniques ", Software Engineering Using Metaheuristic Algorithms in Lulu Publication, United States, ISBN -978-1-67814-610-8. Feb 2020.
3. M.SunilKumar,V.Anantha Natarajan, and **Dr.SureshKallam**,"Software Restructuring", December , 2019,Lulu Publications,US,ISBN:978-1-79474-441-7.
4. **K.Suresh** "Recent Trends in Internet of Things", November 2017, VSRD Academic Publications ISBN-13: 978-93-86258-82-3
5. **K.Suresh** "PROBLEM SOLVING TECHNIQUES AND INTRODUCTION TO C PROGRAMMING", june 2017, VSRD Academic Publications ISBN-13: 978-93-86258-61-8.
6. **K.Suresh**,M.RajasekharaBabu ,and P.Rizwan "Computer Architecture: A Technical Approach to Improve Performance using limited power", March 2016, VSRD Academic Publications ISBN-13:978-81-931580-6-7.


Book Chapter Publication

1. AnuRadha Reddy, Dr.G S Pradeep Ghantasala, Rizwan Patan, R. Manikandan, **Suresh Kallam**, "**SMART ASSISTANCE OF AGED AFFLICTION PEOPLE FOR GUIDING IN EMERGENCY SITUATION AT HOME** ", In Internet of Medical Things Remote Healthcare Systems and Applications, D. Jude Hemanth Etc.,(Eds.), Springer, August,2021.ISBN 978-3-030-63936-5.
2. BasettyMallikarjuna, T. V. Ramana, **Suresh Kallam**, Rizwan Patan, Manikandan Ramachandran, "Visualizing Bitcoin using BigData: Mempool Visualization, visualization, peer visualization, Attack visual analysis, High-Resolution Visualization of Bitcoin systems, Effectiveness ", In Blockchain, Big Data and Machine Learning Trends and Applications, Neeraj Kumarand Gayathri Etc.,(Eds.), CRC Press, Taylor & Francis, August,2020.ISBN 9780367370688.
3. A.Harika,M.SunilKumar,V.Anantha Natarajan, and **Suresh Kallam**, "Business Process Re-Engineering: Issues and Challenges",ICSIS-2020 scheduled on 20-21 March 2020 at Poornima Institute of Engineering & Technology, Jaipur., Springer Book Series: "Algorithms for Intelligent Systems (AIS)– Springer" (ISSN: 2524-7565), Springer.
4. **Kallam Suresh** ,PatanRizwan,B.Balamurugan,M.Rajasekhrababuand S.Sreeji, "To Identify Visible or Non-visible-Based Vehicular Ad Hoc Networks Using Proposed BBICR Technique",In: Bhatia S., Tiwari S., Mishra K., Trivedi M. (eds) Advances in Computer Communication and Computational Sciences. Advances in Intelligent Systems and Computing, vol 924. Springer, Singapore,ISBN978-981-13-6861-5,DOI:https://doi.org/10.1007/978-981-13-6861-5_12,Pages 133-142.
5. **K.Suresh**, "Software Engineering" The book chapter titled has been accepted for publication in edited book titled "Advances in Computer Science (Volume - 3)",AnkinikPublication,New Delhi,March,2019.
6. S. Namasudra, D. Devi, S. Choudhary, R. Patan and **S. Kallam**, "Security, Privacy, Trust, and Anonymity", In Advances of DNA Computing in Cryptography, S. Namasudra and G. C. Deka

- (Eds.), CRC Press, Taylor & Francis, 2018.
7. P.Rizwan, Dr.M.Rajasekharababu and **Dr.K.Suresh** “Exploring the Convergence of Big Data and the Internet of Things” Part of the Advances in Data Mining and Database Management Book Series,IGIGlobal Publication, ISBN: 9781522529477,Release Date: September, 2017,Hershey, PA 17033, USA.
 8. P.Srinivasa Rao, Dr.D.Vasumathi and **Dr. K. Suresh**, “The Adaptive Strategies Improving Web Personalization Using the Tree Seed Algorithm (TSA)”,Cognitive Science and Artificial Intelligence: Advances and Applications,SpringerBriefs in Forensic and Medical Bioinformatics ISBN 978-981-10-6697-9, ISBN 978-981-10-6698-6 (eBook) DOI:<https://doi.org/10.1007/978-981-10-6698-6>, volume VIII, Pages 23-28. December ,2017

International Conferences

1. V.Anantha Natarajan, M.SunilKumar,Rizwan Patan,**Suresh Kallam** and **Mohamed Yasin Noor Mohamed** “Segmentation of Nuclei in Histopathology images using Fully Convolutional Deep Neural Architecture”, 2020 International Conference on Computing and Information Technology, University of Tabuk, Kingdom of Saudi Arabia. Volume: 01, Issue: ICCIT- 1441, Page No.: 319 – 325, 9th & 10th Sep. 2020.
2. A.Harika,M.SunilKumar,V.Anantha Natarajan, and **Suresh Kallam**, “Business Process Re-Engineering: Issues and Challenges”,ICSIS-2020 scheduled on 20-21 March 2020 at Poornima Institute of Engineering & Technology, Jaipur., Springer Book Series: “Algorithms for Intelligent Systems (AIS)– Springer” (ISSN: 2524-7565), Springer.
3. G S Pradeep Ghantasala ; B. Venkateswarlu naik ; **Suresh Kallam** ; Nalli Vinaya Kumari ; Rizwan Patan, “Texture Recognition and Image Smoothing for Microcalcification and Mass Detection in Abnormal Region”, 2020 International Conference on Computer Science, Engineering and Applications (ICCSEA) at GIET Univeristy.
4. **K.Suresh**,Rizwan,Balumurgan,Rajasekharababu and Sreeji”To identify visible or non-visible based Vehicular Ad-hoc Networks using proposed BBICR Technique” 3rd Springer conference,IC4 2018 International Joint Conference on Computer, Communication and Computational Sciences,**Bangkok**, Thailand during 20th-21st October 2018.
5. **K.Suresh** , Syed Muzamil Basha, Dharmendra Singh Rajput, Rizwan Patan· Balamurugan B, Sk. Abdul Khalandar Basha,“Evaluating the performance of Deep Learning Techniques on Classification Using Tensor Flow Application”- 4th IEEE International Conference on Advances in Computing, Communication and Engineering (ICACCE 2018),**Paris**,France, 22 and 23 June ,2018.

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6. G Nalinipriya, Balamurugan Baluswamy, Tamizharasi Gs, Rizwan Patan, **Kallam Suresh** , M. Rajasekhara Babu “A Parallel Approach to detect and Recognize Object from Videos for Computer Vision using Deep Learning”- 4th IEEE International Conference on Advances in Computing, Communication and Engineering (ICACCE 2018),**Paris,France**, 22 and 23 June ,2018.
 7. P.Rizwan, M. Rajasekhara Babu B.Balamuruganand **K. Suresh**“Real-time big data computing for Internet of Things and cyber physical system aided medical devices for better healthcare”- Majan International Conference MIC2018,**Oman**, 19 and 20March ,2018.
 8. P.Srinivasa Rao, D.Vasumathi and **Dr. K. Suresh**, “The Adaptive Strategies Improving Web Personalization Using the Tree Seed Algorithm (TSA)”- International Conference on "Cognitive Science and Artificial Intelligence" (ICCSAI-2017),SVCE,Tirupati,AP , India, 5 to 7 July ,2017.Published in Spinger ,DOI:<https://doi.org/10.1007/978-981-10-6698-6>
 9. **K. Suresh**, Dr. M. Rajasekhara Babu and P.Rizwan “EEIoT: Energy Efficient mechanism to leverage the Internet of Things (IoT)”- IEEE International Conference on Emerging Technological Trends”, ICETT-2016, Kollam,Kerala , India, 21 and 22 October ,2016.
 10. Rizwan Patan, **Suresh K.**, Dr. Rajasekhara Babu M., “Real-Time Smart Traffic Management System for Smart Cities by Using Internet of Things and Big Data”, IEEE International Conference on Emerging Technological Trends (ICETT), ISBN-978-1-5090- 3751-3, pp. 7- 15, 2016.
 11. **K.Suresh**, Dr.M.RajasekharaBabu, presented a paper entitled “A Self-Adaptive Energy Efficient Mechanism to leverage the Internet of Things (IoT)” on 2016 IEEE International Conference on Innovations in information Embedded and Communication Systems (ICIIECS’16),Karpagam Engineering College, Coimbatore ,Tamilnadu, 17 and 18 March 2016.
 12. M.Rajesh,**K.Suresh**,etc.,Presented a paper entitled “Reducing Power Consumption at Computer Architectures to Improve the Performance” on International Conference on Advances in Computing Logic, Sciences and Technology - 2016, Anatalakshmi college of Engineering, Anatapuramu,AP, 11 March 2016.
 13. **K.Suresh**, Dr.M.RajasekharaBabu, presented a paper entitled “Energy –aware system Design Compiler methods for Multiprocessors and Voltage Scaling /Frequency” on IEEE International Conference on Control ,instrumentation ,Communication and Computational Technologies (ICCICCT-2014), NI University ,Nagercoil,Kanyakumari, Tamilnadu , 10 And 11 July 2014. PRINT ISBN: 978-1-4799-4191-9,DOI:[10.1109/ICCICCT.2014.6993121](https://doi.org/10.1109/ICCICCT.2014.6993121),PAGE NO: 1079 – 1082.
 14. **K.Suresh**, Dr.M.RajasekharaBabu, presented a paper entitled “Towards on High Performance Computing of Medical Image Computation based on Graphical Processing Units” on 15 IEEE International Conference on Advanced Computing(ICACT-2013), AITS Rajampet, 21 and 22 Sept 2013. (<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6710504>)
 15. O.Obulesh, Dr.A.Rama Mohan Reddy ,**K.Suresh**,R.Ramakanth Reddy presented paper on“Finding Frequent and Maximal Periodic Patterns in Spatiotemporal Databases for

Shifted Instances” on ICECIT 2012 SRIT ,Ananthapuramu 21-23 Dec. 2012. Published by Elsevier.

16. **K.Suresh**, M.SubbaRao, M.Sankara Prasanna Kumar and K.Ramana paper accepted in International conference on IACT-11,JNN College of Engineering ,Tamil Nadu. July 2011.
17. **K.Suresh** ,R.Madana Mohana ,Dr.A.Rama Mohan Reddy and Dr.A.Subramanyam paper accepted in International conference on computers and management(CAMAN 2011),published by *IEEE Conference*, and indexed by EI and ISTP ,at Wuhan ,*P.R.China*,978-1-4244-9281-7/11 ©2011 IEEE. (<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5778781>)
18. **K.Suresh**,B.Sreenivasreddy and M.Vijaykumar presented a paper entitled “Using Site Semantics and a Taxonomy to Enhance the Web Personalization using Web Mining Process” at MKCE College ,Chennai,2010.
19. D.Vasumathi and Dr A.Govardhan and **K.Suresh** presented a paper entitled "Effective Web Personalization Using Clustering " presented in IEEE International Conference on Intelligent Agent & Multi-Agent Systems (IAMA09), Chennai-India, Jul. 2009, IEEE Xplore, [http://ieeexplore.ieee.org/xpl/tocresult.jsp?sortType%3Dasc_p_Sequence%26filter%3DAND\(p_IS_Number%3A5228011\)&rowsPerPage=50&pageNumber=1&resultAction=ROWS_PER_PAGE](http://ieeexplore.ieee.org/xpl/tocresult.jsp?sortType%3Dasc_p_Sequence%26filter%3DAND(p_IS_Number%3A5228011)&rowsPerPage=50&pageNumber=1&resultAction=ROWS_PER_PAGE).DOI: 10.1109/IAMA.2009.5228085 (ISBN: 978-1-4244-4711-4)
20. D.Vasumathi and Dr A.Govardhan and K.Suresh presented a paper entitled "Web Intelligence: Applying Web Usage Mining Techniques to Discover Potential Browsing Problems of Users " presented in International Conference on ICWS-2009 at KLC Engineering College ,Vijayawada,A.P,11and 12 of January -2009 Published at Excel India Publishers, New Delhi with ISBN: 978-81-907839-9-6.
21. **K.Suresh** , P.Srinivas Rao and D.Vasumathi presented a paper entitled "Discovery of Semantic Web " presented in International Conference on Data Management ICWS-2009 at KLC Engineering College ,Vijayawada,A.P,11and 12 of January -2009 Published at *Excel India Publishers, New Delhi* with ISBN: 978-81-907839-9-6.
22. **K.Suresh** and D .Vasumathi presented a paper entitled "Web Mining :Integration of Semantic Web and Web Usage mining " accepted in International conference ICACT-2008 at GokarajuRangaraju Institute Of Engineering and Technology,Bachupally, Kukatpally,Hyderabad on 26 and 27th December-2008 .*Published by BSP publications*.
23. **K.Suresh** attended the 4th international conference on information security at JNTUHyderabad on 23-28 December 2009.

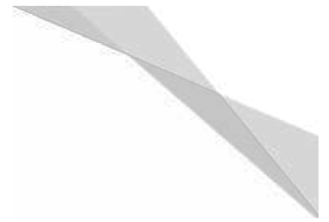
National Conferences / Seminars

1. **K.Suresh**, L.Gangadar, and M.Vidya presented a paper entitled “ Medical Image computing on GPU for High Performance computing” on Third National Conference on Emerging and

Innovative trends in Computer Science(NCEITCS-2014),Vasavi College of Engineering,Hyderabad,01-02 April 2014 published by HIKEY Media publications with ISBN:978-93-82570-30-1.

2. **K.Suresh**, O.Obulesu presented a paper entitled “ A Survey on Systematic Approach for Knowledge types in API Reference Documentation” on Two days National Conference on Advancements in Computing Methodologies(ACM14),ANNA University Regional Center ,Coimbatore,27th to 28th March 2014.
3. V.Satheyndrakumar**K.Suresh**, B.NagaMallewari and O.Obulesu presented a paper entitled “ DQSU:Design of Quality of Services Using Distributed Model” on National Conference on Emerging Trends in Business Management and Computing Technology, AITS,Autonomous,Rajmept,9 March 2014,Published by Pezzottaite Journals in international journal of Enterprenenurship and Business Environment perspectives” online ISSN:2279-0926,Volume:3,,Number:1, Jan to March 2014.
4. **K.Suresh**, M.sunilKumar,L.VeeraSubbareddy presented a paper entitled “ User Access Pattern mining improving FCM algorithm or clustering on web usage mining” on UGC Sponsored National Conference on Recent Trends in Web Sciences(NCRTWS-2014), Dravidian University,Kuppam,14-15 March 2014 published by Spectrum publications with ISBN:978-93-82829-99-7.
5. **K.Suresh**, Dr.M.RajasekharaBabu,O.Obulesu and K.Ramanaresentedpaper entitled “Review on High Performance Computing of Medical Image Computation based on Graphical ProcessingUnits” on National Conference on Advances in Computing and Technology (NCACT-2013), VIT University,Chennai,15th March 2013. Published at *CiiT Journal ,Coimbatore* ,ISBN 978-0-9888421-6-8.
6. G.venkatesh, Dr. N. Sambasiva Rao and **K.Suresh**presented a paper entitled “Routing Algorithms for Lifetime-Optimization in Complex Sensor- Networks” in National Conference on Networking and Information Technology(N2IT-2012) at AITS Rajampet ,kadapa ,AP held on 12th and 13th Oct. 2012.
7. **K.Suresh** ,K.Ramana presented a paper entitled “An Illustrative Study of Cloud Computing” in First National Conference on Recent Trends in Information Technology(NCRTIT2012) at RMK College of Engineering and Technology,Chennai ,held on 20th Feb.2012.
8. **K.Suresh** ,T.Harikrishna ,M.S.P.Kumar and K.Ramana presented a paper entitled "Approach of proactive tree recovery for overlay multicast” in National Conference on Network Technologies NCNT’09 at Sri Venkataswara College of Engineering&Technology,Chitoor,29th December-2009.
9. **K.Suresh**, M,SubbaRao and B.Srinivas Reddy presented a paper entitled "piracy of digital water marking relational databases" in National Conference on Network Technologies NCNT’09 at Sri Venkataswara College of Engineering&Technology,Chitoor,29th December-2009.


10. D.Vasumathi ,DrA.Govardhan and **K.Suresh** presented a paper National Conference on CSI College of Engineering at Nilagiri,ooty,tamilnadu,11and 12 of march-2009.
11. D.Vasumathi ,DrA.Govardhan and **K.Suresh** presented a paper National Conference at K.S .Rangaswamy Engineering college,trichungode,tamilnadu,20 feb.-2009.
12. **K.Suresh** ,R.Madana Mohana and Dr.A.Rama Mohan Reddy presented a paper in National Conference on INFORMATICS NIC-2008 at Narayana Engineering College ,Nellore,27th December-2008.
13. **K.Suresh** and B.Veera Reddy presented a paper entitled "data mining trends and developments " accepted in National Conference on INFORMATICS NIC-2008 at Narayana Engineering College ,Nellore, 27th December-2008.
14. **K.Suresh**P.Srinivas Rao and D.Vasumathi presented a paper in National Conference on INFORMATICS NIC-2008 at Narayana Engineering College ,Nellore, 27th December- 2008.
15. **K.Suresh**R.Madana Mohana and Dr.A.Rama Mohan Reddy presented a paper entitled "Data mining: Decision Trees for Crime Analysis" in national conference on trends in Information Technology at Trivandrum on 20 and 21st November 2008 Published at *Excel India publishers ,New Delhi* , ISBN:81-9071-963-5.
16. **K.Suresh** and D.Vasumathi presented a paper entitled "SEWuP: Using Site Semantics and a Taxonomy to Enhance the Web Personalization using Web mining Process" in national conference on trends in Information Technology at Trivandrum on 20 and 21st November 2008 Published at *Excel India publishers, New Delhi*withISBN: :81-9071-963-5.
17. **K.Suresh** presented a paper entitled "crime analysis based on the decision tree "First Prize in National Technical Paper meet event SANKETHIKA-08 at Sreenidhi institute of technology and sciences, Gatkeswar, Hyderabad on march 2008 .
18. **K.Suresh** and D.Vasumathi presented a paper entitled "data mining: Decision trees for crime analysis "Presented in National Conference RESPOGRAF-2008 for research scholars and Postgraduate Technical Festival on February 2008.
19. **K.Suresh** presented a paper entitled "data mining: Decision trees for crime analysis "Presented in National level student symposium Annamacharya Talent Meet-08 at Annamacharya institute of technology and sciences, Rajampet, kadapa (Dist.) at February 2008
20. **K.Suresh** and D.Vasumathi presented a Paper entitled as "crime data mining: Decision trees for crime analysis "in 2 days National Seminar on Data mining and its Application at Gudlavalleru Engineering College, Gudlavalleru, on 20 and 21 January 2008
21. **K.Suresh** and A.Subramanyam presented a paper entitled on "high performance computing" in Emerging Technologies and Applications ETA-06 at Sarasota University, Rajkot on 2006.



Workshops Attended

1. Attended AICTE Sponsored Two weeks Faculty Development Programme on “massive Parallel super computing using OpenCL framework on the Heterogeneous computing Platform” organized by Department of computer science and engineering from 06 to 18 January 2019 at Dan Bosco Institute of Technology ,Bengaluru-74.
2. Attended 5 days FDP workshop on “Artificial Intelligence and Machine learning applications in the emerging areas of computer science and information technology” 09th-13thDecember, 2019 ,NITK,Surathkal,Mangalore.
3. Attended One Week Faculty Development Program on "Scientific Computing Through MATLAB" from 2nd-6th December,2019 at SVEC,Tirupati.
4. Attended one week FDP workshop on “Block chain Technologies: Applications and Challenges” 19th-24thAugust, 2019 ,SVEC,Tirupati,AP.
5. Attended one week FDP workshop on “Nature Inspired Algorithms for Solving Complex Engg. Problems (FDP-NIASCEP’2018)” 23rd -27th April, 2018 ,GalgotiasUniversity, UP.
6. Attended Two day’s workshop on “Leveraging Internet of Things “, program from November 7and 8 ,2015 at Hotel Lalit, Bengaluru.
7. Attended Two day’s workshop on “Medical Internet of Things “, faulty development program from October 16 and October 17 ,2015 at Kristu Jayanti College, Bengaluru.
8. Attended Two Weeks International workshop on Short term course on “Enabling Internet of Things through Cloud and BigDataNetworking“, faulty development program from May 25to June 6 ,2015 at School of Information Technology, IIT Kharagpur , Kharagpur, West Bengal.
9. Attended Two days’ workshop on “IBM DB2 Academic Associate” Conducted by IBM Hyderabad at JNTU College of Engineering, Ananthapuramu during 19 to 20 December, 2014.
10. Attended Two Weeks workshop on Short term course on “Recent trends in Computer Architecture“, faulty development program from 12 to 25 November 2014 at Ragagiritech School of Engineering and Technology RSET, kakkand, Kerala.
11. Attended One day workshop on “Big Cloud Technologies “24 August. 2014 at AITS (Autonomous), Rajampet, AP.

12. Attended One day workshop on "IBM Mainframe Technologies for Cloud & Big Cloud Data Analytics" 19 July. 2014 at VIT University, TN.
13. Attended Two Weeks ISTE workshop on "Computer Networks" faculty development program Conducted by IIT Bombay from 28 May to 29 June and 30 June to 05 July, 2014 at AITS,
14. Rajampet, AP. (under National Mission on Education Through ICT(MHRD)).
15. Attended Two Weeks ISTE workshop on "Computer Programming" faculty development program Conducted by IIT Bombay from 20 May to 15 June and 16 June to 21 June, 2014 at AITS, Rajampet, AP. (under National Mission on Education Through ICT(MHRD)).
16. Attended Two days National workshop on "Advances in Service Oriented Architecture and Web services –Issues & Challenges "faculty development program from 1 to 2 march. 2014 at SVEC, Tirupati, AP.
17. Attended Two days National workshop on "BIG DATA: Technologies and Challenges" faculty development program from 23 to 24 Dec. 2013 at SVEC, Tirupati, AP.
18. Attended Two Weeks ISTE workshop on "Database Management Systems" faculty development program Conducted by IIT Bombay from 21 to 31 May. 2013 at SV University, Tirupati, AP.
19. Attended Two Days National workshop on "Multicore Programming" faculty development program from 22 to 23 Feb. 2013 at RCEW, Kurnool, A.P.
20. Attended one day workshop on "Cloud Computing" at AITS, Rajampet on 29 Jan 2013.
21. Attended one day workshop on "virtualization and Cloud Computing" at Sree vidhayanikethan Engineering college, Rangampet, Tirupati, 19 Oct 2012.
22. Attended two days' workshop on "Research Methodology " at SVU University ,Tirupati, conducted by CSE Department on Sept 29 and 30 2012.
23. Attended one day workshop on "Software Testing and Test Automation using QTP 9.2" at Sreevidhayanikethan Engineering College, Rangampet, Tirupati, March 09 2012.
24. Attended three day workshop on "Data mining and Web Intelligence" faulty development program from 16to 18 Feb. 2012 at SRM University, kattankulathur.Chennai.
25. Attended one day workshop on "Market-Oriented Cloud Computing and the Aneka platform" UGC Sponsored faulty development program at JNTUA College of Engineering, Anantapur 27 Dec 2011.
26. Attended 2days workshop on "Cloud Computing" at Sreevidhayanikethan Engineering college, Rangampet, Tirupati, Oct 9&10 2011.

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27. Attended one day Workshop on “Ontology tools” at Kongu Engineering College, tamilnadu, 3 September 2011.
 28. Attended AICTE sponsored 2 weeks staff development program on “Distributed program on Middleware” at MNM Jain Engineering college, Thorapakam, Chennai, 13may to31june 2010.
 29. Attended two day national seminar on "Datamining&Middleware technologies" at CBIT&VBIT at Produtur, 24 to 26 Feb. 2010.
 30. Attended three day national seminar on "Middleware technologies" at GNITS, Hyderabad, on Dec 3to6 Dec. 2009.
 31. Attended AICTE sponsored 2 weeks staff development program on “Artificial Intelligence in power systems” at AITS, Rajampet, 2009.
 32. Attended one day national workshop on "Wireless Communication" conducted by JNTU College of Engineering Hyderabad and Gov. Institute of electronics secunderabad under TEQIP,30 March 2009.
 33. Attended one day national workshop on "Advanced Computer Architecture” conducted JNTU College of Engineering Hyderabad with collaboration of IITM at JNTU Hyderabad, 28 march 2009.
 34. Attended one day national on "Emerging Technologies Data Mining and Data Warehousing" conducted by JNTU College of Engineering Hyderabad with collaboration of IIIT Hyderabad, at JNTU Hyderabad 26 March 2009.
 35. Attended one day national workshop on "Advanced Web Technologies" conducted JNTU College of Engineering Hyderabad, 25 March 2009.
 36. Attended two day national level workshop on "Resent Advances in Software Engineering" at RRS college of Engineering, Muthangi, Hyderabad 21&22 Nov.2008.
 37. Attended one day national seminar on “data warehousing and mining and web technologies through J2EE” Gokula Krishna college of Engineering, SULLURUPET on Oct 4th, 2008.
 38. Attended seven day’s training program for “IT Workshop” at JNT University Hyderabad on3to8 Oct. 2005.Participated as volunteer in south student zone research convention conducted by association of Indian universities, New Delhi and JNTU Hyderabad ,held during 2 to 4 April 2008 at JNTU Hyderabad.

Personal Information

1 Father’s Name : Late K.Sreeramulu

2 Date of Birth : 1st June 1984
3 Sex : Male
4 Marital Status : Married
5 Address for communication : K.Suresh
19-41-S5-1099
Jaya Nagar
Hotel Bliss back side
Tirupati
Chittoor(Dt.)-517501,AP,India.
6 Telephone Number : +91-9966322466
7 E-mail : sureshkallam@gmail.com
8 Passport Number : R1868212



(Dr.K.Suresh)

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address: Dr .L. Mary Gladence, Sathyabama Institute of Science & Technology, Chennai-119
2. Email(s) and contact number(s) : marygladence.it@sathyabama.ac.in
3. Institution : Sathyabama Institute of Science & Technology
4. Date of Birth : 27/11/1977
5. Gender (M/F/T) : F
6. Category Gen/SC/ST/OBC : OBC
7. Whether differently abled (Yes/No) : No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.E	1999	CSE	Madras University	69
2.	M.E	2006	CSE	Sathyabama University	78
3.	Ph.D	2017	CSE	Sathyabama Institute of Science & Technology	Degree Awarded

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award: Detection of Contiguous Patterns in Sequence Data Set, Dr.T.Ravi, Sathyabama Institute of Science & Technology, 2017

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Sathyabama Institute of Science & Technology	07/06/2006	Till Date	15600-39100
2	Associate Professor	Sathyabama Institute of Science & Technology	01/06/2020	Till Date	Rs. 37400-67000

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1	Maulana Abul Kalam Azad Excellence Award of Education	Shikshak Kalyan Foundation	2021
2	High Impact factor Journal Award	Sathyabama Institute of Science & Technology	2020

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Gladence, L.M., Anu, V.M., Revathy, S, Jeyanthi.P	Security management in smart home environment	Soft Computing	Vol.1	1-11	2021
2	Gladence, L.M., Anu, V.M., Rathna,R. Brumancia.E	Recommender system for home automation using IoT and artificial intelligence	Journal of Ambient Intelligence and Humanized Computing	Vol.1	1-13	2020
3	Brumancia, E., S. Justin Samuel, L. Mary Gladence, and Karunya Rathan	Hybrid data fusion model for restricted information using Dempster–Shafer and adaptive neuro-fuzzy inference (DSANFI) system	Soft Computing	Vol.8	2637-2644	2019
4	L.Mary Gladence, T.Ravi, Y.Mistica Dhas	An enhanced method for disease prediction using ordinal classification- APUOC	Journal of Pure and Applied Microbiology	Vol.9	1-5	2015

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1	IOT enabled smart wearable handy sanitizer dispenser	Mary Gladence.L, V.Maria Anu, E.Brumancia	202041028753 A	10.07.2020	Intellectual Property India	Published

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	Pattern Mining— FTISPAM Using Hybrid Genetic Algorithm	Mary Gladence L., Shanmuga Priya S., Shane Sam A., Pushparathi G., Brumancia E	Springer	2021
2	Healthcare Management- Predictive Analysis (IoT)	Mary Gladence.L, Maria Anu, Bevish Jinila.Y	John Wiley & Sons	2021

15. Any other Information (maximum 500 words): Presented and Published papers in National and International Conferences and Journals. Motivated the students to bring out there excellence and excel in their interests.

PROFORMA FOR BIO-DATA

1. Name and full correspondence address: Dr.J.Arunarasi, Assistant Professor, Electronics and Communication Engineering, Sri Sairam Engineering College, West Tambaram, Chennai - 50
2. Email(s) and contact number(s) : arasi_arun@yahoo.co.in, arunarasi.ece@sairam.edu.in
3. Institution: Sri Sairam Engineering College, West Tambaram, Chennai – 50.
4. Date of Birth: 27/06/1982
5. Gender (M/F/T) : Female
6. Category Gen/SC/ST/OBC: OBC
7. Whether differently abled (Yes/No): No
8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1	B.E	2003	Electronics and Communication Engineering	Thanthai Periyar Govt. Inst. of Technology, University of Madras	76%
2	M.E	2005	Applied Electronics	Thanthai Periyar Govt. Inst. of Technology, Anna University, Chennai.	72%
3	Ph.D	2014	Information & Communication Engineering	Anna University, Chennai.	--

9. Ph.D thesis title, Guide’s Name, Institute/Organization/University, Year of Award.
PERFORMANCE ENHANCEMENT AND ANALYSIS OF WAVELET BASED DS-CDMA OVER AWGN AND FADING CHANNELS

Guide Name: **Dr.P.Indumathi,**
Institute/Organization/University: **Anna University**
Year of Award: **2014**

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale (in Rs.)
1.	Lecturer	Vel Multimedia Engg. College, Chennai.	11-06-2005	07-10-2006	16,000
2.	Lecturer	SMK Fomra Inst. Of	01-12-2006	30-09-2008	18,000

		Technology, Chennai.			
3.	Lecturer	Magna College Of Engg, Chennai.	05-06-2009	30-06-2013	24,000
4.	Asst. Professor	Magna College Of Engg, Chennai.	01-07-2013	23-12-2014	27,000
5.	Asst. Professor	Veltech Multitech Dr.Rangarajandr.Sakunthala Engineering College, Chennai.	02-01-2015	28.04.2016	90,000
6.	Asst. Professor	Sri Sairam Engineering College, Chennai.	21.12.2018	Till date	

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
-	-	-	-

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	D.Logendran, J.Arunarasi	Experimental investigation on inherent properties of Hydroxybutandioic Acid treated Banana/Sisal fibers based hybrid composite	Materials Today: Proceedings		Accepted for publication in the month of March	2020
2	A.Karthikeyan, J.Arunarasi, A.Arulmary	A Neoteric FPGA Architecture with Memristor Based Interconnects for Efficient Power Consumption	Indian Journal of Science and Technology	Vol 9	1-9	2016
3	D.Priya, J.Arunarasi, A.Arulmary	Efficient energy and power consumption of 3-D Chip Multiprocessor with NUCA Architecture	Indian Journal of Science and Technology	Vol 9		2016
4	E.Kayalvizhi, A.Karthikeyan, J.Arunarasi,	An Optimal Energy Management System for Electric Vehicles using Firefly Optimization Algorithm based Dynamic EDF Scheduling	International Journal of Engineering and Technology	Vol 7		2015

5	J. Arunarasi and P.N. Jebarani Sargunar	Performance Comparison of DS- CDMA system using Wavelet based shrinkage methods	International Journal of Applied Engineering and Research	Volume 10	25773- 25788	2015
6	J. Arunarasi and P.Indumathi	Performance analysis of DS-CDMA system over AWGN and fading channels based on diversity scheme	Journal of Theoretical and Applied Information Technology	Vol. 52		2013
7	J. Arunarasi and P.Indumathi	Combined Wiener and Double Density Discrete Wavelet Filter Based Algorithm for Noise Reduction in CDMA Receiver	European Journal of Scientific Research	Vol. 53	269-279	2011
8	J. Arunarasi and P.Indumathi	A New Threshold Calculation Approach in the Performance Enhancement of Spread Spectrum System Using Double Density Discrete Wavelet Filter	Information and Communication Technologies	vol. 101	654-659	2010

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No	Award Date	Agency/Country	Status
1.	A Power generating kite system- Production of electricity from the wind.	Ms.G.Shanthakumari Mr.Senthur Beem EV Mr.Karthik Ravikumar Dr.E.Priya Dr.J.Arunarasi Ms.V.Sasikala Ms.C.N.Savithri Ms.R.Chitra Ms.S.Josephin Ida Litrizia Ms.M.Shabana Parveen Ms.B.Rajalakshmi Ms.S.Saranya	202041004000	-	India	Published

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
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15. Any other Information (maximum 500 words)

J.Arunarasi

Dr B.Sreedevi

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Citizenship: India

Research Interests

My research interests revolve around the problem of Medical Image Processing and, more recently, Stem Cells. Much of my recent work focuses on image segmentation isolation and prediction using Machine learning algorithms. I've compared various Machine Learning Algorithms and proposed a model for predicting Accuracy. My interest in multiscale, parts-based shape representations, and their common abstraction as hierarchical graphs, has motivated my research in inexact graph indexing and matching – key problems in object recognition, another broad focus of my research. My research has also explored many problems related to object recognition, including object tracking, vision-based navigation, content based image retrieval, language-vision integration, and image/model abstraction.

Education

- Ph.D., Computer Science and Engineering Anna University, Chennai, India, Aug 2017 - Sub-specialization: Machine Learning and Image Processing
- Master of Technology in Computer Science and Engineering, SRM University Chennai, India, April 2007
- Bachelor of Engineering in Computer Science and Engineering, University of Madras April 1999

Professional Experience

- **Head of the Department & Professor**, Department of Computer Science and Engineering, Sri Sai Ram Institute of Technology, Anna University. June 2010 to Present
- **Assistant Professor** Department of Computer Science and Engineering Rajalakshmi Engineering College, Thandalam, Chennai, India. July 2019 to May 2010
- **Lecturer** Department of Computer Science and Engineering, SRM University, Chennai, India. Jan 2001 to March 2007

Technical Skills

- Programming in C, Python, Java with JDBC, PHP
- Web Technologies: HTML, CSS, AJAX, Java Script, XML and Web Services
- Extensive knowledge of RDBMS like Oracle and MYSQL.
- Familiarity in OS like Fedora, Windows and Linux.
- Work Experience in IDE like Net beans and Eclipse.
- Application of Data Mining Algorithms with WEKA tool.

Achievements

- Development of Visible Light Communication for Smart Museums, Bangkok University, Centre of Research in Optoelectronics, Bangkok, Thailand-May 2019
- Longest Continuous Student Branch Counsellor 2019
- Academic Excellence Award 2018
- Best faculty advisor Award by Institution of Engineers (India) 2019
- “Uttama Acharya Puraskar”-A National Award for Impact Creators-Lions Club of Vijayawada

Certifications

Certified EMC Academic Associate in Data Science and Big Data Analytics by DELL EMC2 during March 2018.

NPTEL-IIT certification in Data Mining, Database Management Systems, Python for Machine Learning and Internet of Things.

Certified from AICTE NITTTR for Module 8-Institutional Management and Administrative Procedures

Certified ATL tinkerprenuer Mentor by AICTE

Professional Affiliations

Inventive Research Organization (IRO)	Feb 2017-Present
International Association of Engineers (IAENG)	Dec 2017-Present
Computer Society of India –Student Branch Counsellor	May 2011 – Present
Indian Society for Technical Education (ISTE)	May 2014 – Present
Institution of Engineers (India)(IEI)	Nov 2018- Present
National Digital Library (NDL)	May 2016 – Present
The Society of Innovative Educationalist and Research (FSIERP)	Mar 2019-Present

Books Published

- Internet Programming in Sahara Publications, India with ISBN 9789386636157 – 2017
- Book Chapter in “Machine Learning and Applications” on the topic Machine Learning based Credit Card based Fraud Detection(CNN Algorithm)
- Book Chapter in Advanced Aspects of Engineering Research Vol. 5 “Study on Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled”

Patents

- Mind Controlled Gaming for Differently Abled Indian Provisional (**Patent No201841016343**) in the field of Bio Medical Engineering – May 2018

- Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems(No. 202041031869-July 2020)
- VLC TRANSCIEVERS FOR SMART MUSEUMS(Patent No 202141029314)- June 2021

Grants

- Dr.B.Sreedevi, 2017, Department of Science and Technology, Government of India granted Rs.100000/- for the project titled “Mind Controlled Gaming for Differently Abled”.
- AICTE Sponsored STTP for Rs.300000/- in Predictive Modelling And Data Analysis Using Python Based Machine Learning Technique
- AICTE Sponsored ATAL FDP for Rs.93000/- in Data Sciences.

Publications

- **Sreedevi, B & Rajagopalan, SP, ‘Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques’, SCI, Annexure-I, ISSN: 1537-744X, Article: ID 405974**
- **Sreedevi. B ,’Disaster Management Using Blockchain and Cloud Services’ Journal of Green Engineering (JGE) 10 (10)**
- Dr.B.Sreedevi, P.Rayavel,” Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled’,AIP Publications,Scopus Indexed 2019.
- Sreedevi. B, Pachhiammal@Priya M, T.Ragunthar, ‘Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’, International Journal of Pure and Applied Mathematics,Vol.117,no.21,2017.
- **Dr.B.Sreedevi, Pachhiammal @Priya. M ,’Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’,IEEE Digital Library and Scopus Indexed,Publication Year: 2018, Page(s):6 – 11**
- Sreedevi, B ,’Analysis of Performance Metrics with Mesenchymal Stem cell Classification and Optimization Algorithms’ ,International Journal of Creative Research Thoughts (IJCRT) 5 (4), 2613-2618,2017
- Sreedevi, B & Rajagopalan, SP 2015, ‘Examine and Extraction of Optimized Stem Cells Using Image Processing’, Australian Journal of Basic and Applied Sciences, vol. 9, no. 10, Special 2015, pp. 1-5.
- Sreedevi. B, Abheek Kumar Srivastava, Ashwin Venkataraman,’ Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm’, International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 10, October 2013, ISSN: 2277 128X

- B.Sreedevi, Dr.S.P.Rajagopalan,' Analysing Stem Cells Using Transformed Stem Cell Algorithm ', International Journal of Applied Engineering Research (IJAER), Volume 10, Number 75 (2015) .
- Pradeep Kumar Sahoo, S. P. Rajagopalan, Sreedevi B, Pachhaimmal@Priya.M,' Web Content Mining Based Relevant Text Data Extraction', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.186-193.
- Pachhaimmal@Priya M, S.P.Rajagopalan, B.Sreedevi and Pradeep Kumar Sahoo,' Analysis methods and mining of brain functional connectivity for detection of brain disorders', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.258-262.

International & National Conferences

- **Dr.B.Sreedevi, 'Decentralized Application for managing the Disaster with Block chain, Cloud &IOT',International Conference on Computer and Information Sciences at University of PETRONAS, Malaysia during JULY 13-15,2021.**
- Dr.B.Sreedevi, P.Rayavel Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled', NATIONAL CONFERENCE ON MATHEMATICAL TECHNIQUES AND ITS APPLICATIONS (NCMTA – 2019) AT SRM UNIVERSITY FROM 11-12 JANUARY 2019.
- Dr.B.Sreedevi, Pachhaimmal @Priya. M ,'Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms ',International Conference on Communication, Computing & Internet of Things, held at Sri Sai Ram Engineering College, Chennai, India from 15-17 February 2018.
- Dr.B.Sreedevi,P.Rayavel, National Conference on Mathematical Techniques and its Applications(NCMTA) held at SRM University, Chennai, India from 11-12 January 2019.
- B.Sreedevi, Dr.S.P.Rajagopalan, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm 'International Conference On Computing And Information Technology (ICCIT '15)
- Sreedevi, B, Abeek Kumar Srivastava & Ashwin Venkataraman 2013,'Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm', Proceedings of the International Conference on Recent Trends in Computing(ICRTC 2013) ,4th &5th October 2013, pp. 32-27.
- Sreedevi, B & Rajagopalan, SP 2015, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm', Proceedings of the International Conference on Computing and Information Technology (ICCIT'15), 13th &14th August 2015, pp. 96-100.
- Sreedevi, B & Rajagopalan, SP 2015, 'Examine and Extraction of Optimized Stem Cells Using Image Processing', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'15' On 27th March, 2015.

- B.Sreedevi, E.Madhumitha, M.Kalaiselvi, 'Automatic Classification Of Intracardiac Tumor And Thrombi In Echocardiogram Using Adaptive Co-Segmentation', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'16'

Workshop & Conferences

- Coordinator for TEDX-SriSairamIT and Hackathon Events.
- Organized first International Conference on Computing and Information Technology (ICCIT'15) during 2015.
- Organized a Staff development programme on "Soft Computing with AI" sponsored by AICTE for Rs.700000/- during 2011.
- Organized National Conferences on "Information & Communication Engineering Systems"-NICE '11, NICE'17 and NICE'18.
- International Seminar on "Recent Trends in Computer Technology" by Dr.Emerson Raja Joseph, Multimedia University, Malaysia during 2014.
- National Event on" CSI Golden Tech Bridge Programme" by Computer Society of India during 2014.
- FDP on Python Programming by ICTACT of Tamilnadu during 2018.
- Attended a seminar on "Stem Cell and Regenerative Medicine" during Nov 2016 at Anna University
- Delivered a session in FDP on "Internet Programming" at Loyola ICAM Institute of Technology, Chennai
- Attended STTP in Pondicherry Engineering College during 2016 on "Recent trends in optimization techniques".
- Attended FDP on "Hadoop" conducted by ICTACT at Sri Sai Ram Institute of Technology during 2016.



Sri

SAI RAM INSTITUTE OF TECHNOLOGY

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - II

HOD ROOM

DOOR

MOBILE APPLICATION LAB / SECURITY LAB



CASE TOOL LAB / OS LAB / GRAPHICS LAB



DOOR

COMPILER LAB / INTERNET PROGRAMMING LAB



COMPUTER NETWORK LAB / GRID AND CLOUD COMPUTING LAB



DOOR

UPS ROOM

Network Rack



6 KV



10 KV



10 KV



6 KV



10 KV



DOOR





Sri

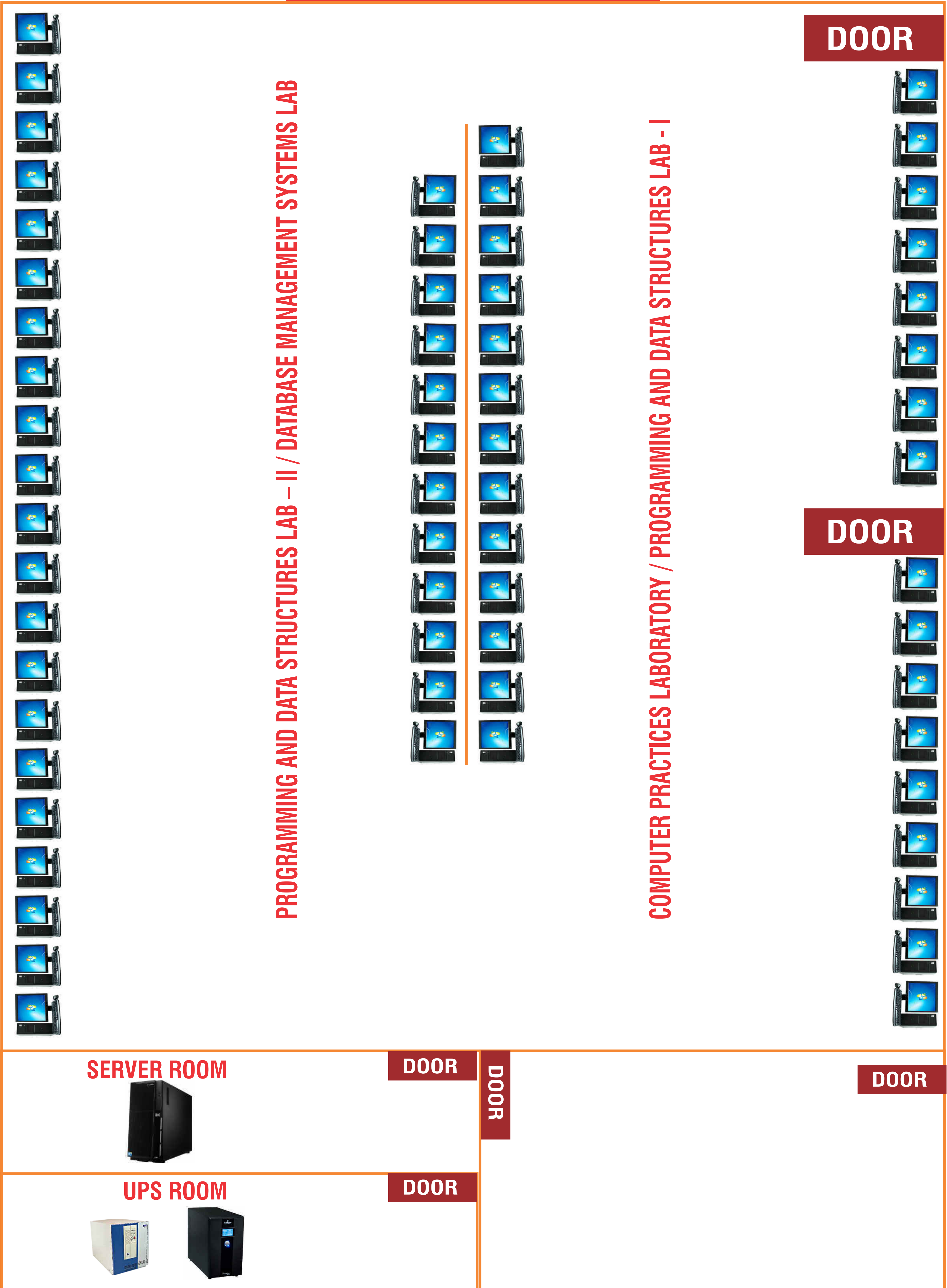
SAI RAM INSTITUTE OF TECHNOLOGY

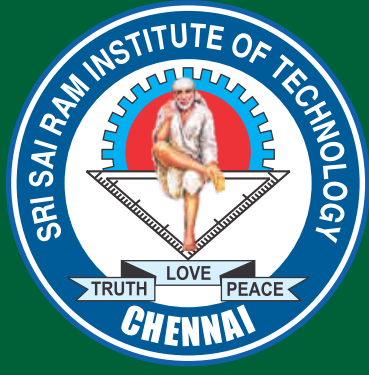
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - I





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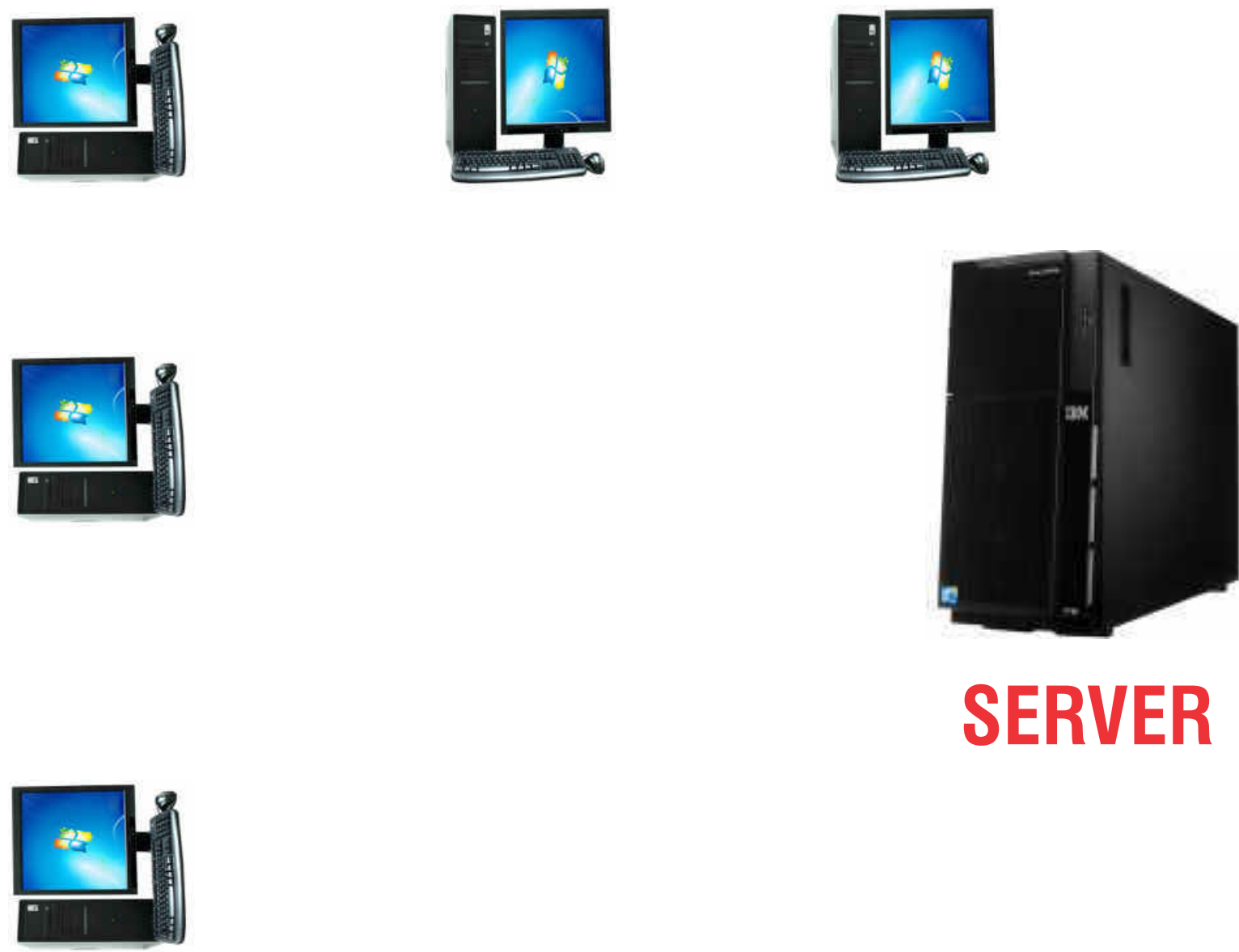
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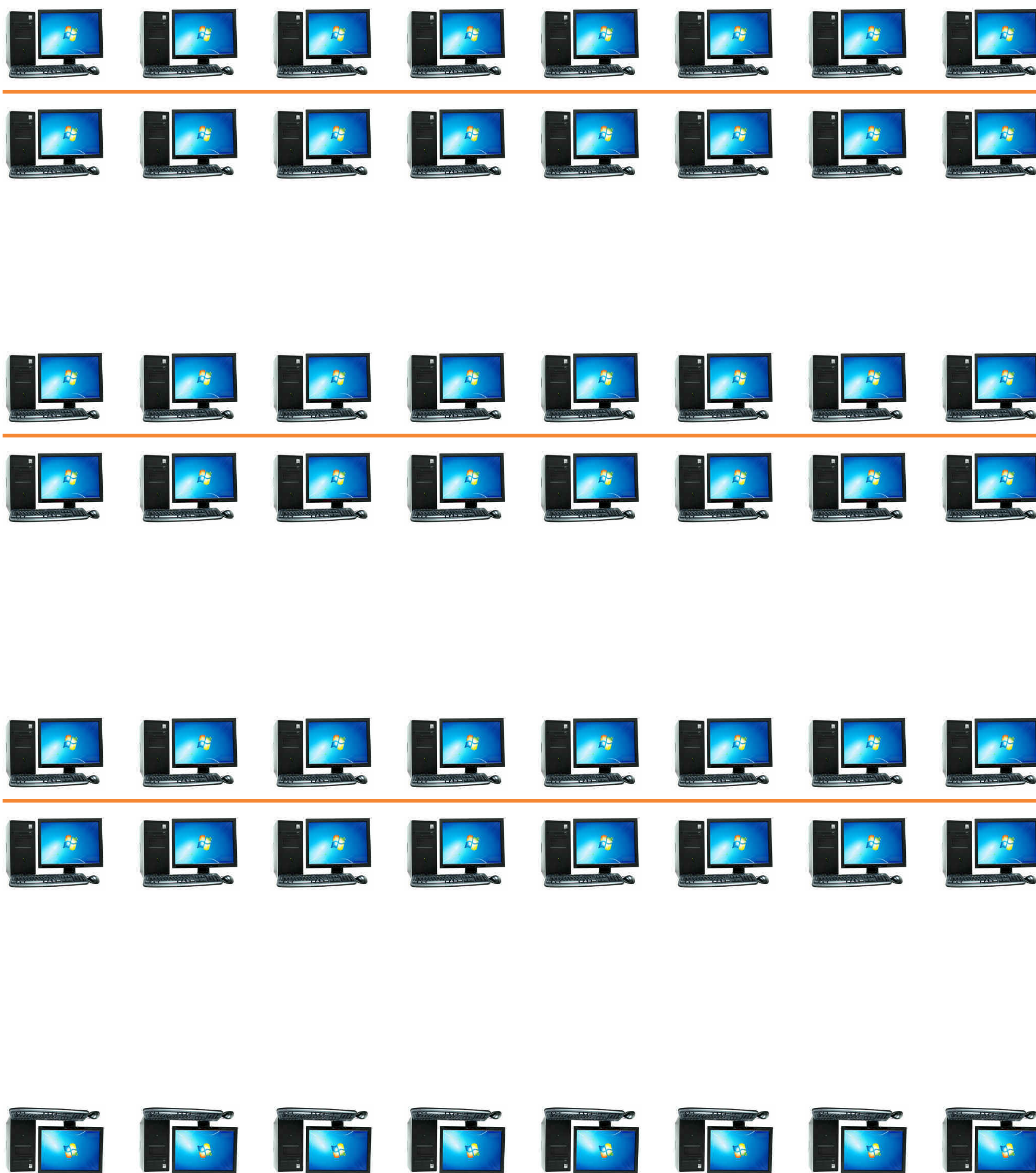
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - III



SERVER

COMMUNICATION SKILLS LAB



DOOR





To,

The Principal
Sri Sairam institute of technology
West Tambaram
Chennai-600044

We are pleased to know that Sri Sairam Institute of Technology is submitting a proposal with SERB (Scientific Engineering and Research board) under the title “**An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer’s Disease Progression and Intervention**” to facilitate Research and Development in the campus.

Vectra Technosoft Pvt. Ltd is herewith agreed to support this initiative by providing technical software requirements.

Sri Sairam Institute of Technology is solely responsible for the safety and insurance measures to safeguard against any loss incurred.

Vectra Technosoft Pvt Ltd.


Ranjit Sengupta
Director





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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
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Founder Chairman : M.J.F. Ln. Leo Muthu



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2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
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7. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research objectives.
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9. The University/ Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of the SERB.
10. University/ Institute agrees to undertake the financial and other management responsibilities of the project as per SERB guidelines.
11. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:




Signature


Head of the Institute

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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai



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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
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9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
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Seal of
Host Institute

Date:



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Head of the Institute

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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

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Seal of
Host Institute

Date:




Signature

Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

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7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

**Dr.K.PALANI KUMAR
PRINCIPAL**

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai

Undertaking by the Principal Investigator

To

The Secretary
SERB, New Delhi

Sir

I Dr K.Palanikumar hereby certify that the research proposal titled *An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention* submitted for possible funding by SERB, New Delhi is my original idea and has not been copied/taken verbatim from anyone or from any other sources. I further certify that this proposal has been checked for plagiarism through a plagiarism detection tool i.e. TURNITIN approved by the Institute and the contents are original and not copied/taken from any one or many other sources. I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grant Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulation, 2018. I also declare that there are no plagiarism charges established or pending against me in the last five years. If the funding agency notices any plagiarism or any other discrepancies in the above proposal of mine, I would abide by whatsoever action taken against me by SERB, as deemed necessary.



Signature of PI with date

Name / designation

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Sri SAI RAM INSTITUTE OF TECHNOLOGY

(Managed by Sapthagiri Educational Trust, Chennai - 17)

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Sai Leo Nagar, West Tambaram, Chennai. Tel : 044 - 2251 2111 . www.sairamit.edu.in

Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
5. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
6. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
7. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research objectives.
8. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
9. The University/ Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of the SERB.
10. University/ Institute agrees to undertake the financial and other management responsibilities of the project as per SERB guidelines.
11. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:




Signature

Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
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Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai

BIO-DATA

1. Name and full correspondence address

Dr.K.PALANIKUMAR

Professor & Principal

Sri Sai Ram Institute of Technology

West tambaram, Chennai- 600044

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E-mail : palanikumar@sairamit.edu.in

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Mobile: 91-9677053338

Ph : 91-44-22512444, 2251 2111 (O)

3. Institution

: **Sri Sai Ram Institute of Technology, Sai
Leo Nagar, Chennai – 600 044.**

4. Date of Birth

: 10-05-1968

5. Gender(M/F/T)

: Male

6. Category Gen/SC/ST/OBC

: OBC

7. Whether differently abled(Yes/No)

: NO

8. Academic Qualification (Undergraduate Onwards)

Sl no	Degree	Year	Subject	University/Institution	% of marks
1.	Post Ph.D work	2008	Machining of Composites	University of Aveiro, Portugal.	NA
2.	Ph.D	2004	Mechanical Engineering - Composites	Anna University	NA
3.	M.E	1996	Production Engineering	Annamalai University	84 University First Rank
4.	A.M.I.E	1994	Mechanical Engineering	Institution of Engineers (India).	58

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title: “Studies on machining characteristics of glass fiber reinforced polymer composites”

Guide: Dr. Karunamoorthy, L , College of Engineering Guindy , Anna University , Chennai

Year of Award: 2004

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Professor and Principal	Sri Sai Ram Institute of Technology	01-09-2008	Till Date	66,986 + DA + HRA 1,39,220/-
2	Professor and Principal	S.R.R. Engineering College	20-10-2004	13-06-2008	75, 000
3	Lecturer, Asst. Professor and Professor	Sathyabama University	20-06-1992	01-06-2004	40, 000

11. Professional Recognition/Award/Prize/Certificate, Fellowship received.

S.No	Name of Award	Awarding Agency	Year
1	World Top 2 % Scientist in Materials Engineering award	Stanford university	2021
2	Chairman	The Institution of Engineers (India)- Kanchepuram Local Centre	2020
3	National Executive Member	Indian Society for Technical Education	2020
4	Executive Committee Member	Computer Society of India - Kanchepuram Local Centre	2020
5	Teaching awards in best research work in Mechanical Engineering	Education Matters	2019
6	Best Faculty of the Year Published Research	Computer Society of India (CSI)	2019
7	President	MOE's Institution Innovation Council (IIC)	2018
8	Coordinator	DST Sponsored IEDC	2015
9	Fellow Member	The Institution of Engineers	2012
10	Chartered Engineer (India),	The Institution of Engineers	2012
11	Fellow Member	Indian Institution of Production Engineers (IIPE)	2004
12	Best Research work in Engineering and Technology	Indian Society for Technical Education	2019
13	Best Principal Award	The Society for Educational and Entrepreneurship Development (SEED)	2017
14	Publons peer review Awards - Top 1% of peer reviewers in Engineering.	Publons from Web of Science	2017

15	Certified Sentinel of Science Award Recipient - As one of the Top 10 percent of Researchers Contributing to the peer review of the field of Engineering	Publons from Web of Science	2016
16	Outstanding Reviewer Award	Elsevier Journal - Measurement In cooperation with International Measurement Confederation	2016
17	Maharashtra State National Award for Best Research work in Engineering and Technology	Indian Society for Technical Education	2014
18	Special paper presentation by National Board of Accreditation	National Board of Accreditation	2013
19	Best Academic Researcher Award	ASDF Global Awards, Techno Forum Group, Pondicherry, India.	2013
20	Best Researcher Award	Association of Scientist, Developer and Faculties	2012
21	Received Best paper award	YMCA University, Faridabad	2012
22	Best Faculty Award	Nehru Group of Institutions	2012
23	Best Teacher award	Sathyabama University	2008
24	Best Teacher award	Sathyabama University	2004
25	Best Technical paper in R&D	Journal of Non-Destructive Testing	2003
26	Best Teacher award	Sathyabama University	2002
27	Best Teacher award	Sathyabama Engineering college	1999
28	University First Rank in M.E (Production Engineering)	Annamalai University	1996
29	Certificate of Excellence in Annamalai University Golden Jubilee Exhibition	Annamalai University	1995

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No	Authors	Title	Name of Journal	Volume	Page	Year
134	Palani Kumar, K., Shadrach Jeya Sekaran, A., Dinesh, L., Hari Prasad, D., Deepak kumar, K.	Natural sisal fiber-based woven glass hybrid polymer composites for mono leaf spring: Experimental and numerical analysis	Progress in Rubber, Plastics and Recycling Technology	37(1)	32-48	2021
133	Palani Kumar, K., Keshavan, D., Natarajan, E., Deepak, M., Freitas, L.I.	Evaluation of mechanical properties of coconut flower cover fibre-reinforced polymer composites for industrial applications	Progress in Rubber, Plastics and Recycling Technology,	37(1)	3-18	2021
132	Velavan, K., Palanikumar, K., Natarajan, E., Lim, W.H.	Implications on the influence of mica on the mechanical properties of cast hybrid (Al+10%B4C+Mica) metal matrix composite	International Journal of Materials Research and Technology	10	99-109	2021
131	Chakravarthy, V.V.K., Rajmohan, T., Vijayan, D., Palanikumar, K.	Sustainable Drilling of Nano SiC Reinforced Al Matrix Composites Using MQL and Cryogenic Cooling for Achieving the Better Surface Integrity	Silicon,	In Press		2021
130	Siva, R., Valarmathi, T.N., Palanikumar, K.	Effects of magnesium carbonate concentration and lignin presence on properties of natural cellulosic Cissus quadrangularis fiber composites	International Journal of Biological Macromolecules	164	3611-3620	2020
129	Siva, R., Valarmathi, T.N., Palanikumar, K., Samrot, A.V.	Study on a Novel natural cellulosic fiber from Kigelia africana fruit: Characterization and analysis	Carbohydrate Polymers	244	116494	2020
128	Kalyan Chakaravarthy, V.V., Rajmohan, T., Vijayan, D., Palanikumar, K., Latha, B.	Sustainable drilling performance optimization for Nano SiC reinforced Al matrix composites	Materials and Manufacturing Processes,	35(12)	1304-1312	2020
127	Palanikumar, K., Mudhukrishnan, M., P., Soorya Prabha.	Technologies in additive manufacturing for fiber reinforced composite materials: a review	Current Opinion in Chemical Engineering	28	51-59	2020

126	Natarajan, E., Razif, M.R.M., Faudzi, A.A.M., Palanikumar , K.	Evaluation of a suitable material for soft actuator through experiments and FE simulations	International Journal of Manufacturing, Materials, and Mechanical Engineering	10(2)	64-76	2020
125	Valarmathi, T.N., Palanikumar , K., Sekar, S., Latha, B.	Investigation of the effect of process parameters on surface roughness in drilling of particleboard composite panels using adaptive neuro fuzzy inference system	Materials and Manufacturing Processes	35(4)	469-477	2020
124	Eaben Rajkumar, S., Palanikumar , K., Pitchandi, K., Latha, B.	Subsurface integrity studies on the drilling of Al/B4C/mica hybrid metal matrix composites	Materials and Manufacturing Processes	35(1)	52-60	2020
123	Mudhukrishnan, M., Hariharan, P., Palanikumar , K.	Measurement and analysis of thrust force and delamination in drilling glass fiber reinforced polypropylene composites using different drills	Measurement: Journal of the International Measurement Confederation	14	910-926	2020
122	Velavan, K., Palanikumar, K.	Analysis on sliding wear behavior of Al + B4 C + mica hybrid metal matrix composites	Materials Express	10(7)	986-997	2020
121	Mudhukrishnan, M., Hariharan, P., Palanikumar , K., Latha, B.	Optimization and sensitivity analysis of drilling parameters for sustainable machining of carbon fiber–reinforced polypropylene composites	Journal of Thermoplastic Composite Materials	32(11)	1485-1508	2019
120	Palanikumar , K., Eaben Rajkumar, S., Pitchandi, K.	Influence of Primary B4C Particles and Secondary Mica Particles on the Wear Performance of Al6061/B4C/Mica Hybrid Composites	Journal of Bio- and Tribo-Corrosion	5(3)	77-97	2019
119	Radhakrishnan, E., Kumaraswamidhas, L.A., Palanikumar, K., Muruganandam, D.	Strength and hardness studies of C44300 tube to AA7075-T651 tube plate threaded and unthreaded dissimilar joints fabricated by friction welding process	Journal of Materials Research and Technology	8(4)	3424-3433	2019
118	Rajkumar, S.E., Palanikumar, K., Kasiviswanathan,	Influence of mica particles as secondary reinforcement on the mechanical and wear	Materials Express	9(4)	299-309	2019

	P.	properties of al/b4c/mica composites				
117	Palanikumar, K., Subbiah, V.	Bio Caryota Fiber Reinforced Polymer Composites: Mechanical Properties and Vibration Behavior Analysis	Journal of Bionic Engineering	16(3)	480-491	2019
116	Padmavathi, K.R., Ramakrishnan, R., Palanikumar, K.	Wear properties of sicp and tio2p reinforced aluminium metal matrix composites	Indian Journal of Engineering and Materials Sciences	26(1)	51-58	2019
115	Das, S., Chandrasekaran, M., Samanta, S., Kayaroganam, P., Paulo Davim, J.	Fabrication and tribological study of AA6061 hybrid metal matrix composites reinforced with SiC/B4C nanoparticles	Industrial Lubrication and Tribology	71(1)	83-93	2019
114	NP Kumar, N Mani, K Palanikumar	Influence of Rutile Nano TiO2 on Thrust Force, Mechanical, Wear and Microstructural Behavior of Al-SiC Composites	Nanoscience and Nanotechnology Letters	11	1502-1512	2019
113	Ramya Devi, G., Palanikumar, K.	Analysis on drilling of woven glass fibre reinforced aluminium sandwich laminates	Journal of Materials Research and Technology	8(1)	1024-1035	2019
112	Raja, V.K.B., Palanikumar, K., Sai, A.S., Goud, B.V.	Pitting corrosion studies on Ti6Al4V alloy weldments in marine environment	Indian Journal of Geo-Marine Sciences	48(8)	1179-1182	2019
111	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Experimental investigation and analysis on the wear properties of glass fiber and CNT reinforced hybrid polymer composites	Science and Engineering of Composite materials	25(5)	963-974	2018
110	Anand, G., Alagumurthi, N., Palanikumar, K., Venkateshwaran, N., Elansezhain, R.	Influence of drilling process parameters on hybrid vinyl ester composite	Materials and Manufacturing Processes	35(12)	1299-1305	2018
109	Devi, G.R., Palanikumar, K.	Mechanical Properties Evaluation of Unidirectional Glass Fibre Reinforced Aluminium Sandwich Laminate	Silicon	10(5)	2329-2340	2018

108	Natrayan, L., Senthil Kumar, M., Palanikumar, K.	Optimization of squeeze cast process parameters on mechanical properties of Al ₂ O ₃ /SiC reinforced hybrid metal matrix composites using taguchi technique	Materials Research Express	5(6)	66516	2018
107	R. Anbusagar, N.R., Palanikumar, K.	Nanoclay Addition and Core Materials Effect on Impact and Damage Tolerance Capability of Glass Fiber Skin Sandwich Laminates	Silicon	10(3)	769-779	2018
106	Selvamani, S.T., Vigneshwar, M., Palanikumar, K., Jayaperumal, D.	The corrosion behavior of fully deformed zone of friction welded low chromium plain carbon steel joints in optimized condition	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(5)	246	2018
105	Anand, G., Alagumurthi, N., Elansezhian, R., Palanikumar, K., Venkateshwaran, N.	Investigation of drilling parameters on hybrid polymer composites using grey relational analysis, regression, fuzzy logic, and ANN models	Journal of the Brazilian Society of Mechanical Sciences and Engineering	40(4)	214-234	2018
104	Umanath, K., Palanikumar, K.	Evaluation of mechanical performance of friction welded AISI304L grade stainless steel joints	International Journal of Heavy Vehicle Systems	25(3-4)	419-429	2018
103	Kathirvel, M., Kumar, K.P., Diaz, P.M.	Experimental analysis on surface roughness in turning hybrid metal matrix (6061Al+SiC+Gr) composites	Mechanics and Mechanical Engineering	22(1)	341-356	2018
102	Selvamani, S.T., Premkumar, S., Vigneshwar, M., Hariprasath, P., Palanikumar, K.	Influence of carbon nano tubes on mechanical, metallurgical and tribological behavior of magnesium nanocomposites	Journal of Magnesium and Alloys	5(3)	326-335	2017
101	Mudhukrishnan, M., Hariharan, P., Palanikumar, K., Latha, B.	Tool materials influence on surface roughness and oversize in machining glass fiber reinforced polypropylene (GFR-PP) composites	Materials and Manufacturing Processes	32(9)	988-997	2017
100	Rajmohan, T., Sathishkumar, S.D., Palanikumar, K.	Effect of a nanoparticle-filled lubricant in turning of AISI 316L stainless steel (SS)	Particulate Science and Technology	35(2)	201-208	2017

99	Palani Kumar, K., Shadrach Jeya Sekaran, A., Pitchandi, K.	Investigation on mechanical properties of woven alovera/sisal/kenaf fibres and their hybrid composites	Bulletin of Materials Science	40(1)	117-128	2017
98	Srinivasan, T., Palanikumar, K., Rajagopal, K., Latha, B.	Optimization of delamination factor in drilling GFR–polypropylene composites	Materials and Manufacturing Processes	32(2)	226-233	2017
97	Ramesh, M., Palanikumar, K., Reddy, K.H.	Plant fibre based bio-composites: Sustainable and renewable green materials	Renewable and Sustainable Energy Reviews	79	558-584	2017
96	Ramesh, M., Palanikumar, K., Hemachandra Reddy, K.	Evaluation of Mechanical and Interfacial Properties of Sisal/Jute/Glass Hybrid Fiber Reinforced Polymer Composites	Transactions of the Indian Institute of Metals	69(10)	1851-1859	2016
95	Jeyasekaran, A.S., Kumar, K.P., Rajarajan, S.	Numerical and experimental analysis on tensile properties of banana and glass fibers reinforced epoxy composites	Sadhana - Academy Proceedings in Engineering Sciences	41(11)	1357-1367	2016
94	Palanikumar, K., Ramesh, M., Hemachandra Reddy, K.	Experimental investigation on the mechanical properties of green hybrid sisal and glass fiber reinforced polymer composites	Journal of Natural Fibers	13(3)	321-331	2016
93	Dhandapani, S., Rajmohan, T., Palanikumar, K., Charan, M.	Synthesis and characterization of dual particle (MWCT+B4C) reinforced sintered hybrid aluminum matrix composites	Particulate Science and Technology	34(3)	255-262	2016
92	Palanikumar, K., Srinivasan, T., Rajagopal, K., Latha, B.	Thrust Force Analysis in Drilling Glass Fiber Reinforced/Polypropylene (GFR/PP) Composites	Materials and Manufacturing Processes	31(5)	581-586	2016
91	Ramesh, M., Palanikumar, K., Reddy, K.H.	Influence of fiber orientation and fiber content on properties of sisal-jute-glass fiber-reinforced polyester composites	Journal of Applied Polymer Science	133(6)	42968	2016
90	Palanikumar, K., Valarmathi, T.N.	Experimental Investigation and Analysis on Thrust Force in Drilling of Wood Composite Medium Density Fiberboard Panels	Experimental Techniques	40(1)	391-400	2016

89	Rajmohan, T., Palanikumar, K., Davim, J.P., Premnath, A.A.	Modeling and optimization in tribological parameters of polyether ether ketone matrix composites using D-optimal design	Journal of Thermoplastic Composite Materials	29(2)	161-188	2016
88	Palanikumar, K., Rajasekaran, T., Latha, B.	Fuzzy rule-based modeling of machining parameters for surface roughness in turning carbon particle-reinforced polyamide	Journal of Thermoplastic Composite Materials	28(10)	1387-1405	2015
87	Venkatesan, M., Palanikumar, K., Rajendra Boopathy, S.	Comparison of the Wear Properties of Polymer Composites Having CNT With and Without Glass Fiber Reinforcement	Transactions of the Indian Institute of Metals	68	91-97	2015
86	Anbusagar, N.R.R., Palanikumar, K., Giridharan, P.K.	Study of sandwich effect on nanoclay modified polyester resin GFR face sheet laminates	Composite Structures	125	336-342	2015
85	Tamilarasan, U., Karunamoorthy, L., Palanikumar, K.	Mechanical properties evaluation of the carbon fibre reinforced aluminium sandwich composites	Materials Research	18(5)	1029-1037	2015
84	Shadrach Jeya Sekaran, A., Palani Kumar, K., Pitchandi, K.	Evaluation on mechanical properties of woven aloevera and sisal fibre hybrid reinforced epoxy composites	Bulletin of Materials Science	38(5)	1183-1193	2015
83	Bosco, M.A.J., Palanikumar, K., Prasad, B.D., Velayudham, A.	Analysis on influence of machining parameters on thrust force in drilling GFRP-armor steel sandwich composites	Journal of Composite Materials	49(3)	1539-1551	2015
82	Selvamani, S.T., Palanikumar, K., Umanath, K., Jayaperumal, D.	Analysis of friction welding parameters on the mechanical metallurgical and chemical properties of AISI 1035 steel joints	Materials and Design	65	652-661	2015
81	Rajmohan, T., Palanikumar, K., Arumugam, S.	Synthesis and characterization of sintered hybrid aluminium matrix composites reinforced with nanocopper oxide particles and microsilicon carbide particles	Composites Part B: Engineering	59	43-49	2014
80	Krishna Sastry, K.V., Seshagiri Rao, V., Palanikumar,	Assessment of process parameters influencing delamination factor on the	Indian Journal of Science and Technology	7(2)	142-150	2014

	K., Dhanalakshmi, R., Kuravi, A.	drilling of CFRC composite material with TiN coated carbide tool				
79	Kumar, K.P., Sekaran, A.S.J.	Some natural fibers used in polymer composites and their extraction processes: A review	Journal of Reinforced Plastics and Composites	33(20)	1879-1892	2014
78	Palanikumar, K., Muniaraj, A.	Experimental investigation and analysis of thrust force in drilling cast hybrid metal matrix (Al-15%SiC-4%graphite) composites	Measurement: Journal of the International Measurement Confederation	53	240-250	2014
77	Selvamani, S.T., Palanikumar, K.	Optimizing the friction welding parameters to attain maximum tensile strength in AISI 1035 grade carbon steel rods	Measurement: Journal of the International Measurement Confederation	53	Oct-21	2014
76	Elango, G., Raghunath, B.K., Palanikumar, K.	Experimental analysis of the wear behavior of hybrid metal-matrix composites of LM25Al with equal volumes of SiC + TiO ₂	Materiali in Tehnologije	48(6)	803-810	2014
75	Rathika, S., Palanikumar, K., Raghavan, P.S.	Physical performance of sisal-PALF-banana/glass fiber reinforced polyester hybrid composites	Asian Journal of Chemistry	26(14)	4157-4161	2014
74	Anbusagar, N.R.R., Giridharan, P.K., Palanikumar, K.	Effect of nanomodified polyester resin on hybrid sandwich laminates	Materials and Design	54	507-514	2014
73	Elango, G., Raghunath, B.K., Palanikumar, K., Thamizhmaran, K.	Sliding wear of LM25 aluminium alloy with 7.5% SiC+2.5% TiO ₂ and 2.5% SiC+7.5% TiO ₂ hybrid composites	Journal of Composite Materials	48(18)	2227-2236	2014
72	Diaz, P.M., Austin, N., Maniysundar, K., Manoj Abraham, D.S., Palanikumar, K.	Simulation analysis of combustion parameters and emission characteristics of CNG fueled HCCI engine	Advances in Mechanical Engineering	2(35)	241-249	2013
71	Jayabal, S., Velumani, S., Navaneethakrishnan, P., Palanikumar, K.	Mechanical and machinability behaviors of woven coir fiber-reinforced polyester composite	Fibers and Polymers	14(9)	1505-1514	2013
70	Rajamurugan, T.V., Shanmugam, K., Palanikumar, K.	Mathematical model for predicting thrust force in drilling of GFRP composites by multifaceted drill	Indian Journal of Science and Technology	6(10)	5316-5324	2013

69	Raj, A.M., Das, S.L., Palanikumarr, K.	Influence of drill geometry on surface roughness in drilling of al/sic/gr hybrid metal matrix composite	Indian Journal of Science and Technology	6(7)	5002-5007	2013
68	Valarmathi, T.N., Palanikumar, K.	Studies on delamination in drilling of particleboard (PB) wood composite panels	Proceedings of the Indian National Science Academy	79(3)	339-345	2013
67	Umanath, K., Palanikumar, K., Selvamani, S.T.	Analysis of dry sliding wear behaviour of Al6061/SiC/Al2O3 hybrid metal matrix composites	Composites Part B: Engineering	53	159-168	2013
66	Rajmohan, T., Palanikumar, K., Prakash, S.	Grey-fuzzy algorithm to optimise machining parameters in drilling of hybrid metal matrix composites	Composites Part B: Engineering	50	297-308	2013
65	Gandhi, R.A., Kumar, K.P., Ragnath, B.K., Kanagaraj, D.	Role of nano clay in improving wear properties of polypropylene in dry sliding condition	Asian Journal of Chemistry	25	S139-S142	2013
64	Ramesh, M., Palanikumar, K., Reddy, K.H.	Mechanical property evaluation of sisal-jute-glass fiber reinforced polyester composites	Composites Part B: Engineering	48	19	2013
63	Valarmathi, T.N., Palanikumar, K., Sekar, S.	Parametric analysis on delamination in drilling of wood composite panels	Indian Journal of Science and Technology	6(4)	4347-4356	2013
62	Rajmohan, T., Palanikumar, K.	Modeling and analysis of performances in drilling hybrid metal matrix composites using D-optimal design	International Journal of Advanced Manufacturing Technology	64(9-12)	1249-1261	2013
61	Rajmohan, T., Palanikumar, K.	Application of the central composite design in optimization of machining parameters in drilling hybrid metal matrix composites	Measurement: Journal of the International Measurement Confederation	46(4)	1470-1481	2013
60	Rajmohan, T., Palanikumar, K., Ranganathan, S.	Evaluation of mechanical and wear properties of hybrid aluminium matrix composites	Transactions of Nonferrous Metals Society of China (English Edition)	23(9)	2509-2517	2013

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58	Rajamurugan, T.V., Shanmugam, K., Palanikumar, K.	Analysis of delamination in drilling glass fiber reinforced polyester composites	Materials and Design	45	80-87	2013
57	Ashok Gandhi, R., Palanikumar, K., Rangunath, B.K., Davim, J.P.	Role of carbon nanotubes (CNTs) in improving wear properties of polypropylene (PP) in dry sliding condition	Materials and Design	48	52-57	2013
56	Rajmohan, T., Palanikumar, K., Davim, J.P.	Analysis of Surface Integrity in Drilling Metal Matrix and Hybrid Metal Matrix Composites	Journal of Materials Science and Technology	28(8)	761-768	2012
55	Kanagarajan, D., Palanikumar, K., Karthikeyan, R.	Effect of Electrical Discharge Machining on strength and reliability of WC-30%Co composite	Materials and Design	39	469-474	2012
54	Prakash, S., Palanikumar, K., Krishnamoorthy, A.	Thrust force evaluation in drilling medium density fibre (MDF) panels using design of experiments	International Journal of Manufacturing Technology and Management	25(1-3)	95-112	2012
53	Rajmohan, T., Palanikumar, K., Kathirvel, M.	Optimization of machining parameters in drilling hybrid aluminium metal matrix composites	Transactions of Nonferrous Metals Society of China (English Edition)	22(6)	1286-1297	2012
52	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Measurement and analysis of surface roughness in turning of aerospace titanium alloy (gr5)	Measurement: Journal of the International Measurement Confederation	45(5)	1266-1276	2012
51	Krishnamoorthy, A., Rajendra Boopathy, S., Palanikumar, K., Paulo Davim, J.	Application of grey fuzzy logic for the optimization of drilling parameters for CFRP composites with multiple performance characteristics	Measurement: Journal of the International Measurement Confederation	45(5)	1286-1296	2012
50	Rajmohan, T., Palanikumar, K.	Optimization of machining parameters for multi-performance characteristics in drilling hybrid metal matrix composites	Journal of Composite Materials	46(7)	869-878	2012

49	Rajasekaran, T., Palanikumar, K., Vinayagam, B.K.	Experimental investigation and analysis in turning of CFRP composites	Journal of Composite Materials	46(7)	809-821	2012
48	Rajmohan, T., Palanikumar, K.	Optimization of machining parameters for surface roughness and burr height in drilling hybrid composites	Materials and Manufacturing Processes	27(3)	320-328	2012
47	Palanikumar, K., Latha, B., Senthilkumar, V.S., Davim, J.P.	Analysis on drilling of glass fiber-reinforced polymer (GFRP) composites using grey relational analysis	Materials and Manufacturing Processes	27(3)	297-305	2012
46	Somasundaram, G., Rajendra Boopathy, S., Palanikumar, K.	Modeling and analysis of roundness error in friction drilling of aluminum silicon carbide metal matrix composite	Journal of Composite Materials	46(2)	169-181	2012
45	Palanikumar, K.	Experimental investigation and optimisation in drilling of GFRP composites	Measurement: Journal of the International Measurement Confederation	44(10)	2138-2148	2011
44	Somasundaram, G., Rajendra Boopathy, S., Palanikumar, K.	Experimental investigation on roundness error in friction drilling and mechanical properties of Al/SiCp-MMC composites	Mecanique et Industries	12(6)	445-457	2011
43	Ezilarasan, C., Senthil Kumar, V.S., Velayudham, A., Palanikumar, K.	Modeling and analysis of surface roughness on machining of Nimonic C-263 alloy by PVD coated carbide insert	Transactions of Nonferrous Metals Society of China (English Edition)	21(9)	1986-1994	2011
42	Prakash, S., Palanikumar, K.	Modeling for prediction of surface roughness in drilling MDF panels using response surface methodology	Journal of Composite Materials	45(16)	1639-1646	2011
41	Rajmohan, T., Palanikumar, K.	Experimental investigation and analysis of thrust force in drilling hybrid metal matrix composites by coated carbide drills	Materials and Manufacturing Processes	26(8)	961-968	2011
40	Raghunath, B.K., Raghukandan, K., Karthikeyan, R., (...), Pillai, U.T.S., Gandhi, R.A.	Flow stress modeling of AZ91 magnesium alloys at elevated temperature	Journal of Alloys and Compounds	509(15)	4992-4998	2011

39	Krishnamoorthy, A., Rajendra Boopathy, S., Palanikumar, K.	Delamination prediction in drilling of CFRP composites using artificial neural network	Journal of Engineering Science and Technology	6(2)	191-203	2011
38	Latha, B., Senthilkumar, V.S., Palanikumar, K.	Modeling and optimization of process parameters for delamination in drilling glass fiber reinforced plastic (GFRP) composites	Machining Science and Technology	15(2)	172-191	2011
37	Latha, B., Senthilkumar, V.S., Palanikumar, K.	Influence of drill geometry on thrust force in drilling GFRP composites	Journal of Reinforced Plastics and Composites	30(6)	463-472	2011
36	Palanikumar, K., Shanmugam, K., Davim, J.P.	Analysis and optimisation of cutting parameters for surface roughness in machining Al/SiC particulate composites by PCD tool	International Journal of Materials and Product Technology	37(1-2)	117-128	2010
35	Palanikumar, K.	Modeling and analysis of delamination factor and surface roughness in drilling GFRP composites	Materials and Manufacturing Processes	25(10)	1059-1067	2010
34	Hussain, S.A., Pandurangadu, V., Palanikumar, K.	Surface roughness analysis in machining of GFRP composites by carbide tool (K20)	European Journal of Scientific Research	41(1)	84-98	2010
33	Palanikumar, K., Prakash, S., Manoharan, N.	Experimental investigation and analysis on delamination in drilling of wood composite medium density fiber boards	Materials and Manufacturing Processes	24(12)	1341-1348	2009
32	Prakash, S., Palanikumar, K., Manoharan, N.	Optimization of delamination factor in drilling medium-density fiberboards (MDF) using desirability-based approach	International Journal of Advanced Manufacturing Technology	45(13)	370-381	2009
31	Krishnamoorthy, A., Boopathy, S.R., Palanikumar, K.	Delamination analysis in drilling of CFRP composites using response surface methodology	Journal of Composite Materials	43(24)	2885-2902	2009
30	Palanikumar, K.	Surface roughness model for machining glass fiber reinforced plastics by pcd tool using fuzzy logics	Journal of Reinforced Plastics and Composites	28(18)	2273-2286	2009
29	Sarma, P.M.M.S., Karunamoorthy, L., Palanikumar, K.	Surface roughness parameters evaluation in machining GFRP composites by PCD tool using digital image	Journal of Reinforced Plastics and Composites	28(13)	1567-1585	2009

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28	Srinivasan, V., Asaithambi, B., Ganesan, G., Karthikeyan, R., Palanikumar, K.	Wear mechanism of glass fiber reinforced epoxy composites under dry sliding using fuzzy clustering technique	Journal of Reinforced Plastics and Composites	28(11)	1349-1358	2009
27	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Davim, J.P.	Application of goal programming technique for electro discharge machining (EDM) characteristics of cemented carbide (WC/Co)	International Journal of Materials and Product Technology	35(12)	216-227	2009
26	Palanikumar, K., Latha, B., Senthilkumar, V.S., Karthikeyan, R.	Multiple performance Optimization in machining of GFRP composites by a pcd tool using Non-dominated Sorting Genetic Algorithm (NSGA-II)	Metals and Materials International	15(2)	249-258	2009
25	Ramesh, S., Karunamoorthy, L., Senthilkumar, V.S., Palanikumar, K.	Experimental study on machining of titanium alloy (Ti64) by CVD and PVD coated carbide inserts	International Journal of Manufacturing Technology and Management	17(4)	337-385	2009
24	Palanikumar, K., Davim, J.P.	Assessment of some factors influencing tool wear on the machining of glass fibre-reinforced plastics by coated cemented carbide tools	Journal of Materials Processing Technology	209(1)	511-519	2009
23	Kalaichelvi, V., Sivakumar, D., Karthikeyan, R., Palanikumar, K.	Prediction of the flow stress of 6061 Al-15% SiC - MMC composites using adaptive network based fuzzy inference system	Materials and Design	30(4)	1362-1370	2009
22	Palanikumar, K., Campos Rubio, J., Abrao, A.M., Esteves Correia, A., Davim, J.P.	Influence of drill point angle in high speed drilling of glass fiber reinforced plastics	Journal of Composite Materials	42(24)	2585-2597	2008
21	Palanikumar, K., Muthukrishnan, N., Hariprasad, K.S.	Surface roughness parameters optimization in machining A356/SiC/20p metal matrix composites by PCD tool using response surface methodology and desirability function	Machining Science and Technology	12(4)	529-545	2008

20	Palanikumar, K., Prakash, S., Shanmugam, K.	Evaluation of delamination in drilling GFRP composites	Materials and Manufacturing Processes	23(8)	858-864	2008
19	Palanikumar, K., Rubio, J.C., Abrao, A., Esteves, A., Davim, J.P.	Statistical analysis of delamination in drilling Glass Fiber-Reinforced Plastics (GFRP)	Journal of Reinforced Plastics and Composites	27(15)	165-1623	2008
18	Palanikumar, K., Karthikeyan, R.	Modeling of machining parameters to predict surface roughness in machining Al/SiC particulate composites by carbide insert	Multidiscipline Modeling in Materials and Structures	4(4)	345-358	2008
17	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Sivaraj, P.	Influence of process parameters on electric discharge machining of WC/30%Co composites	Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	222(7)	807-815	2008
16	Palanikumar, K., Mata, F., Davim, J.P.	Analysis of surface roughness parameters in turning of FRP tubes by PCD tool	Journal of Materials Processing Technology	204(1-3)	469-474	2008
15	Palanikumar, K., Sivakumar, G., Paulo Davim, J.	Development of an empirical model for surface roughness in the machining of Al/SiC particulate composites by PCD tool	International Journal of Materials and Product Technology	32(2-3)	318-332	2008
14	Sarma, P.M.M.S., Karunamoorthy, L., Palanikumar, K.	Modeling and analysis of cutting force in turning of GFRP composites by CBN tools	Journal of Reinforced Plastics and Composites	27(7)	711-723	2008
13	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Fuzzy modeling and analysis of machining parameters in machining titanium alloy	Materials and Manufacturing Processes	23(4)	439-447	2008
12	Kanagarajan, D., Karthikeyan, R., Palanikumar, K., Davim, J.P.	Optimization of electrical discharge machining characteristics of WC/Co composites using non-dominated sorting genetic algorithm (NSGA-II)	International Journal of Advanced Manufacturing Technology	36(11)	1124-1132	2008
11	Sathianarayanan, D., Karunamoorthy, L., Srinivasan, J., Kandasami,	Chatter suppression in boring operation using magnetorheological fluid damper	Materials and Manufacturing Processes	23(4)	329-335	2008

	G.S., Palanikumar, K.					
10	Palanikumar, K.	Application of Taguchi and response surface methodologies for surface roughness in machining glass fiber reinforced plastics by PCD tooling	International Journal of Advanced Manufacturing Technology	36(1-2)	19-27	2008
9	Ramesh, S., Karunamoorthy, L., Palanikumar, K.	Surface roughness analysis in machining of titanium alloy	Materials and Manufacturing Processes	23(2)	174-181	2008
8	Srinivasan, V., Maheshkumar, K.V., Karthikeyan, R., Palanikumar, K.	Application of probabilistic neural network for the development of wear mechanism map for glass fiber reinforced plastics	Journal of Reinforced Plastics and Composites	26(18)	1893-1906	2007
7	Palanikumar, K.	Modeling and analysis for surface roughness in machining glass fibre reinforced plastics using response surface methodology	Materials and Design	28(10)	2611-2618	2007
6	Palanikumar, K., Paulo Davim, J.	Mathematical model to predict tool wear on the machining of glass fibre reinforced plastic composites	Materials and Design	28(7)	2008-2014	2007
5	Palanikumar, K., Karthikeyan, R.	Assessment of factors influencing surface roughness on the machining of Al/SiC particulate composites	Materials and Design	28(5)	1584-1591	2007
4	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Multiple performance optimization of machining parameters on the machining of GFRP composites using carbide (K10) tool	Materials and Manufacturing Processes	21(8)	846-852	2006
3	Palanikumar, K.	Cutting parameters optimization for surface roughness in machining of GFRP composites using Taguchi's method	Journal of Reinforced Plastics and Composites	25(16)	1739-1751	2006
2	Palanikumar, K., Karunamoorthy, L., Manoharan, N.	Mathematical model to predict the surface roughness on the machining of glass fiber reinforced polymer composites	Journal of Reinforced Plastics and Composites	25(4)	407-419	2006

1	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Assessment of factors influencing surface roughness on the machining of glass fiber-reinforced polymer composites	Materials and Design	27(10)	862-871	2006
134	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Parametric optimization to minimise the surface roughness on the machining of GFRP composites	Journal of Materials Science and Technology	22(1)	66-72	2006
133	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R., Latha, B.	Optimization of machining parameters in turning GFRP composites using a carbide (K10) tool based on the taguchi method with fuzzy logics	Metals and Materials International	12(6)	483-491	2006
132	Palanikumar, K., Karunamoorthy, L., Karthikeyan, R.	Optimizing the machining parameters for minimum surface roughness in turning of GFRP composites using the design of experiments	Journal of Materials Science and Technology	20(4)	373-378	2004

13. Detail of Patents.

S. No.	Patent Title	Name of The Applicants	Patent No	Award Date	Agency/ Country	Status
20	Protective Head Wear for Autism Patients with LED light	Dr.K.Palanikumar	337058-001	31-12-2020	INDIA	Granted
19	Protective Head Wear for Autism Patients	Dr.K.Palanikumar	337200-001	05-01-2021	INDIA	Granted
18	A device and method for assisting in self-learning of the braille language to visually impaired end users	1 . Vijayaraja L 2 . Dhanasekar r 3 . K. Palanikumar 4 . Dhinakaran m s 5 . Dinesh kumar r 6 . Joahnas mathew saji 7 . Vijay s	202041045084	16-10-2020	INDIA	Published

17	An automatized load carrying electric vehicle with custom path navigation	1 . G. Shanmugasundar	202041044652	14-10-2020	INDIA	Published
		2 . K. Palanikumar				
		3 . Anooj. M				
		4 . Maniponraja.H				
		5 . Jayant.M				
		6 . Yokeshkrishna.P				
16	E-glove	1 . G.saravanan	202041042710	01-10-2020	INDIA	Published
		2 . K.Palanikumar				
		3 . Hrini Karthik				
		4 . M.Unashalini				
		5 . V.Janani				
		6 . B.Uivashini				
15	Wireless security camera for stalker and threat identification	1 . Dr. K.Palanikumar	201941012141	28-03-2019	INDIA	Published & FER Replied
		2 . Dr. V.Brindha Devi				
		3 . P.Sharmila				
		4 . Neeraja.S				
		5 . Pavitra.P				
		6 . Queency Leena Sawyer				
14	An authentication slip procurement system for a public transport vehicle	1 . Dr. K. Palanikumar	201941008408	05-03-2019	INDIA	Published & FER Replied
		2 . Sharmila p				
		3 . Skanda gurunathan				
		4 . S. Vivekanandan				
		5 . Shankar t				
		6 . Aravind g				
13	A sign language translator	1 . K.Palanikumar	201841026260	13-07-2018	INDIA	Published

	glove	2 . K.C.Suresh				& FER Replied
		3 . B. Krishna moorthy				
12	An exoarm frame structure utilizing electrical actuators for arm rehabilitation and effortless load	1 . K. Palanikumar	201841025468	09-07-2018	INDIA	Published & FER Received
		2 . G. Shanmugasundar				
		3 . Tanush.h.bhaskar				
		4 . N.kishore				
		5 . S.a.vetri ganesh				
		6 . Anissh khaan.i				
11	Mind controlled gaming for the differently abled	1 . K. Palanikumar	201841016343	01-05-2018	INDIA	Published
		2 . B. Sreedevi				
		3 . P. Navaneeth				
		4 . H. Akshay				
		5 . M. Nirmalraj				
		6 . S. Athreya				
10	Exo Skeleton Arm using Block and Tackle Mechanism	1 . Dr. K. Palanikumar	201741042997	30-11-2017	INDIA	Published & FER Replied
		2 . G.shanmugasundar				
		3 . Tanush.'h.bhaskar				
		4 . N. Kishore				
		5 . Anissh khaan.i				
		6 . S.a.vetri ganesh				
9	An automatic system and method for the detecting and arresting of the LPG spillage from the gas stov	1 . K. Palanikumar	201741028002	07-08-2017	INDIA	Published & FER Replied
		2 . T. Srinivasan				
		3 . E. Thamizhmaran				
		4 . S. Rahavendhor				
		5 . B. Abhijeeth				
		6 . S. Solomon jaisingh				
8	A system and a method for toggling the operating state of electrical	1 . K.Palanikumar	201741027560	03-08-2017	INDIA	Published & FER Replied
		2 . R.nagammai nachu				

	appliances through user gesture	3 . V.kayalvizhi 4 . S.mythili 5 . S.malathy 6 . S.rajarajan				
7	A fibre reinforced hybrid polymer composite protective mechanism for the head	1 . Dr.K.Palanikumar 2 . K.R.Bharat	201741016072	08-05-2017	INDIA	Published & FER Replied
6	Phoneme encryptor	1 . K.Palanikumar, 2 . J. Ilakkiya, 3 . A. Subathra, 4 . S. Ragavi,	201741012896	11-04-2017	INDIA	Published & FER Replied
5	Egensor	1 . K.Palanikumar 2 . Arvindh.r 3 . Shubham shekhar 4 . Venkatesan.m 5 . Vignesh.a 6 . L.vijayaraja	201741011384	30-03-2017	INDIA	Published & FER Replied
4	A cattail fiber activated charcoal cartridge for the filtration and removal of the pah from the aque	1 . K.Palanikumar 2 . T. Gowshik 3 . S. Balaji 4 . R.satish 5 . Grandhe Venkata Karthik 6 . S.Aiswarya Devi 7 . R.M.Asha	201741010893	28-03-2017	INDIA	Granted
3	A durable multi-layered protective cover enclosing the head and neck of the firefighters	1 . K.Palanikumar 2 . K.R.Bharat	201641044018	23-12-2016	INDIA	Published & FER Replied
2	Woven Aloe vera/Sisal/Kenaf Fibre Epoxy composites	1 . A. Shadrach jeya sekaran 2 . K Palani kumar	201641012809	01.06.2016	INDIA	Yet to be Granted

	for Corrugated Roof sheet					
1	A multi-layered natural fiber reinforced composite sheet laminate	1. K. Palani kumar 2 . S. Dilip kumar 3 . C. Amarnath 4 . C. Rakesh	201641036636	26-10-2016	INDIA	Published & FER Replied

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
17	Mechanical Properties of Flax-Cotton Fiber Reinforced Polymer Composites	A Sailesh , K Palanikumar	Green Composites Published by Springer, 393-411	2020
16	Influence of fibre arrangement on mechanical properties of glass fibre-reinforced aluminium sandwich laminates Glass Fibre-Reinforced Polymer Composites: Materials	K Palanikumar, GR Devi	Manufacturing and Engineering Walter de Gruyter GmbH & Co KG, 12, 17	2020
15	Preparation and properties of nanopolymer advanced composites: A review	NRR Anbusagar, K. PalaniKumar, A Ponshanmugakumar	Polymer-based Nanocomposites for Energy and Environmental Applications, 27-73	2018
14	Glass Fiber Reinforced Composite materials: Book Chapter in “ Composites in Helicopter industry”	K.Palanikumar	Published by Wood head Publications, UK –In Press.	2016
13	Development and Characterization of Nano Clay Reinforced Three-Phase Sandwich Composite Laminates.	N. R. R. Anbu Sagar, K.Palanikumar	Nanoclay Reinforced Polymer Composites 01/2016: pages 357-391; ISBN: 978-981-10-1952-4, DOI:10.1007/978-981-10-1953-1_16	2016
12	Machinability of Fibre-Reinforced Plastics. Machinability of Fibre-Reinforced Plastics	K. Palanikumar, T. Srinivasan, K. Rajagopal, J.P. Davim	chapter Drilling of high impact Polystrene Materials,	2015

11	Application of response surface method and desirability function for the optimization of machining parameters of hybrid metal matrix (Al/SiC/Al ₂ O ₃) composites. Metal Matrix Composites	Kayaroganam Palanikumar	Walter de Gruyter GmbH & Co KG, ISBN: 9783110315448	2014
10	Application of artificial neural network for the prediction of surface roughness in drilling GFRP composites	K.Palanikumar, B.Latha, V.S.Senthilkumar J.PauloDavim	Materials Science Forum, Trans Tech publications, DOI: 10.4028/www.scientific.net/MSF.766.21.	2013
9	Electrical discharge machining: Study on machining characteristics of WC/Co composites. Machining and Machine-Tools	K. Palanikumar, J. Paulo Davim	chapter Electrical discharge machining: study on machining characteristics of WC/Co composites,DOI:10.1533/9780857092199.135	2013
8	Application of Taguchi method with Grey fuzzy logic for the optimization of machining parameters in machining composites, Computational Methods for Optimizing Manufacturing Technology	K.Palanikumar, B.Latha, J.PauloDavim	Models and Techniques. IGI-GLOBAL Publishers,DOI: 10.4018/978-1-4666-0128-4.ch009.	2012
7	Analyzing surface quality in machined composites. Machining Technology for Composite Materials	Kayaroganam Palanikumar	chapter Analyzing surface quality in machined composites: pages 154-182; Wood Head,	2012
6	Surface Roughness Evaluation in Drilling Hybrid Metal Matrix Composites. Emerging Trends in Science, Engineering and Technology	T. Rajmohan, K. Palanikumar, G. Harish	,DOI:10.1007/978-81-322-1007-8_29	2012
5	Investigation of optimum parameters for multiple performance characteristics in drilling wood composites (MDF) using Grey-Taguchi method. Wood and Wood Products,	K. Palanikumar, S. Prakash, J. Paulo Davim	chapter Chapter 4: pages 87-108; NOVA,ISBN: 978-1-62081-973-9	2012
4	Optimization of machining parameters for multiple performances in drilling hybrid composites using	K. Palanikumar, T.Rajmohan, J. Paulo Davim	Chapter 8 (in press), in Davim, J.P (Ed.), Metal Matrix Composites, NOVA Publishers, New York,ISBN: 978-1-61209-771-8.	2011

	desirability-based approach			
3	Modelling and analysis on wear behaviour of metal matrix composites	K. Palanikumar, T.Rajasekaran, J. Paulo Davim	Chapter 7, (157-174) in Davim, J.P. (Ed.), Tribology of Composite Materials, NOVA Publishers, New York, ISBN: 978-1-61668-319-1	2010
2	Application of fuzzy logic in manufacturing: a study on modelling of cutting force in turning GRFP composites	K. Palanikumar, J. Paulo Davim	Chapter 7, (111-128) in Davim, J.P. (Ed.), Artificial Intelligence in Manufacturing: Research, NOVA Publishers, New York, ISBN: 978-1-60876-214-9	2010
1	Analysis of delamination in drilling wood composite medium density fibre boards. Drilling of Composite Materials	Kayaroganam Palanikumar, S. Prakash, C.V.Jayakumar, J. Paulo Davim	chapter 7: pages 121-136; Nova, ISBN: 978-1-60741-163-5	2009

15. Any other Information :

1. Published more than 100 papers in SCI journals and received the citation of over 8000 having google Scholar h-index: 48.
2. Received best researcher Award 2 times from Indian Society for Technical Education.
3. Coordinated 12 numbers of AICTE sponsored FDPs, STTPs in the recent past.
4. Coordinated DST – NIMAT Sponsored Entrepreneurship Programs (EAC, FDP & TEDP).
5. Received grant for setting up of Innovation and Entrepreneurship Development Centre from DSt-NSTEDB (47 lakhs)
6. Acted as resource person for more than 150 FDP, webinars under various Technical, Research and Administrative topics.
7. Guided, Motivated and actively involved in the following Community Development Activities Through Institute: 1. National Service Scheme (NSS) 2. Swachh Bharat mission Activities 3. Unnath Bharath Abhiyan (UBA) activities for Adopted villages. 4. Lions Club Activities. 5. Skill Development Programs For Unemployed youth coordinating through the PMKVY and other schemes. 6. Entrepreneurship development Activities for Village people and also the S&T institutions.
8. Guided 21 research scholars, out of that 18 were successfully completed the research in the area of composite materials, Friction welding, environmental friendly processes, etc..

Biography



Dr. A. Suresh, B.E., M.Tech., Ph.D works as the Associate Professor, Department of the Computer Science and Engineering in SRM Institute of Science & Technology, Kattankulathur, Chengalpattu Dist., Tamil Nadu, India. He has been nearly two decades of experience in teaching and his areas of specializations are Data Mining, Artificial Intelligence, Image Processing, Multimedia and System Software. He has published two patents and 90 papers in International journals. He has book authored “Industrial IoT Application Architectures and use cases” published in CRC press and edited book entitled “Deep Neural Networks for Multimodal Imaging and Biomedical Application” published in IGI Global. He has currently editing three books namely “Deep learning and Edge Computing solutions for High Performance Computing” in EAI/Springer Innovations in Communications and Computing, “Sensor Data Management and Analysis: The Role of Deep Learning” and “Bioinformatics and Medical Applications: Big Data using Deep Learning Algorithms” in Scrivener-Wiley publisher. He has published 15 chapters in the book title An Intelligent Grid Network Based on Cloud Computing Infrastructures in IGI Global Publisher and Internet of Things for Industry 4.0 in EAI/Springer Innovations in Communication and Computing. He has published more than 40 papers in National and International Conferences. He has served as editor / reviewer for Springer, Elsevier, Wiley, IGI Global, IoS Press, Inderscience journals etc... He is a member of IEEE(Senior Member), ISTE, MCSI, IACSIT, IAENG, MCSTA and Global Member of Internet Society (ISOC). He has organized several National Workshop, Conferences and Technical Events. He is regularly invited to deliver lectures in various programmes for imparting skills in research methodology to students and research scholars. He has published four books in Indian publishers, in the name of Hospital Management, Data Structures & Algorithms, Computer Programming, Problem Solving and Python Programming and Programming in “C”. He has hosted two special sessions for IEEE sponsored conference in Osaka, Japan and Thailand.

Dr. A. Suresh

Senior Member IEEE

Associate Professor, Department of Computer Science and Engineering,
SRM Institute of Science and Technology,
Kattankulathur, Chengalpattu Dist., Tamil Nadu, India

Email: prisu6esh@ieee.org; suresha2@srmist.edu.in
prisu6esh@gmail.com; prisu6esh@yahoo.com

Scopus ID: 57194525382

ResearcherID: F-3114-2014

ORCID: 0000-0001-7439-2834

Google Scholar: <https://scholar.google.com/citations?user=S374GVYAAAAJ&hl=en>

Published SI:

As a guest editor - 04 SCI & 18 SCOPUS Special Issue has been completed

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address Mr.R.Udendhran
Assistant Professor
Department of Computer Science
and Engineering
Sri Sai Ram Institute of Technology
Sai Leo Nagar, West Tambaram
Chennai-600047

2. Email(s) and contact number(s) udendhran.cse@sairamit.edu.in +919626319144

3. Institution Sri Sai Ram Institute of Technology

4. Date of Birth 10.08.1992

5. Gender (M/F/T) M

6. Category Gen/SC/ST/OBC OBC

7. Whether differently abled (Yes/No) No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	Ph D	2021	Computer Science and Engineering	Bharathidasan University	-
2.	M.Tech	2017	Computer Science and Engineering	Bharathidasan University	First Class
3.	B.Tech	2015	Computer Science and Engineering	Bharathidasan University	Fisrt Class

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

A DEEP LEARNING CLASSIFIER AND HOMOMORPHIC ENCRYPTION FOR SECURE MULTIPARTY COMPUTATION FOR ANALYSIS OF CONFIDENTIAL DATA TECHNIQUES, Dr.M.Balamurugan, Bharathidasan University, 2021

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Sri Sai Ram Institute of Technology	2021	Till date	VI Pay Scale
2	Researcher Ph.D Full Time	Bharathidasan University	2008	2021	---

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1			
2			
3			

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	R. Udendhran M.Balamurugan	Towards secure deep learning architecture for smart farming-based applications	Complex and Intelligent. System , Springer	https://doi.org/10.1007/s40747-020-00225-5	1-5	2020
2.	Udendhran, R Annamalai Suresh, M Balamurgan	Enhancing image processing architecture using deep learning for embedded vision systems	Microprocessors and Microsystems, ELSEVIER	https://doi.org/10.1016/j.micpro.2020.103094	1-5	2020
3.	Annamalai Suresh, R Udendhran, M Balamurgan	Hybridized neural network and decision tree based classifier for prognostic decision making in breast cancers	Journal of Soft Computing, Springer	https://doi.org/10.1007/s00500-019-04066-4	1-5	2019
4.	Annamalai Suresh, R Udendhran, M Balamurgan	A Novel Internet of Things Framework Integrated with Real Time Monitoring for Intelligent Healthcare Environment	Journal of Medical Systems, Springer	https://doi.org/10.1007/s10916-019-1302-9	1-5	2018

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1						
2						
3						

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	BOOK - Deep Neural Networks for Multimodal Imaging and Biomedical Applications, IGI GLOBAL	R.Udendhran, Irfan Ahmed	Wiley Press and IEEE Press	2021
2	Deep Neural Networks for Multimodal Imaging and Biomedical Applications	A. Suresh, R.Udendhran, Irfan Ahmed	IGI GLOBAL Press	2020

15. Any other Information (maximum 500 words)

Mr. R. Udendhran, B.Tech, M.Tech. (PhD), works as Assistant Professor Department of the Computer Science and Engineering at Sri SaiRam Institute of Technology, Sairam College Rd, Sai Leo Nagar, Tambaram West, Chennai, Tamil Nadu 600044, Tamil Nadu, India. He is a dignified computer science research scholar focusing on Deep Learning. He worked as a data scientist and presented research work in international conference held at University of Cambridge which is available in ACM digital library and published around 5 research papers indexed in web of science and 11 research papers in Scopus database.

Dr. P. Sivakumar BE (IT)., ME(CSE).,Ph.D., MISTE.,

Associate Professor,
 Department of Computer Science and Engineering,
 SRM Institute of Science and Technology,
 Delhi NCR Campus, Modinagr,
 Ghaziabad, Uttar Pradesh- 201204.
 Email-Id: drsivakumar.p@gmail.com ,ps@srmist.edu.in

**CURRICULUM VITAE**

Total Experience : **12 Years 9 Months**
 Before PG : 3 Months
 After PG : 5 Years, 9 Months
 After Ph.D : 6 Years 9 Months,
Nationality : Indian
Languages Known : English, Tamil.
Marital Status : Married

Award : Professional Awards & Honors – 2016, Chennai, “Innovative Professional Award” organized by Society of Professional Engineers (India) & Engineering Today,29-Auguest-2016.

Patent Registered : Registered the application for grant of patent titled “Wireless Mesh Networks lifetime maximization for machine Communication”, The application no. E-12/2688/2019/CHE.

Research Supervisor : 1) Anna University, Chennai (**Number Scholar :03**)

Area of Interest: Data Mining, Computer Network, Web Technology

Research and Funding Agency (R&D): 03
 Number of Research Project Applied : 01 (DST-SERB)
 Number of Workshop Grand Applied : 01 (DST-SERB)
 Number of Seminar Grand Applied : 01 (Deity)

Education Background :

<i>Course</i>	<i>Institution</i>	<i>University/ Board Type: Government/ Private</i>	<i>Year of Passing</i>	<i>% Aggregate</i>
Ph.D (Information & Communication Engineering)	Anna University, Chennai. Tamilnadu, India.	Anna University, Chennai Government	August 2013	-
M.E (Computer Science and Engineering)	Annai Mathammal Sheela Engineering College, Namakkal, Tamilnadu, India.	Anna University, Chennai. Government	2005-2007	75%
B.E (Information Technology)	Sri Ramakrishna Engineering College, Coimbatore, Tamilnadu, India.	Bharathiyar University, Coimbatore. Government	2000-2004	65%

Teaching Experience : 13 Years

Patent Published : 01

Patent Registered : 03

Consultancy Projects : 02

Book published : 01

No Phd Students produced : 03

Membership : 09

Sessions/Symposium chaired Organized : 03

Faculty Development Program Organized : 01

National Conference Organized : 02

International Conference Organized : 01

International Workshop Organized : 01

Seminar / Workshop / FDP attended : 26

Journal Editorial and Reviewer : 14

International Journal Publications : 20

International Conferences : 07

National Conferences : 10

Total Research Paper published : 06

Project guided for Post Graduate level : 03

Project guided for Under Graduate level : 06

Mini Project guided for Under Graduate level: 03

Number of PhD Scholars

<i>SRL. NO</i>	<i>Status</i>	<i>Research Area</i>	<i>Title of the Thesis Work</i>	<i>Register Number</i>	<i>Name of the Scholar</i>	<i>University</i>
1	Completed 02/03/ 2017	Data Mining	An Improved Hybrid Honey Bee Mating Optimization of k-Means Algorithm for Medical Document Clustering	11160111035	Vengateshkumar.P	Anna University, Tamilnadu
2	Completed 05/06/2018	Grid Computing	Efficient Scheduling of Tabu Search, Round Robin, Earliest Deadline and First Come First Serve with Genetic Algorithm	71070621026	Rajagopal R	Anna University, Tamilnadu
3	Completed 28/12/2018	Web Mining	A Paradigm for Proficient information retrieval using trust based automatic web document classification framework	71070621042	Sridharan K	Anna University, Tamilnadu

Consultancy Projects

S.No	Name of the Project	Client	Faculty members involved	Period	Amount generated (In Rs.)
1	Cloud Based Data Collection and storage in Web portal	Techno soft salutation, Coimbatore	Dr.P.Sivakumar	2013-14	Rs.30,000 (Completed)
2	Design, Development and Maintenance of the web portal for Raja Textiles	Raja Textiles, Erode	Dr.P.Sivakumar	2014-15	Rs.1,00,000 (Completed)

Positions Held

SRL. NO	Designation	Name of the college / University	Teaching Experience			
			Start	End	Total years	Overall Years
1	Associate Professor	SRM NCR,Campus , Delhi	07-09-2020	Till Date	0.0	13.00
2	Associate Professor	Sree Vidyanikethan Engineering College (Autonomous),	13-08-2019	28.08.2020	1.0	13.00
3	Assistant Professor	Saudi Electronic University, Riyadh ,Saudi Arabia	22-03-2017	29-07-2019	2.3	12.00
4	Associate Professor	Sree Vidyanikethan Engineering College (Autonomous),	01-06-2016	31-01-2017	0.8	09.09
5	Assistant Professor	K.S.R. College of Engineering (Autonomous)	01-06 -2011	31-05-2016	5.0	09.01
6	Lecturer	Annai Mathammal Sheela Engineering College, Namakkal	15- 07- 2007	31-05- 2011	3.10	04.01
7	Lecturer	Annai Mathammal Sheela Engineering College, Namakkal	14-06-2005	15-09-2005	0.3	00.03

Research Publications

International Journal Publications SCI Indexed : 2 and Scopus Indexed : 08

- [1]. **Dr.P.Sivakumar**, “Implementing The Model For Software Quality Based On Interaction Between User And Developer”, Journal of Critical Reviews ,ISSN- 2394-5125 VOL 7, ISSUE 15, 2020. (Scopus)
- [2]. **Dr.P.Sivakumar**, “Exploring The Trajectory Prediction Using Lstm And Extreme Machine Learning”, journal of critical reviews, issn- 2394-5125 vol 7, issue 10, 2020. (Scopus)
- [3]. **Dr.P.Sivakumar**, “Design and analysis the performance of real time content delivery network using beam scanning” journal of critical reviews, ISSN- 2394-5125 VOL 7, ISSUE 04, 2020. (Scopus)
- [4]. **Dr.P.Sivakumar**, “Fit for Life: Home Personal Coach”, Bonfring International Journal of Software Engineering and Soft Computing, Vol. 8, No. 2, April 2018.

- [5]. **Dr.P.Sivakumar**, “A Systematic review on Techniques of Feature Selection and Classification for Text Mining”, International Journal of Business Information Systems, Vol. 28, No. 4, 2017. Print –ISSN : 17460972 (**Scopus**)
- [6]. **Dr.P.Sivakumar**, “Trust Factors based Hierarchy Key Distribution Security Protocol in Grid Computing by means of Elliptic Curve Cryptography” Asian Journal of Research in Social Sciences and Humanities. ISSN:2249-7315 (ONLINE) 2250-1665, Jan,2017.
- [7]. **Dr.P.Sivakumar an Mr.K Rajagobal**, ‘Object Based Ring Routing Path Management Algorithm for Energy Efficient Nest Node of Sensor Network’, Journal of Computer and System Sciences, Volume 83, Issue 3, ISSN: 0022-0000, 2017, Pages 3-21. (**Scopus Indexed**)
- [8]. **Dr.P. Sivakumar**, ‘Efficient Job Scheduling of Genetic Algorithm with Tabu Search and Round Robin’, International Journal of Printing, Packaging & Allied Sciences, (ISSN 2320-4387), vol. 4, no. 4, pp. 2864-2878,2016.
- [9]. Dr.P. Sivakumar, “Mobile Agents based Reliable and Energy Efficient Routing Protocol for MANET”, International Journal of Intelligent Engineering and Systems 9(3):110-116 · September 2016(**Scopus Indexed**)
- [10]. **Dr.P.Sivakumar**. “Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, International Journal of Innovations & Advancement in Computer Science (IJIACS), Vol.5, Issue No: 6, June 2016.
- [11]. Dr.P.Sivakumar, “An Integration of Web Mining and Security for Ensuring the E-Marketing Websites”, Asian Journal of Research in Social Sciences and Humanities Vol. 6, No. 12, December 2016, pp. 975-991.
- [12]. **Dr.P.Sivakumar**. “Web Forum Questions using Answers Retrieval Information”, journal of computer science and technology, Vol.5, Issue No: 6, June 2016.
- [13]. **Dr.P. Sivakumar**, “Effectual Web Content Mining is using Noise Removal from Web Page”, Wireless Personal Communications, Vol .84, pp.89-121, 2015, **ISSN: 0929-6212,(SCI & Scopus Indexed) Impact Factor : 1.20.**
- [14]. **Dr.P.Sivakumar**,. “Efficient Methods for Distinction Preclusion in Data Mining”, International Journal of Applied Engineering Research, Special issue Vol.10, Issue.55, pp.2212-2215, 2015.
- [15].**Dr.P.Sivakumar**,. “Ensure and Energy Efficient Data Forwarding in Cluster Based Wireless Sensor Network”, IJSRD -International Journal for Scientific Research & Development , Vol. 2, Issue 12, Pages: 2321-0613,March 2015.
- [16]. **Dr.P.Sivakumar**,. “Multimodal Mobile Visual Search Using Region-Based Matching Algorithm”, International Journal of Current Research Vol. 6, Issue, 01, pp.4750-4753, 2014.
- [17]. **Dr.P.Sivakumar**,. “Interactive Mobile Visual Search using Pixel based Matching Algorithm”, International Journal of Engineering Associates (IJEA), Vol. 3, Issue, 04, pp.20-23, 2014.
- [18]. **Dr.P.Sivakumar**,. “An Efficient Interactive Mobile Visual Search Using Multipart Region based Matching (MRM) Algorithm”, Australian Journal of Basic and Applied Sciences”,Vol 8,Issue,10, Pages: 7-11,July 2014., Print-ISSN : 19918178 (**Scopus Indexed**)
- [19]. **Dr.P.Sivakumar**,“Verifying Integrity and Availability in Multi-Cloud Using PDP”, International Journal of Computer Science and Mobile Computing, Vol. 2, Issue, 4, 2013.

- [20]. **Sivakumar, P.** and Parvathi, R. M. S. “JC- Automatic Manifold Related Pages Reviewed by Jaccard’s Coefficient”, International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 2, No. 2, pp. 230-232, 2012.
- [21]. **Sivakumar, P.** and Parvathi, R. M. S. “Mainly Significant Content Mining of Entire Web Page”, International Journal of Engineering Research and Applications, Vol. 2, No. 2, pp. 719-722, 2012.
- [22]. **Sivakumar, P.** and Parvathi, R. M. S. “Neural Networking using Multiple Web Page Noise Removing Method”, International Journal on Computer Science and Technology (IJCST), Vol. 3, No. 1, pp. 336-338, 2012.
- [23]. **Sivakumar, P.** and Parvathi, R.M.S. “Eliminating of Picture Animation from Web Sheet”, International Journal of Current Research, Vol. 4, No. 4, pp. 212-215, 2012.
- [24]. **Sivakumar, P.** and Parvathi, R. M. S. “An Efficient Approach of Noise Removal from Web Page for Effectual WCM”, European Journal of Scientific Research, Vol. 50, No. 3, pp. 340-351, 2011, Print-ISSN: 1450202X, (**Scopus Indexed**)
- [25]. **Sivakumar, P.** and Parvathi, R. M. S. “Sketching-Din Elimination of Web Page”, Journal of Computer Science, Vol. 7, No. 12, pp.1888-1893, 2011, print-ISSN: 15493636, (**Scopus Indexed**)

International Conferences

- [1]. **Dr.Sivakumar Ponnusamy**, Mohsen Ba Omar, Fahad Alshunaybir, Mohsen Alanazi, Mwaz Alzebak, "Fit for Life: Home Personal Coach" ICICS'2018, International Conference on Information and Computational Science (ICICS-2018), KSR College of Engineering, Tiruchengode, Tamilnadu, India, Conference Date :27.03.2018 to 28.03.2018.
- [2]. **Dr.P.Sivakumar.** “Web Forum Questions using Answers Retrieval Information”, International Conference on "Latest Concepts in Science, Technology and Management (ICLCSTM-16), is organized by Conference info and Academic Science at The Institutions of Electronic and Telecommunication Engineers (IETE), Institutional Area, Lodhi Road, New Delhi 110003, Date: 19 June, 2016.
- [3]. **Dr.P.Sivakumar.** “ Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, International Conference on "Latest Concepts in Science, Technology and Management (ICLCSTM-16), is organized by Conference info and Academic Science at The Institutions of Electronic and Telecommunication Engineers (IETE), Institutional Area, Lodhi Road, New Delhi 110003, Date: 19 June, 2016.
- [4]. **Dr.P.Sivakumar.** “Web Forum Questions using Answers Retrieval Information (IJCMS)”, International Journal of Computer & Mathematical Sciences, Vol.5, Issue No:6, June 2016.
- [5]. **Sivakumar,P.** “Efficient Methods for Distinction Preclusion in Data Mining”, International Conference on Advances in Applied Engineering and Technology - 2015 (ICAAET'15). The ICAAET'15 is organized by Syed Ammal Engineering College, Ramanathapuram, Tamilnadu, India, May 14-16, 2015.
- [6]. **Sivakumar, P. and Parvathi, R.M.S.** “LS-SVM: Text Document Classification for Particular Value Decomposition”, International conference on Recent Advances and Trends in computer Engg, Management and Security, Vivekanandha College of Engineering for Women, Elayampalayam, Tiruchengode, Tamilnadu, India, pp.85, March 2012.

- [7]. **Sivakumar, P. and Parvathi, R. M. S.** “An Efficient Approach of Noise Removal from Web Page for Effectual Web Content Mining”, International conference on Advanced Computer Technology, J.K.K.Nattraja College Of Engineering and Technology Komarapalayam ,Namakkal, Tamilnadu, India, pp.919-922, July 2011.

National Conferences

- [1]. **Sivakumar.p**, “Trailing Mobile Sinks to Data Coverage Protocol for Wireless Sensor Networks”, National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March, 2016.
- [2]. **Sivakumar.p**, “A Hierarchical Fuzzy relational Clustering Algorithm for sentence Level Text Clustering” National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March 2016.
- [3]. **Sivakumar.p**, “Web Forum Questions using Answers Retrieval Information”, National Conference on Cutting Edge Technologies in Information and Communication (NCCETC), March, 2016.
- [4]. **Sivakumar.p**, ”An Energy Aware data Forwarding using MD5 in Cluster based Wireless sensor Network”, National Conference on Big Data Cloud Computing (NCBDC’15), National Institute of Technology, Tiruchirappalli, 2015.
- [5]. **Sivakumar.p** , “Interactive Mobile Visual Search using Matching Algorithm”, National Conference on Knowledge based Scientific Research and Communication Engineering (NCKSRCE’14), K.S.R. College of Engineering, 2014.
- [6]. **Sivakumar, P.** and Parvathi, R. M. S. “A Syntactic categorization based Web Page Rating Algorithm”, National Conference on Frontiers of Future Generation Computer Systems and Engineering, KSR College of Engineering, Tiruchengode , pp.36, February 2012.
- [7]. **Sivakumar, P.** and Parvathi, R. M. S. “Most Improvement Content Mining from complete web pages”, National Conference on Advances in Computing, Communication, Electrical and Network Technologies, Sengunthar Engineering College, Tiruchengode pp.160-165, March 2012.
- [8]. **Sivakumar, P.** “Scalable Peer-To-Peer File Sharing System in Hybrid Model”, National Conference on Advances in Communication and Computing (NCACC-2011), Karpagam College of Engineering(Autonomous), October 2011.
- [9]. **Sivakumar, P.** “Scalable Peer-To-Peer File Sharing System in Hybrid Model”, Seventh National Conference on Recent Trends in Advanced Computing (RTAC-2011), SNS College of Technology, October 2011.
- [10]. **Sivakumar,P** “Improved Context Based data Access”, First National Conference on Network , Intelligence and Computing System, SNS College of Technology, Coimbatore, Feb 2007.

Journal Editorial Member and Reviewer

- [1]. Reviewer of International Journal of Computer Science and Network (IJCSN)
- [2]. Reviewer of International Journal of Scientific & Engineering Research (IJSER)
- [3]. Reviewer of International Journal of Advances in Engineering and Technology(IJAET)
- [4]. Reviewer of International Journal of Research in Engineering and Technology (IJRET)
- [5]. Editorial Board Member of International Journal of Research in Science & Technology (IJRST).
- [6]. Reviewer of International Journals of Engineering and Sciences (IJENS)
- [7]. Editorial Board Member of Taraksh International Journal of Information Systems (TIJIS)
- [8]. Editorial Board member of Taraksh Journal of Cultural Studies(TJCS)
- [9]. Reviewer of International Journal of Scientific Engineering and Technology (IJSET)
- [10]. Editorial Board Member of International Journal of Advances in Engineering Research (IAER)

- [11].Editorial Board Member of International Journal Of Innovations In Applied Sciences & Engineering (IJIASE)
- [12].Editorial Board Member of International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS) ,SVEC.
- [13].Editorial Board Member of International Journal of Advanced Research in Biology, Engineering, Science and Technology((IJARBEST),SVEC
- [14].International Journal of Advanced Research Trends in Engineering and Technology(IJARTET), SVEC.

Professional Society Membership

Life Member

- Indian Society for Technical Education (ISTE)
Member No: LM 81589
- International Society For Research And Development (ISRD)
Member NO :SR4150900222
- Global Research & Development Services (GRDS)
Membership ID: WASRTI-M16101

Senior Member

- International Association of Computer Science and Information Technology (IACSIT)
Member NO: 80347977

Member

- International Association of Engineers (IAENG)
Member NO: 137474
- International Journal of Engineering Trends and Technology
Member ID: SSRG - IJETT-1500 . SVEC.

Member of Societies

- IAENG Society of Computer Science
- IAENG Society of Data Mining
- IAENG Society of Software Engineering

National Conference Organized

- Fourth National Conference on Knowledge Based Scientific Research and Communication Engineering - 2014 (NCKSRCE'14), held on 15th March 2014”, K.S.R. College of Engineering, (Autonomous).

Guest Lecturing

- Act as a Resource person “One Week Faculty Development Programme on Advanced Tools for Data Analytics” 23th November, 2016, Under TEQIP-II, Conducted by Sree Vidyanikethan Engineering College (Autonomus),Tirupathi,on 24-25 October, 2016.
- Acut as a judge of CODE-A-THON “ Mantra- A National Level Techno – Cultural Fest” Conducted by Sree Vidyanikethan Engineering College (Autonomus),Tirupathi,on 6-7 October, 2016.
- Act as a Resource person on 11th Dec 2014 for Anna University Sponsored Faculty development Training Programme on “CS6402 Design and Analysis of Algorithms” organized at K.S.R College of Engineering.
- Act as a Resource person on 13th Dec 2014 for Anna University Sponsored Faculty development Training Programme on “CS6402 Design and Analysis of Algorithms” organized at Kongunadu College of Engineering and Technology

Technical Program Committees

- 7th IEEE International Advance Computing Conference (IACC-2017), Organized by IEEE Computer Society Chapter of India Council & VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, India.
- First International Conference on Innovations in Electrical, Information and Communication Engineering (ICIEICE) to be conducted during March 24 and 25 of 2017, Kongunadu College of Engineering and Technology (KNCET), Namakkal - Trichy Main Road Tholurpatti, Thottiam, Trichy District, Tamilnadu, India.

List of R & D Project Work

S.No	Workshop / Seminar / Funded Projects	Name of the agency	Title of the Programme	Applied Date	Status
1.	Seminar	SERB Seminar Grant Proposal	Statistically Open Data Applications and Challenges	July 2019	Applied
2.	Funded Projects	SERB (Empowerment and Equity Opportunities for Excellence in Science)	Security Track: Bluetooth module with Smartphone Sensing Platform for Emergency Disaster Management	August 2019	Applied
3.	Workshop	DeitY Sponsored A Two Day National Seminar	Open Data Applications and Challenges	August 2019	Applied

List of Project work

S.no	Title of the Project	Purpose of the Project	Software used
1.	Improved Context Base Mobile data access	Mobile using to access All kind of data information with data format	JSP, Ms-Access, J2ME
2.	Location Identification	Mobile using identify the particular location and also nearest location with map	J2ME, JSP, SQL
3.	Mobile Billing System	Online Mobile Billing System	VB, Ms-Access
4.	Student Information	Each students Bio data and also mark statement	VB, Ms-Access

List of Patent

S.No	Title of the Patent	Application Number	Data of Published / eFiling	Status
1	Wireless mesh networks lifetime maximization for machine to Machine communication	201941052842	27/12/2019	Published
2	A novel Multiple-Access Edge Computing technique for ultra-reliable low-latency communication (URLLC), and massive Internet of Things (IoT) in	202041014796	15/05/2020	Published

	5G networks			
3	Automated vegetation mapping approach of crops through satellite image fusion and convolution neural networks-based classification	202041014696	15/05/2020	Published
4	A method to emotional component and Intrapersonal cognitive detection of a person using machine learning.	202041014970	22/05/2020	Published
5	Voice Assisted Neuro-Fuzzy Deep Learning Technique to Elderly and Disabled for Flexible and Secure Navigation	2020100866	27/05/2020	Published
6				

List of Book published

S.No	Title of the Book	Book ISBN	Year of publication	Publisher
1	WEB CONTENT MINING AND NOISE FREE WEB PAGES	978-81-932882-0-7	2016 November	IRA PUBLICATIONS

Programming Knowledge

Language : C, C++, Visual Basic and Java

Database : Oracle 8, My SQL, Ms-Access

Web Design : HTML, DHTML, Scripting, Style Sheet, ASP,PHP.

Title of Ph.D Thesis

Noise Free Information Retrieval Using Web Content Mining on Web Pages

Seminar / Workshop / Faculty Development Programme Attended

1. The webinar on "Identification of Internet Suspect Criminals using Forensic Field True Traveller Kit" by Dr.R.Ravi, Professor - IT, FXEC, Organized by Department of Information Technology, Francis Xavier Engineering College, Tirunelveli, Tamil Nadu on 27th May, 2020.
2. The webinar on "A Kaleidoscopic view of AI" organized by Department of Computer Science and Engineering, Panimalar Institute of Technology on 24.05.2020.
3. The Live Webinar PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY, Organized By CSE Dept in association with Computer Society of India VVIT chapter Held On 27.05.2020 .
4. "One-Day Online FDP on Data Science Using Machine Learning Algorithms" on 26th May 2020.
5. The one week Faculty Development Program on Advances in " Python(Django and Flask), Python for Data Science and Cyber Security" in association with IIT, organized by the Department of Computer Science and Engineering, Chadalawada Ramanamma Engineering College, Tirupati Bombay during 21st to 27th May 2020.
6. The Research Structuring and Writing Process', Organized By Department of Commerce IV, Rathinam College of Arts and Science, Coimbatore, May 27, 2020.
7. The CMOS Transceiver Design for 5G Communication" Organized By Department of Commerce Dhanalakshmi Srinivasan Institute of Technology on May 26, 2020.
8. The webinar on virtual class Room Teacher Organized By Skillnet on May 27, 2020.

9. The Five Day Faculty Development Programme (FDP) on “Cyber Security”, Conducted by the Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College in association with Supraja Technologies & Computer Society of India Vijayawada Chapter, from 23-05-2020 to 27-05-2020.
10. The NUPRO’2020 Round 1 and participated NUPRO’2020 Round 2 from 21/05/2020 to 25/05/2020 organized by Department of Information Technology, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam .
11. The Faculty Development Programme on Python Programming and Machine Learning Techniques, Department of Computer science and Engineering , K.S.R College of Engineering , Namakkal on 18-05 2020 to 29-05-2020.
12. The Faculty Development Programme on "Web Application Security", Jeppiaar Institute of Technology on 27-05-2020 to 28-05-2020.
13. The “NUPRO’2020 – NURTURE THE PROGRAMMING CONTEST ROUND - 1” organized by Department of Information Technology, E.G.S. Pillay Engineering College (Autonomous), Nagapattinam – 611 002 from 11/05/2020 to 20/05/2020
14. Three Day Online Workshop on "Source Code Management and Technical Documentation" hosted by Sree Vidyanikethan Engineering College in association with APSSDC on 20/05/2020 to 22/05/2020.
15. The Research & Development (R&D) Cell and Institution’s Innovation Council (IIC) of Vivekanandha College of Engineering for Women (Autonomous) are organizing from 13th May 2020 to 20th May 2020.
16. The Eight Days Online Java Programming Course, Conducted by AARON Technology, Salem Tamilnadu on 20th April to 27th April 2020.
17. The One Day Online Webinar on Levers of Digital Industry Presented, Dr.S.D.Sударасan, Group Manager, ABB Corporate Research organized by Chennai Institute of Technology on 01 May 2020.
18. The One Day Online National Workshop on “ Blockchain Technology , conducted by Dr. Kalpesh Parikh on 2nd May, 2020.
19. The Online International Level COVID-19 Awareness Quiz held in May 2020 organized by students of National Service Scheme (NSS) unit of Ashoka Center for Business and Computer Studies, Chndsi, Nashik.
20. The online EQuiz Exam for Data Structure Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 6th May 2020.
21. The online EQuiz Exam for DBMS Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 7th May 2020.
22. The online EQuiz Exam for Compiler Subject” , organized by Panimalar Institute of Technology, Tamilnadu on 8th May 2020.
23. The online Faculty Development Program on "RESEARCH, FUNDING & IPR" jointly organized by Department of Electronics & Telecommunication, IQAC AND R & D Cell, K. C. COLLEGE OF ENGINEERING & MANAGEMENT STUDIES AND RESEARCH, THANE (EAST) in association with under the banner of IETE and Institution's Innovation Cell (IIC) on 7th May-10th May, 2020.
24. The online WEBINAR on Opportunities for Start Ups in current Situation”, organized by Chennai Institute of Technology for registering on 8th may 2020.
25. The online Python Webinar hosted” by Sarada College for Women and Aaron Technologies on "Enhance your coding skills through Python" on 8th may 2020.
26. The 5 Day Online Faculty Development Programme on Python Programming Organized” by Madanapalle Institute of Technology & Science in association with IIT BOMBAY SPOKEN TUTORIAL - to be held during 4th May to 8th May,2020.
27. The 5 Day Online Faculty Development Programme on R Programming” Organized by St.Joseph's College,(Autonomous), Irinjalakuda in association with IIT BOMBAY SPOKEN TUTORIAL - to be held during 4th May to 8th May,2020.
28. The 2 day online Webinar for How to write a Research Proposal”, Organized By: Research and Development Cell, Excel Engineering College, Komarapalayam - 637303, TamilNadu on 04 May to 05 May 2020.
29. The Seven Days Online Faculty Development Program on "Scope of Artificial Intelligence and Machine Learning in Automation" from 11th May 2020 to 17th May 2020.
30. The Introduction to image quality measures”, organized by Chennai Institute of Technology for registering on 13th may 2020.
31. The Star Ethical Hacking Expert (EHE)”, organized by star certification, United States on May 14, 2020.

32. The Ethical Hacking Webinar” Conducted by IT Dept of Sengunthar College of Engineering, on 13 May 2020.
33. A one Week Faculty Development Programme on “Advances in Python Programming” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 27th - 28th November, 2016.
34. One week Faculty Development Programme on “Advanced Tools for Data Analytics” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 21st - 25th November, 2016.
35. A Two Day Research Oriented Faculty Development Programme on “Open Source Technologies”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 26-27 September, 2016.
36. DST-SERB Sponsored Two Day National Seminar on “Internet of Things(IoT) : Scope for Future Research and Business”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 24-25 October, 2016.
37. A Three Day Faculty Development Programme on “IBM Certified Application Developer – Cloud Platform”, Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 14-16 November, 2016.
38. DST-SERB Sponsored Two Day National Seminar on “Recent Advances in Bioinformatics and Medical Image Analysis” Conducted by Sree Vidyanikethan Engineering College (Autonomus), Tirupathi, on 18-19 November, 2016.
39. National Workshop on “Blooms Taxonomy and its Assessments”, Conducted at K.S.R College of Engineering, on 20th March 2015.
40. Two Week ISTE STTP on “Introduction to Design of Algorithms” conducted by Indian Institute of Technology Kharagpur from 27th April to 30th May 2015.
41. International Level Workshop on “Journal Paper Writing and Preparation of Winner Research proposal”, Conducted at K.S.R college of Engineering, 2015.
42. The SERB Sponsored National Level Seminar on “Data Mining trends & development for Geospatial technology and its Applications” during 7th January 2015 to 9th January 2015.
43. ISTE – SRM Short Term training Programme on “Big Data Analytics and its Applications” organized by K S R Institute for Engineering and technology and sponsored by Indian Society for Technical Education, New Delhi and SRM University, Chennai, during 5th May 2014 to 10th May 2014.
44. Two week ISTE Workshop on Cyber Security conducted by Indian Institute of Technology Bombay from 10th July to 20th July 2014.
45. AICTE sponsored Two Weeks Faculty Development Programme on “Security Issues in Utility Computing” from 17th May 2013 to 30th May 2013, Organized by K.S.R college of Engineering.
46. AICTE sponsored Staff Development Programme on “Research initiatives in Data Mining for web intelligence” , from 22nd June to 03rd July 2012, Organized by K.S.R college of Engineering.
47. Two Days hands on Training on “Enterprise Computing Lab” held on 2nd and 3rd December 2011, K.S.R. College of Engineering.

48. Workshop on Hardware and Networking from 23^{ed} August 2011 to 25st August 2011 at K.S.R College of Engineering .
49. One Day Workshop on “Data Mining: Challenges and Issues” held on 26th August 2011 at Anna university of Technology Tiruchirappalli.
50. Workshop in “Java and struts frame work” from 23^{ed} April to 24th April 2010 at Annai Mathammal Sheela Engineering College, Namakkal, India.
51. One day orientation programme on Microsoft Corporation on Advanced technology, during 31st July 2009, Gnanamani College of Technology, Namakkal, India.
52. Staff Development Programme in Computer network Design Security and Management, Organized by Vivekanadha College of Engineering For Women, Elayampalam, Namakkal, from 22nd June to 4th July, 2009, Sponsored by AICTE.
53. Faculty Development Programme in Data Warehousing and Data Mining, Organized by Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 16th June to 20th June, 2008, Sponsored by AICTE.
54. Faculty Development Programme in Data Mining and Data Warehousing, Organized by Anna university, Chennai, from 25th May to 1st June, 2008, Sponsored by AICTE.
55. Staff Development Programme in Computer R & D Division of ECE , Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 19th May to 23^{ed} May, 2008, Sponsored by AICTE.
56. Faculty Development Programme in Principles of compiler design, Organized by PSNA Engineering College, Dindigal, from 26th November to 8st December, 2007, Sponsored by AICTE.
57. Faculty Development Programme in Theory of computation, Organized by SSN Engineering College, Chennai, from 21th May to 2nd June, 2007, Sponsored by AICTE.
58. Tutorials on Effective teaching-learning management and student personnel management at Annai Mathammal Sheela Engineering College, Erumapatty, Namakkal, from 7th December to 9th December, 2005, Sponsored by AICTE.

GOOGLE SCHOLAR PAGE

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FOLLOWING

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<https://publons.com/researcher/1704378/kallam-suresh/>

<https://vidwan.inflibnet.ac.in/profile/214276/MjE0Mjc2>

scopus id: 57202595661

EDUCATION AND ACADEMIC QUALIFICATIONS

SL. NO	QUALIFICATION	SPECIALIZATION	Year	CLASS	UNIVERSITY/BOARD
1	Ph.D.	Computer Science and Engineering	2016	-	VIT University, Vellore, TN.
2	M.Tech.	Information Technology	2009	First Class with distinction	JNTUH College of Engineering. Kukatpally, Hyderabad, A.P
3	B.Tech.	Computer Science & Information Technology	2005	First Class	AITS, Rajampet.
4	D.EC.E	Diploma in Electronics and Communication	2002	First Class	S.V.Govt.Polytechnic College, Tirupati.
5	S.S.C	-	1999	First Class	Z.P.HighSchool,Tiruchanoor, Tirupati

Experience

SL. NO	DESIGNATION	DEPARTMENT AND COLLEGE /UNIVERSITY	FROM	TO
1.	Associate Professor	Department of CSE, Sreevidyanikethan Engineering College, Autonomous, Tirupati, AP.	2019	Tilldate
2.	Professor	SCSE, Galgotias University, Greater Noida	2017	2019
3.	Associate Professor	Computer Science and Engineering, AITS, Autonomous, Rajampet, AP	2016	2017
4.	Assistant Professor	Information Technology, AITS, Autonomous, Rajampet, AP, India	2011.	2016
5.	Foreign Faculty	Software College, EAST CHINA TECHNICAL UNIVERSITY, P.R.CHINA	2010	2011
6.	Visiting Faculty	Jiangxi Normal University, Nanchang, Jiangxi 330022, P.R.CHINA.	2010	2011
7.	Assistant Professor	Information Technology, AITS, Autonomous, Rajampet, AP, India	2009.	2010
8.	ASSISTANT PROFESSOR	Information Technology, AITS, Autonomous, Rajampet, AP, India	2005.	2007

SPECIALIZATION

Internet of Things (IoT), Cyber-physical system, intelligent systems, smart environments and Health care using IoT.


PUBLICATIONS

1. M S, Mekala; DHIMAN, GAURAV; Patan, Rizwan; Kallam, Suresh; Ramana, Kadiyala; Yadav, Kusum; Alharbi, Ali O, "Deep Learning-influenced Joint V2I and V2V Communication Approach for Internet of Vehicles (IoV) "Expert Systems, Willy Publications, Accepted, June, 2021.
2. **Kallam Suresh**, Rizwan Patan, Tathapudi V. Ramana, Amir H. Gandomi "Linear Weighted Regression and Energy-Aware Greedy Scheduling for Heterogeneous Big Data" Journal Electronics, MDPI Publisher, SCI, Manuscript ID:

Electronics-1066832, https://www.mdpi.com/journal/electronics/special_issues/ML_BDA.
[Accepted Feb.2021](#).

3. Subhashini Peneti, M. Sunil Kumar, **Suresh Kallam**, Rizwan Patan, Vidhyacharan Bhaskar, Manikandan Ramachandran "BDN-GWMNN: Internet of Things (IoT) enabled secure smart city applications" *Wireless Personal Communications*, Springer, Accepted FEB,2021.
4. V. Mydukuri, Rathnamma; **Kallam, Suresh**; Patan, Rizwan; Al-Turjman, Fadi; Ramachandran, Manikandan " Deming Least Square Regressed Feature Selection and Gaussian Neuro-Fuzzy Multi-Layered Data Classifier for Early Covid Prediction ", *Expert Systems, Wiley*, FEB 2021, Accepted. **SCI**, Impact factor : 1.546. Manuscript ID EXSY-Dec-20-854.
5. Ramesh.S, **Suresh Kallam**, Rizwan Patan , Ramachandran Manikandan and *Fadi Al-Turjman*," 5G Integrated Spectrum Selection and Spectrum Access Using AI-Based Framework for IoT Based Sensor Networks ",*Computer Networks, Elsevier, Volume 186, 26 February 2021, 107649, SCI*, Impact factor :3.1.
6. Sunil kumar Malchi, **Suresh Kallam**, *Fadi Al-Turjman* Rizwan Patan ," A trust-based fuzzy neural network for smart data fusion in Internet of Things ", *Computers and Electrical Engineering, Elsevier*, Jan 2021, Published. **SCI**, vol.89, Impact factor :2.6 <https://doi.org/10.1016/j.compeleceng.2020.106901>.
7. Nalliyanna V. Kousik, Yuvaraj Natarajan, R. Arshath Raja, **Suresh Kallam**, Rizwan Patan and Amir H. Gandomi," Improved salient object detection using hybrid Convolution Recurrent Neural Network ",*Expert Systems with Applications, Elsevier*, 15 March (2021), Vol 166, pp: 114064. **SCI**, Impact factor :5. 4, doi.org/10.1016/j.eswa.2020.114064.
8. Nalliyanna Goundar Veerappan Kousik , Yuvaraj Natarajan, **Kallam Suresh** , Rizwan Patan and Amir H. Gandomi,"Improving Power and Resource Management in Heterogeneous Downlink OFDMA Networks",*Information journal, MDPI Publication*, 10 April (2020). *Web of Science*, Impact factor :1.88, *Information* 2020, 11(4), 203; [doi:10.3390/info11040203](https://doi.org/10.3390/info11040203).
9. *Venkata Subbaraju Dommaraju, Karthik Nathani, Usman Tariq, Fadi Al-Turjman, Suresh Kallam, Praveen Kumar Reddy M, Rizwan Patan*, "ECMCRR-MPDNL for Cellular Network Traffic Prediction with Big Data",**IEEE Access**, published 27 May 2020. Vol:8 (SCI IF-4), [10.1109/ACCESS.2020.3002380](https://doi.org/10.1109/ACCESS.2020.3002380).
10. Dr.O.Obulesu, **Dr.K.Suresh**, and B.VenkataRamudu " Diabetes Prediction using Machine Learning Techniques", *Helix journal*, 30 April (2020). *Web of Science*, 2020, Volume and Issue: 10 (2):Page: 136-142; [doi:https://doi.org/10.29042/2020-10-2-136-142](https://doi.org/10.29042/2020-10-2-136-142).
11. Haftu Tasew Reda, Abebe Diro, Naveen Chilamkurti, **Suresh Kallam** " Firefly-inspired stochastic resonance for spectrum sensing in CR-based IoT communications ",*Neural Computing and Applications*, 10 November (2019), **32**, pages16011–16023. Springer ,*SCI*, Impact factor 4, <https://doi.org/10.1007/s00521-019-04584-0>.
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14. *S. Vijaykumar, P. Rizwan, S. Khanand, Suresh Kallam, "Reliable and Energy-Efficient Emergency Transmission in Wireless Sensor Networks", Internet Technology Letters, Wiley Publications, 2019, doi: 10.1002/itl2.91(SCI), VOLUME 2 ISSUE 2. PP 1-6.*
15. *O. Obulesu, Kallam Suresh, M Mahendra and M. Rajasekhara Babu, "Energy Saving using Green Computing Approach for Internet of Thing (IoT) based Tiny Level Computational Devices", Recent Advances in Computer Science and Communications Formerly Recent Patents on Computer Science (2020) 13: 6. <https://doi.org/10.2174/2213275911666181030110313>.(Scopus)*
16. *Suresh Kallam, Rajasekhara Babu Madda, Chi-Yuan Chen, Rizwan Patan, Dhanaraj Cheelu "Low energy aware communication process in IoT using the green computing approach", IET Networks, 2018, Volume: 7, Issue: 4 Pages: 258 - 264, doi: 10.1049/iet-net.2017.0105.(ESCI)*
17. *Rizwan Patan, K.Suresh and Dr.M.RajasekharaBabu "Design and development of low investment smart hospital using internet of things through innovative approaches. "Biomedical Research 2017; 28 (10):ISSN:0970-938X.(SCI)*
18. *K.Suresh and Dr.M.RajasekharaBabu "SOSIoT: SOS Optimization to leverage the Energy Efficient Internet of Things(IoT) based on Route Search Optimization "International Journal of Computer Aided Engineering and Technology, 2018 Vol.10 No.5, pp.530 – 542, published by Inderscience Publishers. (Scopus indexed).DOI:10.1504/IJCAET.2018.094331.*
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20. *K.Suresh and Dr.M.RajasekharaBabu "Towards Effective Communication Technique for Energy Efficient Internet of Things "International Journal of Engineering Research in Africa Vol. 21 (2016) pp 184-190 JERA, Trans Tech Publications, Switzerland(Scopus indexed)doi:10.4028/www.scientific.net/JERA.21.184*
21. *K.Suresh, Elizabeth Isaac and Dr.M.RajasekharaBabu "High Performance Computing on Heterogeneous/ Multiprocessors System Energy-Aware Design "International Journal of Applied Engineering Research IJAER ISSN: 0973-4562 Volume: 72 No.01 | 10 Feb-2015, Volume 10, Number 3 (2015) pp. 8841-8853 (Scopus indexed)http://www.ripublication.com/ijaer10/ijaerv10n4_41.pdf*
22. *K.Suresh, Dr.M.RajasekharaBabu, "Power-Aware System Design For Multiprocessors And Voltage Scaling/Frequency " Journal of theoretical and applied information technology JATIT ISSN: 1992-8645 | eISSN: 1817-3195 Volume: 72 No.01 | 10 Feb-2015, page 149-154, Available @ <http://www.jatit.org>(Scopus indexed)<http://www.jatit.org/volumes/Vol72No1/18Vol72No1.pdf>*
23. *K.Suresh, L.Gangadhar and M.Vidya "Medical Imaging Computing Based On Graphical Processing Units For High Performance Computing "IJRET: International Journal of Research in Engineering and Technology eISSN: 2319-1163 | pISSN: 2321-7308 Volume: 03 Special Issue: 05 | May-2014 | NCEITCS-2014, Available @ <http://www.ijret.org>.*
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25. K.Ramana,Dr.A.Subramanyam and **K.Suresh**“A Survey on Cloud Computing and Service Oriented Architecture”VSRD International Journal of Computer science and Information technology ,VSRD-IJCSIT, Vol. 1 (9), 2011, 656-665,ISSN NO:2231-2471http://www.vsrjournals.com/CSIT/Issue/2011_11_Nov/Web/2011_11_Nov.html.
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 27. K.Ramana,M.Subba Rao ,**K.Suresh** and O.Obulesu “Performance Analysis of Load Balancing “International Journal of Advanced Research in Technology Vol. 1 Issue 1, Sep 2011,ISSN NO: 6602 312,<http://www.ijart.org/2011/IJART007.pdf>
 28. **K.Suresh**,R.MadanaMohana and Dr.A.RamaMohan Reddy “Improved FCM algorithm for Clustering on Web Usage Mining”, **IJCSI International Journal of Computer Science Issues**, Vol.8 Issue 1, January 2011,ISSN(Online):1694-0814. <http://www.ijcsi.org/papers/IJCSI-8-1-42-45.pdf>
 29. **K.Suresh**,R.MadanaMohana and Dr.A.RamaMohan Reddy “Improved FCM algorithm for Clusteringthe IRIS data”, **IJCSE International Journal on Computer Science and Engineering**, Vol.3,No 1, January 2011, pp 323-326 ,ISSN 0975-3397. <http://www.enggjournals.com/ijcse/doc/IJCSE11-03-01-088.pdf>
 30. R.MadanaMohana, **K.Suresh** and Dr.A.RamaMohan Reddy “crime analysis using data mining”, **IJEECT International Journal of Electrical ,Electronics and Computing Technology**, Vol.1(2), Jan-April, 2011, pp 58-63 ,ISSN 2229-3027.
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Paper Submitted/Underreview/Revision

1. Mekala M.S , , Rizwan Patan, *Fadi Al-Turjman*, **Kallam Suresh**, korhancengiz, jaroslav.frnda” RFTRS: Reinforcement Learning based Flexible Task and Resource Scheduling Approach for Heterogeneous Fog Environment” Manuscript ID Access-2020-58212, IEEE Access, Dec,2020.
2. Sathish K, Narayana Y.V ,Mekala M.S, Rizwan Patan **Suresh Kallam**, ” Efficient Tumor Volume Measurement and Segmentation Approach for CT Image based on Twin Support Vector Machines” Manuscript ID Access-2020-58212, Neural Computing and Applications, Springer, Dec,2020.
3. K. Deeba, , Amutha Balakrishnan,kadiyala Ramana, Vidhyacharan Bhaskar, **Suresh Kallam**, ” Deep learning and IOT based system for Leaf disease classification in Smart Agriculture” Wireless Personal Communications, Springer, Sep.,2020
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Ph.D Thesis Evaluation

- “AN EFFICIENT OPINION BASED RECOMMENDER SYSTEM WITH QUICK ACCESS MEMORY AND COLLABORATIVE FILTERING”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “An Efficient Intrusion Detection System with Feature Selection, Classification and Optimized Rule Generation Algorithms for Network Security”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “EARLY DETECTION OF AUTISM SPECTRUM DISORDER USING RECURRENT NETWORK CLASSIFIERS FROM GENOME SEQUENCE” BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.
- “ Design of Geographical Zone based Traffic Aware Routing Algorithms for Efficient Data Transmission in Vehicular Ad Hoc Network”, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI,TN.

Editorship

- **Science Publishing Group**, USA, *Engineering and Applied Sciences* journal ,Special Issue Guest Editor for *Engineering Projects and Studies Using Raspberry Pi*.
- **Indersciencejournal**(World Review of Science, Technology and Sustainable Development ,Special Issue on: "The Emergence of Sustainable Development and Technology for Innovation Using Green Computing")(Free Scopus Journal).
- **Benthamsience**(Recent Patents on Computer Science ,Special Issue on: "Recent advances in Internet of Things using Computing Intelligence") (Free Scopus Journal).

Copyright Register

1. “NEURAL NETWORKS FOR SMART DATA STORAGE USAGE IN INTERNET OF THINGS” 29 April 2020 Registration Number :L-90786/2020.
2. “Performance Improvement of Internet of Things Applications for Smart Cities through Real-Time Big Data Computing” 18 June 2021, **Registered Number** :L-11191/2021-CO/L.
3. “INTERNET OF THINGS (IOT) ENABLED SECURE SMART CITY APPLICATION” ,**Registered 6 June 2021**,3097/2021-CO/L
4. “Blockchain Defined Network (BDN) based secure transaction in IOT environment” March 2021,Diary no. is 6954/2021-CO/L.
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Patent filled

1. “Computer Implemented method for detection text based cyber stalking in data transmission using machine learning”,patent application number 202041028541, Patent published on 17.07.2020.
2. “System for walking Assistance device for visually impaired person using machine learning”,patent application number 202041007351, Patent published on 28.02.2020.
3. “IOT Sensors based multi functional and intelligent walk guiding stick for visual disabled person”,patent application number 201941051603, Patent published on 20.12.2019.
4. “Method of lung cancer detection using machine learning based CT-SCAN image processing”,patent application number 201941050453, Patent published on 13.12.2019.
5. “Method of Load Distribution Balancing For Fog Cloud Computing In IoT Environment”,patent application number 201941044511, Patent published on 15.11.2019.
6. “System and Method for data security using DNA cryptography based encryption”, patent application number 201941039845, Patent published on 01.10.2019.
7. “Method for maximum energy utilization in Internet of Things”, patent application number 201941040703, Patent published on 09.10.2019.
8. “System of Intelligent parking management using cloud computing”, patent application number 201911026316, Patent published on 12.07.2019.
9. “Fuzzy Neural Network Based PID control system and method thereof for industrial process control” patent application number 201941024479, published on 28.06.2019
10. “Computer Implemented system for Optimizing placement and routing in very largescale integrated circuit design”,201941021599,published on 09.08.2019.
11. “Patient Monitoring System“Application number 201811027264, applied on 20.07.2018.

Patent Grant/Accepted (International)

1. “QUANTUM MACHINE LEARNING BASED SENSOR CONSOLIDATION APPRAOCH FOR IIOT” ”,patent application number 2020102437, Patent Granted on 28.10.2020.
2. “EARLY COVID PREDICTION: NEURO FUZZY MULTI-LAYERED DATA CLASSIFIER” ”,patent application number 2020102448, Patent Granted on 28.10.2020.
3. “SPATIO-TEMPORAL MODELLING TECHNIQUES FOR PREDICTING COVID-19 INFECTION RISKTHROUGH WEARABLE” ”,patent application number 2020102363, Patent Granted on 21.10.2020.
4. “**Smart COVID Mask: AI-based mask with attachment to auto-detect and kill the COVID-19 virus** ”,patent application number 2020102080, Patent grant on 30.09.2020.
5. “**Smart COVID Scanner: Portable and Affordable Scanner to Detect COVID-19 Virus**”,patent application number 2020101728, Patent Granted on 02.09.2020.
6. “**INDUSTRIAL DIGITAL ASSISTANTS (IDA): DESIGNING AND REORGANIZING THE WORKPLACE LAYOUT FOR THE INDUSTRIES THROUGH AI TECHNIQUES DURING LARGE**

- SCALE PANDEMICS**”,patent application number 2020101596, Patent Granted on 26.08.2020.
7. **“Customized Identity Management Systems (CIMS) for Smart City Infrastructure Platform through Blockchain”**,patent application number 2020101845, Patent Accepted on 15.08.2020.
 8. **“SMART QUARANTINE SHELTERS FOR POTENTIAL RISK PATIENTS USING IOT”**,patent application number 2020101145, Patent Granted on 30.07.2020.
 9. **“ADVANCE METERING INFRASTRUCTURE SYSTEM FOR LARGE SCALE IOT NETWORKS DATA COLLECTION BY STREAMING”**,patent application number 2020101173, Patent Granted on 22.07.2020.
 10. **“LARGE SCALE IoT PILOT STRUCTURE FOR SMART CITY PLAN AND DEVELOPMENT”**,patent application number 2020101211, Patent Granted on 22.07.2020.

Reviewer

- IEEE Access
- IET Networks(Scopus,Web of Science)
- Wireless Personal Communication
- Ambient and humanoid journal
- Computer Communication, Elsevier
- Inderscience Journal (Scopus)
- IGI Global(ESCI)
- IET Communication
- Betham Science Journal(Scopus)
- Elsevier Journal(Scopus)
- Journal of Ambient Intelligence and Humanized Computing
- The Computer Journal, The Oxford Academic,SCIE and Scopus journal.

AWARDS AND RECOGNITION

i) Academic and Research Awards


2018**“Best Faculty Award -2018”** by the Academic Brilliant Awards ,28 January 2018, at Noida, Uttar Pradesh, India.

2017 **“Young Scientist Award -2017”** by the CERG ,8 December 2017, at Delhi, India.

2017 **“Young Faculty Award in Computer Science and Engineering-2017”** by the. “Venus International Foundation”,8 July 2017, at Chennai, India

2016 **Got who is who award, 2000 Outstanding Intellectuals of the 21st Century from The International Biographical Centre, of Cambridge, England. 12, August 2016.**

2016 Got Research Award from VIT University in the year 2016 for highest contribution of paper published at SCOPE, VIT University ,Vellore, Tamilnadu.



2012	Got Second winning team International Consortium for Affordable Medical Technologies (CAMTech) was mentored by Dr Ted Moallem and Dr Data Santorino. The conclave, which was organised for the first time in India.
2008	Best paper Award (First Prize), First Prize in National Technical Paper meet event SANKETHIKA-08 at Sreenidhi institute of technology and sciences, Gatkeswar, Hyderabad on march 2008.
2006	Best Paper Award in Emerging Technologies and Applications ETA-06 at Sarasota University, Rajkot on 2006.

Workshop Resource Person/Organized

- ATAL workshop on Smart grid automation using Machine learning, Global Institute , Bangalore , Dec ,2020.
- AICTE 1 week STTP programme on Recent Trends in Industry 4.0 Technologies, Don Basco College of Engineering, Goa, July 2020 ,
- Saveetha Engineering College, Tamilnadu, India.
- 10 July , ITS Engineering College, G. Noida, UP, India.
- 19 March 2018, Majan College, Oman.
- 21 March 2018, Mazoon college, Oman.
- 4 March 2018 , Galgotias University , India.

Guest Lectures/Talks

- Annamacharya Institute of Technology and Sciences ,Kadapa on “Recent trends in IoT” 22 march ,2019.
- Priyadarisini Engineering college, Hyderabad on “Data mining” June ,2017

Event Judge /Reviewer for Student activities

- Judge for paper Presentations in ACM Students Convention on “Current and Emerging technologies in Engineering” on 21 January 2020 at Sree vidyanikethan Engineering College , Tirupati.
- Judge for Mock Interview in Mohan Mantra Students Convention 27 and 28 Sep. 2019 at Sree vidyanikethan Engineering College , Tirupati.

1. Editorial board member International Journal of Latest Technology in Engineering, Management & Applied Science,2018.
2. Scientific Program Committee member for IIR Virtual Conference on Science, Engineering and Technology Applications held on April 14, 2016 (IIR-VCSETA-2016) <http://iirvcseta.org>
3. Scientific Program Committee member for IIR International Conference on Science, Engineering and Technology Applications, July 8-10, 216 (IIRICSETA-2016)<http://icseta.org>
4. Scientific Program Committee member for 2nd International Conference on Computing Paradigms held on July 22-24, 2016 (ICCP-2016) <http://iccpconferences.org>
5. The Third International Conference on Electrical, Electronics, Computer Engineering and their Applications (EECEA2016) that will be held in Lebanon, on April 21-23, 2016. <http://sdiwc.net/conferences/eecea2016/program-committees/>
6. The International Conference on Database, Data Warehouse, Data Mining and Big Data (DDDMBD2015) Surya University, Indonesia on September 10-12, 2015. <http://sdiwc.net/conferences/dddmbd2015/program-committee/>
7. International Conference on Informatics and Advanced Computing (ICIAC-15) that will be held during May 27-28, 2015 London, United Kingdom. <http://iciac.org/committee.php>
8. International Conference on Computer Science and Information Systems (ICCSIS-15) April 24-25, 2015 Pattaya, Thailand, <http://iccsis.org/committee.php>
9. Technical Program Committee member for International conference on Human computing & learning with technologies(ICHCLWT 2015). <http://www.ichclwt.com/committee.php>
10. International Conference on Electronics Systems and Information Technology (ICESIT-15) March 14-15, 2015 Dubai, UAE, <http://icesit.org/committee.php>
11. Technical Program Committee member for Second a conference on computer supported education & Information technology(ICCSEIT 2015). <http://www.iccseit.com/programcommittee.php>
12. International Conference on Network security & Computer Science (ICNSCS-15) Feb. 8-9, 2015 Kaula Lumpur, Malaysia. <http://icnscs.org/committee.php>
13. International conference on E-Learning Management & Computing System (ICEMCS2015), April 25-26,2015,Amsterdam,The Netherland.
14. <http://www.icemcs.com/programcommittee.php>
15. The Second International Conference on Data Mining, Internet Computing, and Big Data (BigData2015) June 29- July 1, 2015 » Reduit, Mauritius ,University of Mauritius
16. <http://sdiwc.net/conferences/bigdata2015/>
17. International Conference on Innovations in Intelligent Systems and Computing Technologies (ICIISCT2015) September 18-20, 2015 » India Rajasthan Vidyapeeth (D) University
18. <http://sdiwc.net/conferences/iciisct2015/program-committees/>
19. Technical Program Committee member for Second a conference on advanced in computing, engineering & learning technologies,(ICACELT 2014).<http://www.icacelt.com/committee.php>
20. Reviewer for the international conference on E-Technologies and Business on the Web(EBW2013) ,Bangkok,Thailand on may 7 to 9 ,2013. <http://sdiwc.net/conferences/2013/ebw2013/program-committees/>
21. Committee member for ICAISED 2013 - 2nd International Conference on Advance Information System, E-Education & Development (ICAISED 2013) ,Malaysia.<http://www.icaised.com/committee.php>

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22. The Second International Conference on Digital Information and Communication Technology and its Applications (DICTAP2012)Thiland may 16-18 ,2012.
 23. The International Conference on Informatics and Applications (ICIA2012) <http://sdiwc.net/icia2012/page.php?id=6> Malaysia, June 3-5, 2012
 24. The International Conference on Cyber Security, Cyber Warfare and Digital Forensic (CyberSec2012) Malaysia, June 26-28, 2012
 25. The Second International Conference on Digital Information Processing and Communications (ICDIPC2012) Lithuania, July 10-12, 2012
 26. The Second International Conference on Digital Enterprise and Information Systems (DEIS2012) Czech Republic, July 16-18, 2012
 27. The World Congress on E-Commerce and Business on the Web (WCEBW2012) United Kingdom, Aug. 27-29, 2012
 28. The International Conference on E-Learning and E-Technologies in Education (ICEEE2012) Poland, Sept. 24-26, 2012
 29. The International Conference on Computing, Networking and Digital Technologies (ICCNDT 2012) Bahrain, Nov. 11-13, 2012,<http://iccndt2012.sdiwc.us/page.php?id=6>.

PROFESSIONAL QUALIFICATION/Certificates

1. MAT Lab basics
2. IBM Bluemix Cloud Computing
3. Microsoft Virtual Academy Certificate of Completion on 20 June 2016.
4. IBM DB2 certified
5. IBM RAD certified.

NPTEL certifications:


- 1."Teaching and learning in Engineering (TALE) "with Elite grade on March 2019.
- 2."Introduction to Internet of Things" with Elite grade on march 2019.
- 3."Python for Data Science" on Sep. 2019.

Courseracertifications:

1. Course Completed "Machine Learning for All "course authorized byUniversity of Londonand offered through Coursera ,Course Completed on 11.07.2020.
2. Course Completed "Internet of Things: Communication Technologies "course authorized byUniversity of California San Diego and offered through Coursera ,Course Completed on 11.07.2020.
3. Course Completed "Successful Career Development "course authorized by University System of Georgiaand offered through Coursera ,Course Completed on 09.07.2020.
4. Course Completed "Interfacing with the Arduino "course authorized byUniversity of Californiaand offered through Coursera ,Course Completed on 09.07.2020.
5. Course Completed "Cybersecurity and the Internet of Things "course authorized byUniversity System of Georgiaand offered through Coursera ,Course Completed on

09.07.2020.

6. Course Completed **“Introduction to Cloud Identity** “course authorized by Google Cloud and offered through Coursera ,Course Completed on 05.07.2020.
7. Course Completed **“Introduction to Psychology** “course authorized by Yale University and offered through Coursera ,Course Completed on 04.07.2020.
8. Course Completed **“Cloud Computing Basics (Cloud 101)**“course authorized by LearnQuest and offered through Coursera ,Course Completed on 04.07.2020.
9. Course Completed **“Work Smarter, Not Harder: Time Management for Personal & Professional Productivity!** “course authorized by University of California, Irvine and offered through Coursera ,Course Completed on 04.07.2020.
10. Course Completed **“Blockchain: Foundations and Use Cases** “course authorized by ConsenSys Academy and offered through Coursera ,Course Completed on 03.07.2020.
11. Course Completed **“Machine Learning: Clustering & Retrieval** “course authorized by University of Washington and offered through Coursera ,Course Completed on 03.07.2020.
12. Course Completed **“Fundamentals of Network Communication** “course authorized by University of Colorado System and offered through Coursera ,Course Completed on 03.07.2020.
13. Course Completed **“Introduction to the Internet of Things and Embedded Systems** “course authorized by University of California, Irvine and offered through Coursera ,Course Completed on 02.07.2020.
14. Course Completed **“IoT (Internet of Things) Wireless & Cloud Computing Emerging Technologies**“course authorized by Yonsei University and offered through Coursera ,Course Completed on 01.07.2020.
15. Course Completed **“Machine Learning: Classification** “course authorized by University of Washington and offered through Coursera ,Course Completed on 01.07.2020.
16. Course Completed **“MOOC: How to make a MOOC?”**“course authorized by Novosibirsk State University and offered through Coursera ,Course Completed on 01.07.2020.
17. Course Completed **“Machine Learning Foundations: A Case Study Approach** “course authorized by University of Washington and offered through Coursera ,Course Completed on 28.06.2020.
18. Course Completed **“Graph Analytics for Big Data** “course authorized by University of California San Diego and offered through Coursera ,Course Completed on 20.06.2020.
19. Course Completed **“Big Data Modeling and Management Systems** “course authorized by University of California San Diego and offered through Coursera , Course Completed on 20.06.2020.
20. Course Completed **“Big Data Integration and Processing** “course authorized by



University of California San Diego and offered through Coursera, Course Completed on 24.06.2020.


21. Course Completed “**Big Data - Capstone Project**” “course authorized by University of California San Diego and offered through Coursera, Course Completed on 24.06.2020.
22. Course Completed “**Introduction to Cybersecurity Tools & Cyber Attacks**” course authorized by IBM and offered through Coursera on 17.06.2020.
23. Course Completed “**Introduction to Big Data**” “course authorized by University of California San Diego and offered through Coursera on 17.06.2020.
24. Course Completed “**Machine Learning With Big Data**” “course authorized by University of California San Diego and offered through Coursera on 17.06.2020.
25. Programming for Everybody (Getting Started with Python)” an online course authorized by University of Michigan and offered through Coursera completed on 01.06.2020.
26. “**AI For Everyone**” an online course authorized by deeplearning.ai and offered through Coursera completed on 31.05.2020.

Online course Certificates/Webinars/workshops/Seminars/Talks

1. Dr.K.Suresh attended Online Faculty Development Program on “Artificial Intelligence and Data Analytics for Automation”, organized by the Department of Robotics Engineering, Karunya Institute of Technology and Sciences, Coimbatore, held from 27th July to 31st July 2020.
2. Dr.K.Suresh attended Online Faculty Development Program on “Artificial Intelligence :Theory and Applications”, organized by Kamla Nehru Institute of Technology and Sciences, U.P, held from 25th July to 29th July 2020.
3. Dr.K.Suresh attended Online Faculty Development Program on “Latex and its Applications for Researchers”, organized by the Department of IS&E, VidyaVardhaka College of Engineering, Mysuru, held from 20th July to 24th July 2020.
4. Dr.K.Suresh attended Online Faculty Development Program on “vision beyond 5G with blockchain and AI”, organized by the Department of IS&E, SRM, Chennai, held from

23rd July to 25 th July 2020.

5. Dr.K.Suresh attended Online Faculty Development Program on “Attended a Three Day Workshop on "Introduction to Web Development” during 17th- 19th july 2020, Organized by SkilltoHire.
6. Dr.K.Suresh attended Online Faculty Development Program on “Artificial Intelligence and its applciations through machine learning ”,organized by the Department of CSE, BITS,Warangal , held from 14 th July to 18 th July 2020.
7. Dr.K.Suresh attended Online Faculty Development Program on “Evolution of IoT and its real time applciations ”,organized by the Department of CSE, Malla Reddy Institute of Technology and Science,Hyderabad , held from 13 th July to 17 th July 2020.
8. “BLOCK CHAIN TECHNOLOGY And CYBER SECURITY” conducted by VIKAS Group of Institutions from 09-07-2020 to 12-07-2020 .
9. “Security Issues in Internet of Things ” conducted by St.Mother Theresa Engineering College,Chennaion 06.07.2020.
10. “Machine Learning With Deployment” conducted by SRI VASAVI ENGINEERING COLLEGE,Tadepalligudem,AP, on 03.07.2020 to 05.07.2020.
11. “Recent Trends in Computer Science” conducted by SITAMS,Chittooron 28.06.2020 to 02.07.2020.
12. “Block Chain Technology” conducted by Mallareddy Institute of Technology and Science ,Hyderabadon 02.07.2020.
13. “Effective usage of educational technology in teaching learning process as a part of NBA ” conducted by M.S.Ramaiah Institute of Technology,Bangaloreon 22.06.2020 to 26.06.2020.
14. “Big data management : An End-to End- perspective” conducted by M.S.Ramaiah Institute of Technology,Bangaloreon 15.06.2020 to 19.06.2020.
15. “Cyber Forensics and Cyber Security” conducted by G. Narayanamma Institute of Technology and Science, Hyderabad on 15.06.2020 to 19.06.2020.
16. “MACHINE LEARNING AND RESEARCH OPPORTUNITIES” conducted by SAPTHAGIRI COLLEGE OF ENGINEERING,BENGALURUfrom15.06.2020 to 19.06.2020.
17. “Data Science Using R programming” conducted by Mahaveer Institute of ScienceandTechnology, Hyderabad on 12.06.2020 to 17.06.2020.
18. “Raspberry Pi-An IoT Magic Box: Introduction and applications ” conducted by Anand International COLLEGE OF ENGINEERING ,Jaipur on 13.06.2020.

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19. "TO FIGHT COVID-19 USING ROBOTICS & IOT" conducted by Mahendra Engineering College,Chennaion 06.06.2020.
 20. "Online 5 days FDP on" Cloud Infrastructure and virtualization" " conducted by Institute of Aeronautical Engineering,Hyd.from 25-05.2020 to 29-05-2020.
 21. "Introduction to Data Science" conducted by Guntur Engineering College,Guntur with association of Code gnan IT Solutions from 18-05.2020 to 22-05-2020.
 22. World Telecommunication & Information Society Day (WTISD) 2020, organized by Department of Information Technology, Babu Banarasi Das Northern India Institute of Technology, Lucknow in association with The Institution of Engineers [IEI] UP State Centre on Sunday, May 17, 2020.
 23. "Cyber securities for beginners" conducted by Palimanan Institute of technology,Chennai on 16.05.2020.
 24. "Building support vector machine learning model" conducted by Code gnan IT Solutions on 16.05.2020.
 25. "INDUSTRY PERSPECTIVE ON DATA SCIENCE AND CLOUD COMPUTING" conducted by MuscutCollege,Oman and Sathyabama Institute of science and Technologyfrom 14.05.2020 to16-05-2020.
 26. "Engineering-Real world application" conducted by Sri venkataswaraa College of Technology,Chennai on 15.05.2020.
 27. "IPR and IP Management for Innovation and Start-ups" conducted by R.M.K. ENGINEERING COLLEGE,Chennai on 15.05.2020.
 28. "Data visualization with R programming" conducted by Code gnan IT Solutions on 15.05.2020.
 29. "How to conduct a search to know the uniqueness of your Idea" conducted by Questel India on 14.05.2020
 30. "Digital teaching for digital learning" conducted by nilagiri college of arts and science on 14.05.2020.
 31. "How to fast track your social distance" conducted by Sri venkataswaraa College of Technology,Chennai on 14.05.2020.
 32. "Faculty Program on NBA" conducted by Bharati Vidyapeeth College Of Engineering, Navi Mumbaion 15.05.2020.

33. "E-QUIZ ON TEACHING APTITUDE" conducted by Jamal Mohamed College (Autonomous), Tiruchirappalli on 14.05.2020.
34. "POST COVID-19 Way Forward" conducted by Prathyusha Engineering College , Thiruvallur. on 12-05-2020.
35. "Ruby Programming" conducted by VIT Chennai with association of ICT ,IIT Bombay from 11-05.2020 to 12-05-2020.
36. "Lean for learners days" conducted by Sri venkataswaraa College of Technology,Chennai on 11.05.2020.
37. One Week Online FDP on Internet of Things (IoT) for Emerging Applications" organized by the Department of Electronics and Computer Engineering, KITS Warangal with associate with Cloud Chip Technologies held on 10th-14th May, 2020.
38. "Machine Learning and its Applications" conducted by SVCET, Chittoor on 9th May, 2020
39. "Building Decision Tree from scratch using python webinar" conducted by Code gnan IT Solutions on 9th May, 2020.
40. "Gamification Tools in Teaching" conducted by Internal Quality Assurance Cell, St. Xavier's College for Women, Aluva on 07-05-2020.
41. "building a mobile App for machine learning model webinar" conducted by Code gnan IT Solutions on 5th May, 2020.
42. "One Week Online Faculty Development Programme on Python 3.4.3" conducted by Sathyabama institute of Science and Technology, Chennai, In Association with Spoken Tutorial, Indian Institute of Technology,Bombay, IIT Bombay, funded by the National Mission on Education through ICT, MHRD, Govt. of India. From 04.05.2020 to 08-05-2020.
43. "One Week Online Faculty Development Programme on LaTeX" conducted by Poornima University, Jaipur, In Association with Spoken Tutorial, Indian Institute of Technology,Bombay, IIT Bombay, funded by the National Mission on Education through ICT, MHRD, Govt. of India. From 04.05.2020 to 08-05-2020.
44. "Machine learning for Beginners" conducted by Indian Servers on 3rd May, 2020.
45. "guidance,navigation&control of autonomous vehicles" conducted by Enflare Technologies on 03.05.2020.
46. "Web Development in Ruby on Rails" conducted by KarpagaVinayaga College of Engineering and Technology on 3rd May, 2020.
47. National Workshop on " Blockchain Technology " conducted by Ganpat University on 2nd May, 2020.
48. "UNIVERSITY INDUSTRY LINKAGE-DIFFERENT MECHANISMS" conducted by



Audisankara Group Of Institutions on 2nd May, 2020.

49. "machine learning with Scikit learn webinar" conducted by Code gnan IT Solutions on 1st May, 2020.
50. "IPR & PATENT", received certificate from BALAJI INSTITUTE OF TECHNOLOGY & SCIENCE on 28. April, 2020.
51. "Developing thinking Abilities relevant for engineering education" on 28 April 2020, received certificate from Face Prep Help.
52. "Intellectual Property and Technological Innovation in COVID 19 and Role of University R&D Spill Over Societal Benefits" on the Occasion of World Intellectual Property Day April 26, 2020, GIET University, Gunupur, Odisha.
53. "EMPLOYABILITY SKILLS IN CURRICULUM DESIGN" on 25. April, 2020, received certificate from Audisankara College Of Engineering & Technology.
54. "building simple" classifier using sklearn webinar on 25. April, 2020, received certificate from Codegnan.
55. "A 4-Day Online FDP on Data Science and Machine Learning using Python" organized by the Department of Electronics and Computer Engineering, K L University held on 20th-23th April 2020.
56. linear regression using python webinar classifier using sklearn webinar on 23 April, 2020, received certificate from Codegnan.
57. "Virtual Reality" on 20. April, 2020, received certificate from bhagwan Mahavir University, surat.
58. "How to become an Online Teacher" on 15. April, 2020, received certificate from Amity University.
59. "Web seminar: Research Proposal Writing" on 14 April 2020 on IEEE Hyderabad section.
60. "Intellectual Property by crash course" on 04 april, 2020 on Cursa and received certificate.
61. "BECOME AN IOT DEVELOPER" on 04 april, 2020 on Samrtbridge and received certificate.

PROFESSIONAL ACTIVITIES

- ❖ Life Member for Centre for Education Growth and Research (LT610)
- ❖ Member of Institute of Electrical and Electronics Engineers (IEEE) :92590725
- ❖ Member of Computer Science India(CSI) ,registration number :L3A073
- ❖ Associate Member on *Universal Association of Computer and Electronics Engineers*.
Membership no.AM1002432
- ❖ Senior member International Association of Engineers and Scientists (IAEST) membership
number:011084275.
- ❖ Member of International Journal of Computer & Organization trends(IJCOT),membership
no:SSRGJ-IJCOT-13152
- ❖ Member of International Association Computer Science and Information
Technology(MIACSIT),membership no:102175.
- ❖ Member of computer science teacher association CSTA
- ❖ Member of International Association of Engineers.
- ❖ Board member of Seventh Sense Group Journals Membership ,Id :SSRGJ-IJCTT-097
- ❖ Member of i-Xplore International Research Journal Consortium (IIRJC) Your Membership
ID is 12220
- ❖ Member <http://ijctjournal.org/boardmembers/k.suresh.pdf>

ADMINISTRATIVE RESPONSIBILITIES

1. Division Head for Data Analytics Division(2018 -2019)
2. Chairman for Project Based Learning(Aug 2018 –2019)
3. Program Chair for M.Tech.(Jan 2018-Nov 2018)
4. Board of Studies Member(BOS) ,AITS,Rajampet,AP (2012 - 2014)
5. Department Coordinator, Research and Development(2013- 2017)
6. Member, Internal Quality Assurance Cell(IQAC)(2014-2017)
7. Organizing Convener for one day workshop on cloud computing, conducted by IT at AITS,
Rajampet, 29 January, 2013.
8. Organizing Member for IEEE International Conference on Advanced Computing Technologies
(ICACT-13) going to conduct on Aug 11 and 12 2013.
9. Organized National Conference on Networking and IT ,12and 13 Oct. .2012
10. Teaching Research Assistant in East China University of technology in 2010 to July 2011.
11. Visiting Faculty for different universities in China.
12. Organize Member for National Level Paper Presentation ATM- 2010.

13. Organized National level Research Program conducted University in India level at JNTU Hyderabad 2008.
14. Conducted National Workshops at JNTU Hyderabad 2008.

Ph.D Guidance

- PhD (Computer Science)at Galgotias University,UP,India.
Mr.Jayanth Kumar Singh,17SCSE302004,2017-18.
- PhD (Computer Science and Engineering)at Galgotias University,UP,India.
Mr.Raju .B,18SCSE302003,2018-19.
- PhD (Computer Science and Engineering)at Galgotias University,UP,India.
Mr.Shrikanth Patel ,2019-20.
- PhD (Computer Science and Engineering)at Galgotias University,UP,India.
Mr.Gopi.A,2019-20.

Ph.D(Doctoral Committee Member)

- PhD –as External Doctoral committee Member
1.M.Praveen Kumar ,SCOPE,VIT University, Vellore,India.
2.Jothymee ,SCOPE, VIT University, Vellore,India.

Conference Keynote

1. “Cyber Physical System for Higher Education” ,2 day conference on “National Conference on Academia Digital Transformation [Challenges and Opportunities] (NCADT-2017) during 15-16 December 2017.
2. “Digital Tools for Teaching” National Conference on ICT Empowered Teaching, Learning and Evaluation (NCICT-2016) , on 16-17 December 2016 at SSBN College,AnatapurAP

Conference Organized

1. International Conference On Computing, Power And Communication Technologies 2018,Galgotias University,Greater Noida.
2. National Conference on Newtork and Information Technology (N²IT-2013) during ,2012 at AITS,Rajampet,AP.

3. National conference on Advanced Computing (NCAC-2011) during ,2011, at AITS,Rajampet,AP.



Text Book Publication

1. Dr.Kallam Suresh," A novel BBICR Technique in Vehicular Ad-hoc Networks" ISBN-13: 9786202317696, Publisher, KS Omniscryptum Publishing, May 2021,Scholar's Press. <https://www.barnesandnoble.com/w/a-novel-bbicr-technique-in-vehicular-ad-hoc-networks-kallam-suresh/1139441420>
2. Dr. M.Sunil Kumar Dr.V.Anantha Natarajan, and Dr.**Suresh Kallam** as an editor &Author"Empirical study for Assessing Requirement Engineering using Machine Learning Techniques ", Software Engineering Using Metaheuristic Algorithms in Lulu Publication, United States, ISBN -978-1-67814-610-8. Feb 2020.
3. M.SunilKumar,V.Anantha Natarajan, and **Dr.SureshKallam**,"Software Restructuring", December , 2019,Lulu Publications,US,ISBN:978-1-79474-441-7.
4. **K.Suresh** "Recent Trends in Internet of Things", November 2017, VSRD Academic Publications ISBN-13: 978-93-86258-82-3
5. **K.Suresh** "PROBLEM SOLVING TECHNIQUES AND INTRODUCTION TO C PROGRAMMING", june 2017, VSRD Academic Publications ISBN-13: 978-93-86258-61-8.
6. **K.Suresh**,M.RajasekharaBabu ,and P.Rizwan "Computer Architecture: A Technical Approach to Improve Performance using limited power", March 2016, VSRD Academic Publications ISBN-13:978-81-931580-6-7.


Book Chapter Publication

1. AnuRadha Reddy, Dr.G S Pradeep Ghantasala, Rizwan Patan, R. Manikandan, **Suresh Kallam**, "**SMART ASSISTANCE OF AGED AFFLICTION PEOPLE FOR GUIDING IN EMERGENCY SITUATION AT HOME** ", In Internet of Medical Things Remote Healthcare Systems and Applications, D. Jude Hemanth Etc.,(Eds.), Springer, August,2021.ISBN 978-3-030-63936-5.
2. BasettyMallikarjuna, T. V. Ramana, **Suresh Kallam**, Rizwan Patan, Manikandan Ramachandran, "Visualizing Bitcoin using BigData: Mempool Visualization, visualization, peer visualization, Attack visual analysis, High-Resolution Visualization of Bitcoin systems, Effectiveness ", In Blockchain, Big Data and Machine Learning Trends and Applications, Neeraj Kumarand Gayathri Etc.,(Eds.), CRC Press, Taylor & Francis, August,2020.ISBN 9780367370688.
3. A.Harika,M.SunilKumar,V.Anantha Natarajan, and **Suresh Kallam**, "Business Process Re-Engineering: Issues and Challenges",ICSIS-2020 scheduled on 20-21 March 2020 at Poornima Institute of Engineering & Technology, Jaipur., Springer Book Series: "Algorithms for Intelligent Systems (AIS)– Springer" (ISSN: 2524-7565), Springer.
4. **Kallam Suresh** ,PatanRizwan,B.Balamurugan,M.Rajasekhrababuand S.Sreeji, "To Identify Visible or Non-visible-Based Vehicular Ad Hoc Networks Using Proposed BBICR Technique",In: Bhatia S., Tiwari S., Mishra K., Trivedi M. (eds) Advances in Computer Communication and Computational Sciences. Advances in Intelligent Systems and Computing, vol 924. Springer, Singapore,ISBN978-981-13-6861-5,DOI:https://doi.org/10.1007/978-981-13-6861-5_12,Pages 133-142.
5. **K.Suresh**, "Software Engineering" The book chapter titled has been accepted for publication in edited book titled "Advances in Computer Science (Volume - 3)",AnkinikPublication,New Delhi,March,2019.
6. S. Namasudra, D. Devi, S. Choudhary, R. Patan and **S. Kallam**, "Security, Privacy, Trust, and Anonymity", In Advances of DNA Computing in Cryptography, S. Namasudra and G. C. Deka

- (Eds.), CRC Press, Taylor & Francis, 2018.
7. P.Rizwan, Dr.M.Rajasekharababu and **Dr.K.Suresh** “Exploring the Convergence of Big Data and the Internet of Things” Part of the Advances in Data Mining and Database Management Book Series,IGIGlobal Publication, ISBN: 9781522529477,Release Date: September, 2017,Hershey, PA 17033, USA.
 8. P.Srinivasa Rao, Dr.D.Vasumathi and **Dr. K. Suresh**, “The Adaptive Strategies Improving Web Personalization Using the Tree Seed Algorithm (TSA)”,Cognitive Science and Artificial Intelligence: Advances and Applications,SpringerBriefs in Forensic and Medical Bioinformatics ISBN 978-981-10-6697-9, ISBN 978-981-10-6698-6 (eBook) DOI:<https://doi.org/10.1007/978-981-10-6698-6>, volume VIII, Pages 23-28. December ,2017

International Conferences

1. V.Anantha Natarajan, M.SunilKumar,Rizwan Patan,**Suresh Kallam** and **Mohamed Yasin Noor Mohamed** “Segmentation of Nuclei in Histopathology images using Fully Convolutional Deep Neural Architecture”, 2020 International Conference on Computing and Information Technology, University of Tabuk, Kingdom of Saudi Arabia. Volume: 01, Issue: ICCIT- 1441, Page No.: 319 – 325, 9th & 10th Sep. 2020.
2. A.Harika,M.SunilKumar,V.Anantha Natarajan, and **Suresh Kallam**, “Business Process Re-Engineering: Issues and Challenges”,ICSIS-2020 scheduled on 20-21 March 2020 at Poornima Institute of Engineering & Technology, Jaipur., Springer Book Series: “Algorithms for Intelligent Systems (AIS)– Springer” (ISSN: 2524-7565), Springer.
3. G S Pradeep Ghantasala ; B. Venkateswarlu naik ; **Suresh Kallam** ; Nalli Vinaya Kumari ; Rizwan Patan, “Texture Recognition and Image Smoothing for Microcalcification and Mass Detection in Abnormal Region”, 2020 International Conference on Computer Science, Engineering and Applications (ICCSEA) at GIET Univeristy.
4. **K.Suresh**,Rizwan,Balumurgan,Rajasekharababu and Sreeji”To identify visible or non-visible based Vehicular Ad-hoc Networks using proposed BBICR Technique” 3rd Springer conference,IC4 2018 International Joint Conference on Computer, Communication and Computational Sciences,**Bangkok**, Thailand during 20th-21st October 2018.
5. **K.Suresh** , Syed Muzamil Basha, Dharmendra Singh Rajput, Rizwan Patan· Balamurugan B, Sk. Abdul Khalandar Basha,“Evaluating the performance of Deep Learning Techniques on Classification Using Tensor Flow Application”- 4th IEEE International Conference on Advances in Computing, Communication and Engineering (ICACCE 2018),**Paris**,France, 22 and 23 June ,2018.

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6. G Nalinipriya, Balamurugan Baluswamy, Tamizharasi Gs, Rizwan Patan, **Kallam Suresh** , M. Rajasekhara Babu “A Parallel Approach to detect and Recognize Object from Videos for Computer Vision using Deep Learning”- 4th IEEE International Conference on Advances in Computing, Communication and Engineering (ICACCE 2018),**Paris,France**, 22 and 23 June ,2018.
 7. P.Rizwan, M. Rajasekhara Babu B.Balamuruganand **K. Suresh**“Real-time big data computing for Internet of Things and cyber physical system aided medical devices for better healthcare”- Majan International Conference MIC2018,**Oman**, 19 and 20March ,2018.
 8. P.Srinivasa Rao, D.Vasumathi and **Dr. K. Suresh**, “The Adaptive Strategies Improving Web Personalization Using the Tree Seed Algorithm (TSA)”- International Conference on "Cognitive Science and Artificial Intelligence" (ICCSAI-2017),SVCE,Tirupati,AP , India, 5 to 7 July ,2017.Published in Spinger ,DOI:<https://doi.org/10.1007/978-981-10-6698-6>
 9. **K. Suresh**, Dr. M. Rajasekhara Babu and P.Rizwan “EEIoT: Energy Efficient mechanism to leverage the Internet of Things (IoT)”- IEEE International Conference on Emerging Technological Trends”, ICETT-2016, Kollam,Kerala , India, 21 and 22 October ,2016.
 10. Rizwan Patan, **Suresh K.**, Dr. Rajasekhara Babu M., “Real-Time Smart Traffic Management System for Smart Cities by Using Internet of Things and Big Data”, IEEE International Conference on Emerging Technological Trends (ICETT), ISBN-978-1-5090- 3751-3, pp. 7-15, 2016.
 11. **K.Suresh**, Dr.M.RajasekharaBabu, presented a paper entitled “A Self-Adaptive Energy Efficient Mechanism to leverage the Internet of Things (IoT)” on 2016 IEEE International Conference on Innovations in information Embedded and Communication Systems (ICIIECS’16),Karpagam Engineering College, Coimbatore ,Tamilnadu, 17 and 18 March 2016.
 12. M.Rajesh,**K.Suresh**,etc.,Presented a paper entitled “Reducing Power Consumption at Computer Architectures to Improve the Performance” on International Conference on Advances in Computing Logic, Sciences and Technology - 2016, Anatalakshmi college of Engineering, Anatapuramu,AP, 11 March 2016.
 13. **K.Suresh**, Dr.M.RajasekharaBabu, presented a paper entitled “Energy –aware system Design Compiler methods for Multiprocessors and Voltage Scaling /Frequency” on IEEE International Conference on Control ,instrumentation ,Communication and Computational Technologies (ICCICCT-2014), NI University ,Nagercoil,Kanyakumari, Tamilnadu , 10 And 11 July 2014. PRINT ISBN: 978-1-4799-4191-9,DOI:[10.1109/ICCICCT.2014.6993121](https://doi.org/10.1109/ICCICCT.2014.6993121),PAGE NO: 1079 – 1082.
 14. **K.Suresh**, Dr.M.RajasekharaBabu, presented a paper entitled “Towards on High Performance Computing of Medical Image Computation based on Graphical Processing Units” on 15 IEEE International Conference on Advanced Computing(ICACT-2013), AITS Rajampet, 21 and 22 Sept 2013. (<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6710504>)
 15. O.Obulesh, Dr.A.Rama Mohan Reddy ,**K.Suresh**,R.Ramakanth Reddy presented paper on“Finding Frequent and Maximal Periodic Patterns in Spatiotemporal Databases for

Shifted Instances” on ICECIT 2012 SRIT ,Ananthapuramu 21-23 Dec. 2012. Published by Elsevier.

16. **K.Suresh**, M.SubbaRao, M.Sankara Prasanna Kumar and K.Ramana paper accepted in International conference on IACT-11,JNN College of Engineering ,Tamil Nadu. July 2011.
17. **K.Suresh** ,R.Madana Mohana ,Dr.A.Rama Mohan Reddy and Dr.A.Subramanyam paper accepted in International conference on computers and management(CAMAN 2011),published by *IEEE Conference*, and indexed by EI and ISTP ,at Wuhan ,*P.R.China*,978-1-4244-9281-7/11 ©2011 IEEE. (<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5778781>)
18. **K.Suresh**,B.Sreenivasreddy and M.Vijaykumar presented a paper entitled “Using Site Semantics and a Taxonomy to Enhance the Web Personalization using Web Mining Process” at MKCE College ,Chennai,2010.
19. D.Vasumathi and Dr A.Govardhan and **K.Suresh** presented a paper entitled "Effective Web Personalization Using Clustering " presented in IEEE International Conference on Intelligent Agent & Multi-Agent Systems (IAMA09), Chennai-India, Jul. 2009, IEEE Xplore, [http://ieeexplore.ieee.org/xpl/tocresult.jsp?sortType%3Dasc_p_Sequence%26filter%3DAND\(p_IS_Number%3A5228011\)&rowsPerPage=50&pageNumber=1&resultAction=ROWS_PER_PAGE](http://ieeexplore.ieee.org/xpl/tocresult.jsp?sortType%3Dasc_p_Sequence%26filter%3DAND(p_IS_Number%3A5228011)&rowsPerPage=50&pageNumber=1&resultAction=ROWS_PER_PAGE).DOI: 10.1109/IAMA.2009.5228085 (ISBN: 978-1-4244-4711-4)
20. D.Vasumathi and Dr A.Govardhan and K.Suresh presented a paper entitled "Web Intelligence: Applying Web Usage Mining Techniques to Discover Potential Browsing Problems of Users " presented in International Conference on ICWS-2009 at KLC Engineering College ,Vijayawada,A.P,11and 12 of January -2009 Published at Excel India Publishers, New Delhi with ISBN: 978-81-907839-9-6.
21. **K.Suresh** , P.Srinivas Rao and D.Vasumathi presented a paper entitled "Discovery of Semantic Web " presented in International Conference on Data Management ICWS-2009 at KLC Engineering College ,Vijayawada,A.P,11and 12 of January -2009 Published at *Excel India Publishers, New Delhi* with ISBN: 978-81-907839-9-6.
22. **K.Suresh** and D .Vasumathi presented a paper entitled "Web Mining :Integration of Semantic Web and Web Usage mining " accepted in International conference ICACT-2008 at GokarajuRangaraju Institute Of Engineering and Technology,Bachupally, Kukatpally,Hyderabad on 26 and 27th December-2008 .*Published by BSP publications*.
23. **K.Suresh** attended the 4th international conference on information security at JNTUHyderabad on 23-28 December 2009.

National Conferences / Seminars

1. **K.Suresh**, L.Gangadar, and M.Vidya presented a paper entitled “ Medical Image computing on GPU for High Performance computing” on Third National Conference on Emerging and

Innovative trends in Computer Science(NCEITCS-2014),Vasavi College of Engineering,Hyderabad,01-02 April 2014 published by HIKEY Media publications with ISBN:978-93-82570-30-1.

2. **K.Suresh**, O.Obulesu presented a paper entitled “ A Survey on Systematic Approach for Knowledge types in API Reference Documentation” on Two days National Conference on Advancements in Computing Methodologies(ACM14),ANNA University Regional Center ,Coimbatore,27th to 28th March 2014.
3. V.Satheyndrakumar**K.Suresh**, B.NagaMallewari and O.Obulesu presented a paper entitled “ DQSU:Design of Quality of Services Using Distributed Model” on National Conference on Emerging Trends in Business Management and Computing Technology, AITS,Autonomous,Rajmept,9 March 2014,Published by Pezzottaite Journals in international journal of Enterprenenurship and Business Environment perspectives” online ISSN:2279-0926,Volume:3,,Number:1, Jan to March 2014.
4. **K.Suresh**, M.sunilKumar,L.VeeraSubbareddy presented a paper entitled “ User Access Pattern mining improving FCM algorithm or clustering on web usage mining” on UGC Sponsored National Conference on Recent Trends in Web Sciences(NCRTWS-2014), Dravidian University,Kuppam,14-15 March 2014 published by Spectrum publications with ISBN:978-93-82829-99-7.
5. **K.Suresh**, Dr.M.RajasekharaBabu,O.Obulesu and K.Ramanaresentedpaper entitled “Review on High Performance Computing of Medical Image Computation based on Graphical ProcessingUnits” on National Conference on Advances in Computing and Technology (NCACT-2013), VIT University,Chennai,15th March 2013. Published at *CiiT Journal ,Coimbatore* ,ISBN 978-0-9888421-6-8.
6. G.venkatesh, Dr. N. Sambasiva Rao and **K.Suresh**presented a paper entitled “Routing Algorithms for Lifetime-Optimization in Complex Sensor- Networks” in National Conference on Networking and Information Technology(N2IT-2012) at AITS Rajampet ,kadapa ,AP held on 12th and 13th Oct. 2012.
7. **K.Suresh** ,K.Ramana presented a paper entitled “An Illustrative Study of Cloud Computing” in First National Conference on Recent Trends in Information Technology(NCRTIT2012) at RMK College of Engineering and Technology,Chennai ,held on 20th Feb.2012.
8. **K.Suresh** ,T.Harikrishna ,M.S.P.Kumar and K.Ramana presented a paper entitled "Approach of proactive tree recovery for overlay multicast” in National Conference on Network Technologies NCNT’09 at Sri Venkataswara College of Engineering&Technology,Chitoor,29th December-2009.
9. **K.Suresh**, M,SubbaRao and B.Srinivas Reddy presented a paper entitled "piracy of digital water marking relational databases" in National Conference on Network Technologies NCNT’09 at Sri Venkataswara College of Engineering&Technology,Chitoor,29th December-2009.


10. D.Vasumathi ,DrA.Govardhan and **K.Suresh** presented a paper National Conference on CSI College of Engineering at Nilagiri,ooty,tamilnadu,11and 12 of march-2009.
11. D.Vasumathi ,DrA.Govardhan and **K.Suresh** presented a paper National Conference at K.S .Rangaswamy Engineering college,trichungode,tamilnadu,20 feb.-2009.
12. **K.Suresh** ,R.Madana Mohana and Dr.A.Rama Mohan Reddy presented a paper in National Conference on INFORMATICS NIC-2008 at Narayana Engineering College ,Nellore,27th December-2008.
13. **K.Suresh** and B.Veera Reddy presented a paper entitled "data mining trends and developments " accepted in National Conference on INFORMATICS NIC-2008 at Narayana Engineering College ,Nellore, 27th December-2008.
14. **K.Suresh**P.Srinivas Rao and D.Vasumathi presented a paper in National Conference on INFORMATICS NIC-2008 at Narayana Engineering College ,Nellore, 27th December- 2008.
15. **K.Suresh**R.Madana Mohana and Dr.A.Rama Mohan Reddy presented a paper entitled "Data mining: Decision Trees for Crime Analysis" in national conference on trends in Information Technology at Trivandrum on 20 and 21st November 2008 Published at *Excel India publishers ,New Delhi* , ISBN:81-9071-963-5.
16. **K.Suresh** and D.Vasumathi presented a paper entitled "SEWuP: Using Site Semantics and a Taxonomy to Enhance the Web Personalization using Web mining Process" in national conference on trends in Information Technology at Trivandrum on 20 and 21st November 2008 Published at *Excel India publishers, New Delhi*withISBN: :81-9071-963-5.
17. **K.Suresh** presented a paper entitled "crime analysis based on the decision tree "First Prize in National Technical Paper meet event SANKETHIKA-08 at Sreenidhi institute of technology and sciences, Gatkeswar, Hyderabad on march 2008 .
18. **K.Suresh** and D.Vasumathi presented a paper entitled "data mining: Decision trees for crime analysis "Presented in National Conference RESPOGRAF-2008 for research scholars and Postgraduate Technical Festival on February 2008.
19. **K.Suresh** presented a paper entitled "data mining: Decision trees for crime analysis "Presented in National level student symposium Annamacharya Talent Meet-08 at Annamacharya institute of technology and sciences, Rajampet, kadapa (Dist.) at February 2008
20. **K.Suresh** and D.Vasumathi presented a Paper entitled as "crime data mining: Decision trees for crime analysis "in 2 days National Seminar on Data mining and its Application at Gudlavalleru Engineering College, Gudlavalleru, on 20 and 21 January 2008
21. **K.Suresh** and A.Subramanyam presented a paper entitled on "high performance computing" in Emerging Technologies and Applications ETA-06 at Sarasota University, Rajkot on 2006.



Workshops Attended

1. Attended AICTE Sponsored Two weeks Faculty Development Programme on “massive Parallel super computing using OpenCL framework on the Heterogeneous computing Platform” organized by Department of computer science and engineering from 06 to 18 January 2019 at Dan Bosco Institute of Technology ,Bengaluru-74.
2. Attended 5 days FDP workshop on “Artificial Intelligence and Machine learning applications in the emerging areas of computer science and information technology” 09th-13thDecember, 2019 ,NITK,Surathkal,Mangalore.
3. Attended One Week Faculty Development Program on "Scientific Computing Through MATLAB" from 2nd-6th December,2019 at SVEC,Tirupati.
4. Attended one week FDP workshop on “Block chain Technologies: Applications and Challenges” 19th-24thAugust, 2019 ,SVEC,Tirupati,AP.
5. Attended one week FDP workshop on “Nature Inspired Algorithms for Solving Complex Engg. Problems (FDP-NIASCEP’2018)” 23rd -27th April, 2018 ,GalgotiasUniversity, UP.
6. Attended Two day’s workshop on “Leveraging Internet of Things “, program from November 7and 8 ,2015 at Hotel Lalit, Bengaluru.
7. Attended Two day’s workshop on “Medical Internet of Things “, faulty development program from October 16 and October 17 ,2015 at Kristu Jayanti College, Bengaluru.
8. Attended Two Weeks International workshop on Short term course on “Enabling Internet of Things through Cloud and BigDataNetworking“, faulty development program from May 25to June 6 ,2015 at School of Information Technology, IIT Kharagpur , Kharagpur, West Bengal.
9. Attended Two days’ workshop on “IBM DB2 Academic Associate” Conducted by IBM Hyderabad at JNTU College of Engineering, Ananthapuramu during 19 to 20 December, 2014.
10. Attended Two Weeks workshop on Short term course on “Recent trends in Computer Architecture“, faulty development program from 12 to 25 November 2014 at Ragagiritech School of Engineering and Technology RSET, kakkand, Kerala.
11. Attended One day workshop on “Big Cloud Technologies “24 August. 2014 at AITS (Autonomous), Rajampet, AP.

12. Attended One day workshop on "IBM Mainframe Technologies for Cloud & Big Cloud Data Analytics" 19 July. 2014 at VIT University, TN.
13. Attended Two Weeks ISTE workshop on "Computer Networks" faculty development program Conducted by IIT Bombay from 28 May to 29 June and 30 June to 05 July, 2014 at AITS,
14. Rajampet, AP. (under National Mission on Education Through ICT(MHRD)).
15. Attended Two Weeks ISTE workshop on "Computer Programming" faculty development program Conducted by IIT Bombay from 20 May to 15 June and 16 June to 21 June, 2014 at AITS, Rajampet, AP. (under National Mission on Education Through ICT(MHRD)).
16. Attended Two days National workshop on "Advances in Service Oriented Architecture and Web services –Issues & Challenges "faculty development program from 1 to 2 march. 2014 at SVEC, Tirupati, AP.
17. Attended Two days National workshop on "BIG DATA: Technologies and Challenges" faculty development program from 23 to 24 Dec. 2013 at SVEC, Tirupati, AP.
18. Attended Two Weeks ISTE workshop on "Database Management Systems" faculty development program Conducted by IIT Bombay from 21 to 31 May. 2013 at SV University, Tirupati, AP.
19. Attended Two Days National workshop on "Multicore Programming" faculty development program from 22 to 23 Feb. 2013 at RCEW, Kurnool, A.P.
20. Attended one day workshop on "Cloud Computing" at AITS, Rajampet on 29 Jan 2013.
21. Attended one day workshop on "virtualization and Cloud Computing" at Sree vidhayanikethan Engineering college, Rangampet, Tirupati, 19 Oct 2012.
22. Attended two days' workshop on "Research Methodology " at SVU University ,Tirupati, conducted by CSE Department on Sept 29 and 30 2012.
23. Attended one day workshop on "Software Testing and Test Automation using QTP 9.2" at Sreevidhayanikethan Engineering College, Rangampet, Tirupati, March 09 2012.
24. Attended three day workshop on "Data mining and Web Intelligence" faculty development program from 16 to 18 Feb. 2012 at SRM University, kattankulathur.Chennai.
25. Attended one day workshop on "Market-Oriented Cloud Computing and the Aneka platform" UGC Sponsored faculty development program at JNTUA College of Engineering, Anantapur 27 Dec 2011.
26. Attended 2 days workshop on "Cloud Computing" at Sreevidhayanikethan Engineering college, Rangampet, Tirupati, Oct 9&10 2011.

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27. Attended one day Workshop on “Ontology tools” at Kongu Engineering College, tamilnadu, 3 September 2011.
 28. Attended AICTE sponsored 2 weeks staff development program on “Distributed program on Middleware” at MNM Jain Engineering college, Thorapakam, Chennai, 13may to31june 2010.
 29. Attended two day national seminar on "Datamining&Middleware technologies" at CBIT&VBIT at Produtur, 24 to 26 Feb. 2010.
 30. Attended three day national seminar on "Middleware technologies" at GNITS, Hyderabad, on Dec 3to6 Dec. 2009.
 31. Attended AICTE sponsored 2 weeks staff development program on “Artificial Intelligence in power systems” at AITS, Rajampet, 2009.
 32. Attended one day national workshop on "Wireless Communication" conducted by JNTU College of Engineering Hyderabad and Gov. Institute of electronics secunderabad under TEQIP,30 March 2009.
 33. Attended one day national workshop on "Advanced Computer Architecture” conducted JNTU College of Engineering Hyderabad with collaboration of IITM at JNTU Hyderabad, 28 march 2009.
 34. Attended one day national on "Emerging Technologies Data Mining and Data Warehousing" conducted by JNTU College of Engineering Hyderabad with collaboration of IIIT Hyderabad, at JNTU Hyderabad 26 March 2009.
 35. Attended one day national workshop on "Advanced Web Technologies" conducted JNTU College of Engineering Hyderabad, 25 March 2009.
 36. Attended two day national level workshop on "Resent Advances in Software Engineering" at RRS college of Engineering, Muthangi, Hyderabad 21&22 Nov.2008.
 37. Attended one day national seminar on “data warehousing and mining and web technologies through J2EE” Gokula Krishna college of Engineering, SULLURUPET on Oct 4th, 2008.
 38. Attended seven day’s training program for “IT Workshop” at JNT University Hyderabad on3to8 Oct. 2005.Participated as volunteer in south student zone research convention conducted by association of Indian universities, New Delhi and JNTU Hyderabad ,held during 2 to 4 April 2008 at JNTU Hyderabad.

Personal Information

1 Father’s Name : Late K.Sreeramulu

2 Date of Birth : 1st June 1984
3 Sex : Male
4 Marital Status : Married
5 Address for communication : K.Suresh
19-41-S5-1099
Jaya Nagar
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Tirupati
Chittoor(Dt.)-517501,AP,India.
6 Telephone Number : +91-9966322466
7 E-mail : sureshkallam@gmail.com
8 Passport Number : R1868212



(Dr.K.Suresh)

PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address: Dr .L. Mary Gladence, Sathyabama Institute of Science & Technology, Chennai-119
2. Email(s) and contact number(s) : marygladence.it@sathyabama.ac.in
3. Institution : Sathyabama Institute of Science & Technology
4. Date of Birth : 27/11/1977
5. Gender (M/F/T) : F
6. Category Gen/SC/ST/OBC : OBC
7. Whether differently abled (Yes/No) : No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.E	1999	CSE	Madras University	69
2.	M.E	2006	CSE	Sathyabama University	78
3.	Ph.D	2017	CSE	Sathyabama Institute of Science & Technology	Degree Awarded

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award: Detection of Contiguous Patterns in Sequence Data Set, Dr.T.Ravi, Sathyabama Institute of Science & Technology, 2017

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Sathyabama Institute of Science & Technology	07/06/2006	Till Date	15600-39100
2	Associate Professor	Sathyabama Institute of Science & Technology	01/06/2020	Till Date	Rs. 37400-67000

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1	Maulana Abul Kalam Azad Excellence Award of Education	Shikshak Kalyan Foundation	2021
2	High Impact factor Journal Award	Sathyabama Institute of Science & Technology	2020

12. Publications (List of papers published in SCI Journals, in year wise descending order).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Gladence, L.M., Anu, V.M., Revathy, S, Jeyanthi.P	Security management in smart home environment	Soft Computing	Vol.1	1-11	2021
2	Gladence, L.M., Anu, V.M., Rathna,R. Brumancia.E	Recommender system for home automation using IoT and artificial intelligence	Journal of Ambient Intelligence and Humanized Computing	Vol.1	1-13	2020
3	Brumancia, E., S. Justin Samuel, L. Mary Gladence, and Karunya Rathan	Hybrid data fusion model for restricted information using Dempster–Shafer and adaptive neuro-fuzzy inference (DSANFI) system	Soft Computing	Vol.8	2637-2644	2019
4	L.Mary Gladence, T.Ravi, Y.Mistica Dhas	An enhanced method for disease prediction using ordinal classification- APUOC	Journal of Pure and Applied Microbiology	Vol.9	1-5	2015

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1	IOT enabled smart wearable handy sanitizer dispenser	Mary Gladence.L, V.Maria Anu, E.Brumancia	202041028753 A	10.07.2020	Intellectual Property India	Published

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1	Pattern Mining— FTISPAM Using Hybrid Genetic Algorithm	Mary Gladence L., Shanmuga Priya S., Shane Sam A., Pushparathi G., Brumancia E	Springer	2021
2	Healthcare Management- Predictive Analysis (IoT)	Mary Gladence.L, Maria Anu, Bevish Jinila.Y	John Wiley & Sons	2021

15. Any other Information (maximum 500 words): Presented and Published papers in National and International Conferences and Journals. Motivated the students to bring out there excellence and excel in their interests.

PROFORMA FOR BIO-DATA

1. Name and full correspondence address: Dr.J.Arunarasi, Assistant Professor, Electronics and Communication Engineering, Sri Sairam Engineering College, West Tambaram, Chennai - 50
2. Email(s) and contact number(s) : arasi_arun@yahoo.co.in, arunarasi.ece@sairam.edu.in
3. Institution: Sri Sairam Engineering College, West Tambaram, Chennai – 50.
4. Date of Birth: 27/06/1982
5. Gender (M/F/T) : Female
6. Category Gen/SC/ST/OBC: OBC
7. Whether differently abled (Yes/No): No
8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1	B.E	2003	Electronics and Communication Engineering	Thanthai Periyar Govt. Inst. of Technology, University of Madras	76%
2	M.E	2005	Applied Electronics	Thanthai Periyar Govt. Inst. of Technology, Anna University, Chennai.	72%
3	Ph.D	2014	Information & Communication Engineering	Anna University, Chennai.	--

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.
PERFORMANCE ENHANCEMENT AND ANALYSIS OF WAVELET BASED DS-CDMA OVER AWGN AND FADING CHANNELS

Guide Name: **Dr.P.Indumathi,**
Institute/Organization/University: **Anna University**
Year of Award: **2014**

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale (in Rs.)
1.	Lecturer	Vel Multimedia Engg. College, Chennai.	11-06-2005	07-10-2006	16,000
2.	Lecturer	SMK Fomra Inst. Of	01-12-2006	30-09-2008	18,000

		Technology, Chennai.			
3.	Lecturer	Magna College Of Engg, Chennai.	05-06-2009	30-06-2013	24,000
4.	Asst. Professor	Magna College Of Engg, Chennai.	01-07-2013	23-12-2014	27,000
5.	Asst. Professor	Veltech Multitech Dr.Rangarajandr.Sakunthala Engineering College, Chennai.	02-01-2015	28.04.2016	90,000
6.	Asst. Professor	Sri Sairam Engineering College, Chennai.	21.12.2018	Till date	

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
-	-	-	-

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	D.Logendran, J.Arunarasi	Experimental investigation on inherent properties of Hydroxybutandioic Acid treated Banana/Sisal fibers based hybrid composite	Materials Today: Proceedings		Accepted for publication in the month of March	2020
2	A.Karthikeyan, J.Arunarasi, A.Arulmary	A Neoteric FPGA Architecture with Memristor Based Interconnects for Efficient Power Consumption	Indian Journal of Science and Technology	Vol 9	1-9	2016
3	D.Priya, J.Arunarasi, A.Arulmary	Efficient energy and power consumption of 3-D Chip Multiprocessor with NUCA Architecture	Indian Journal of Science and Technology	Vol 9		2016
4	E.Kayalvizhi, A.Karthikeyan, J.Arunarasi,	An Optimal Energy Management System for Electric Vehicles using Firefly Optimization Algorithm based Dynamic EDF Scheduling	International Journal of Engineering and Technology	Vol 7		2015

5	J. Arunarasi and P.N. Jebarani Sargunar	Performance Comparison of DS- CDMA system using Wavelet based shrinkage methods	International Journal of Applied Engineering and Research	Volume 10	25773- 25788	2015
6	J. Arunarasi and P.Indumathi	Performance analysis of DS-CDMA system over AWGN and fading channels based on diversity scheme	Journal of Theoretical and Applied Information Technology	Vol. 52		2013
7	J. Arunarasi and P.Indumathi	Combined Wiener and Double Density Discrete Wavelet Filter Based Algorithm for Noise Reduction in CDMA Receiver	European Journal of Scientific Research	Vol. 53	269-279	2011
8	J. Arunarasi and P.Indumathi	A New Threshold Calculation Approach in the Performance Enhancement of Spread Spectrum System Using Double Density Discrete Wavelet Filter	Information and Communication Technologies	vol. 101	654-659	2010

13. Detail of patents.

S.No	Patent Title	Name of Applicant(s)	Patent No	Award Date	Agency/Country	Status
1.	A Power generating kite system- Production of electricity from the wind.	Ms.G.Shanthakumari Mr.Senthur Beem EV Mr.Karthik Ravikumar Dr.E.Priya Dr.J.Arunarasi Ms.V.Sasikala Ms.C.N.Savithri Ms.R.Chitra Ms.S.Josephin Ida Litrizia Ms.M.Shabana Parveen Ms.B.Rajalakshmi Ms.S.Saranya	202041004000	-	India	Published

14. Books/Reports/Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
--	--	--	--	--

15. Any other Information (maximum 500 words)

J.Arunarasi

Dr B.Sreedevi

Professor & HOD, Department of Computer Science and Engineering
Sri Sairam Institute Technology Anna University
Chennai India 600045
Mobile: +91 9444245253 email: hodcse@sairamit.edu.in
Citizenship: India

Research Interests

My research interests revolve around the problem of Medical Image Processing and, more recently, Stem Cells. Much of my recent work focuses on image segmentation isolation and prediction using Machine learning algorithms. I've compared various Machine Learning Algorithms and proposed a model for predicting Accuracy. My interest in multiscale, parts-based shape representations, and their common abstraction as hierarchical graphs, has motivated my research in inexact graph indexing and matching – key problems in object recognition, another broad focus of my research. My research has also explored many problems related to object recognition, including object tracking, vision-based navigation, content based image retrieval, language-vision integration, and image/model abstraction.

Education

- Ph.D., Computer Science and Engineering Anna University, Chennai, India, Aug 2017 - Sub-specialization: Machine Learning and Image Processing
- Master of Technology in Computer Science and Engineering, SRM University Chennai, India, April 2007
- Bachelor of Engineering in Computer Science and Engineering, University of Madras April 1999

Professional Experience

- **Head of the Department & Professor**, Department of Computer Science and Engineering, Sri Sai Ram Institute of Technology, Anna University. June 2010 to Present
- **Assistant Professor** Department of Computer Science and Engineering Rajalakshmi Engineering College, Thandalam, Chennai, India. July 2019 to May 2010
- **Lecturer** Department of Computer Science and Engineering, SRM University, Chennai, India. Jan 2001 to March 2007

Technical Skills

- Programming in C, Python, Java with JDBC, PHP
- Web Technologies: HTML, CSS, AJAX, Java Script, XML and Web Services
- Extensive knowledge of RDBMS like Oracle and MYSQL.
- Familiarity in OS like Fedora, Windows and Linux.
- Work Experience in IDE like Net beans and Eclipse.
- Application of Data Mining Algorithms with WEKA tool.

Achievements

- Development of Visible Light Communication for Smart Museums, Bangkok University, Centre of Research in Optoelectronics, Bangkok, Thailand-May 2019
- Longest Continuous Student Branch Counsellor 2019
- Academic Excellence Award 2018
- Best faculty advisor Award by Institution of Engineers (India) 2019
- “Uttama Acharya Puraskar”-A National Award for Impact Creators-Lions Club of Vijayawada

Certifications

Certified EMC Academic Associate in Data Science and Big Data Analytics by DELL EMC2 during March 2018.

NPTEL-IIT certification in Data Mining, Database Management Systems, Python for Machine Learning and Internet of Things.

Certified from AICTE NITTTR for Module 8-Institutional Management and Administrative Procedures

Certified ATL tinkerpreneur Mentor by AICTE

Professional Affiliations

Inventive Research Organization (IRO)	Feb 2017-Present
International Association of Engineers (IAENG)	Dec 2017-Present
Computer Society of India –Student Branch Counsellor	May 2011 – Present
Indian Society for Technical Education (ISTE)	May 2014 – Present
Institution of Engineers (India)(IEI)	Nov 2018- Present
National Digital Library (NDL)	May 2016 – Present
The Society of Innovative Educationalist and Research (FSIERP)	Mar 2019-Present

Books Published

- Internet Programming in Sahara Publications, India with ISBN 9789386636157 – 2017
- Book Chapter in “Machine Learning and Applications” on the topic Machine Learning based Credit Card based Fraud Detection(CNN Algorithm)
- Book Chapter in Advanced Aspects of Engineering Research Vol. 5 “Study on Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled”

Patents

- Mind Controlled Gaming for Differently Abled Indian Provisional (**Patent No201841016343**) in the field of Bio Medical Engineering – May 2018

- Multi Purpose Surveillance Based On Radar System With Camera Using Embedded Systems(No. 202041031869-July 2020)
- VLC TRANSCIEVERS FOR SMART MUSEUMS(Patent No 202141029314)- June 2021

Grants

- Dr.B.Sreedevi, 2017, Department of Science and Technology, Government of India granted Rs.100000/- for the project titled “Mind Controlled Gaming for Differently Abled”.
- AICTE Sponsored STTP for Rs.300000/- in Predictive Modelling And Data Analysis Using Python Based Machine Learning Technique
- AICTE Sponsored ATAL FDP for Rs.93000/- in Data Sciences.

Publications

- **Sreedevi, B & Rajagopalan, SP, ‘Improving Mesenchymal Stem Cell Classification Using Machine Learning Techniques’, SCI, Annexure-I, ISSN: 1537-744X, Article: ID 405974**
- **Sreedevi. B ,’Disaster Management Using Blockchain and Cloud Services’ Journal of Green Engineering (JGE) 10 (10)**
- Dr.B.Sreedevi, P.Rayavel,” Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled’,AIP Publications,Scopus Indexed 2019.
- Sreedevi. B, Pachhiammal@Priya M, T.Ragunthar, ‘Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’, International Journal of Pure and Applied Mathematics,Vol.117,no.21,2017.
- **Dr.B.Sreedevi, Pachhiammal @Priya. M ,’Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms’,IEEE Digital Library and Scopus Indexed,Publication Year: 2018, Page(s):6 – 11**
- Sreedevi, B ,’Analysis of Performance Metrics with Mesenchymal Stem cell Classification and Optimization Algorithms’ ,International Journal of Creative Research Thoughts (IJCRT) 5 (4), 2613-2618,2017
- Sreedevi, B & Rajagopalan, SP 2015, ‘Examine and Extraction of Optimized Stem Cells Using Image Processing’, Australian Journal of Basic and Applied Sciences, vol. 9, no. 10, Special 2015, pp. 1-5.
- Sreedevi. B, Abheek Kumar Srivastava, Ashwin Venkataraman,’ Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm’, International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 10, October 2013, ISSN: 2277 128X

- B.Sreedevi, Dr.S.P.Rajagopalan,' Analysing Stem Cells Using Transformed Stem Cell Algorithm ', International Journal of Applied Engineering Research (IJAER), Volume 10, Number 75 (2015) .
- Pradeep Kumar Sahoo, S. P. Rajagopalan, Sreedevi B, Pachhaimmal@Priya.M,' Web Content Mining Based Relevant Text Data Extraction', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.186-193.
- Pachhaimmal@Priya M, S.P.Rajagopalan, B.Sreedevi and Pradeep Kumar Sahoo,' Analysis methods and mining of brain functional connectivity for detection of brain disorders', International Journal of Applied Engineering Research (IJAER),Vol 75(2015)pp.258-262.

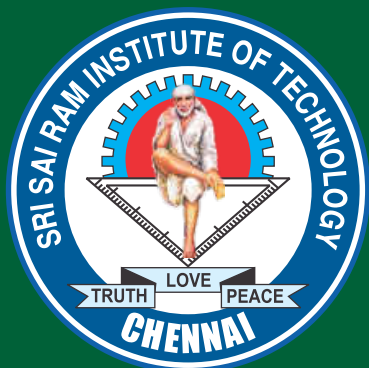
International & National Conferences

- **Dr.B.Sreedevi, 'Decentralized Application for managing the Disaster with Block chain, Cloud &IOT',International Conference on Computer and Information Sciences at University of PETRONAS, Malaysia during JULY 13-15,2021.**
- Dr.B.Sreedevi, P.Rayavel Playing Games in Computers without Physical Interaction Using Electroencephalography for Differently Abled', NATIONAL CONFERENCE ON MATHEMATICAL TECHNIQUES AND ITS APPLICATIONS (NCMTA – 2019) AT SRM UNIVERSITY FROM 11-12 JANUARY 2019.
- Dr.B.Sreedevi, Pachhaimmal @Priya. M ,'Analysis of Performance Metrics with Mesenchymal Stem Cell Classification and Optimization Algorithms ',International Conference on Communication, Computing & Internet of Things, held at Sri Sai Ram Engineering College, Chennai, India from 15-17 February 2018.
- Dr.B.Sreedevi,P.Rayavel, National Conference on Mathematical Techniques and its Applications(NCMTA) held at SRM University, Chennai, India from 11-12 January 2019.
- B.Sreedevi, Dr.S.P.Rajagopalan, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm 'International Conference On Computing And Information Technology (ICCIT '15)
- Sreedevi, B, Abeek Kumar Srivastava & Ashwin Venkataraman 2013,'Treatment of Hepatocellular Carcinoma with Stem Cells Algorithm', Proceedings of the International Conference on Recent Trends in Computing(ICRTC 2013) ,4th &5th October 2013, pp. 32-27.
- Sreedevi, B & Rajagopalan, SP 2015, 'Analysing Stem Cells Using Transformed Stem Cell Algorithm', Proceedings of the International Conference on Computing and Information Technology (ICCIT'15), 13th &14th August 2015, pp. 96-100.
- Sreedevi, B & Rajagopalan, SP 2015, 'Examine and Extraction of Optimized Stem Cells Using Image Processing', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'15' On 27th March, 2015.

- B.Sreedevi, E.Madhumitha, M.Kalaiselvi, 'Automatic Classification Of Intracardiac Tumor And Thrombi In Echocardiogram Using Adaptive Co-Segmentation', Proceedings of the National Conference on Recent Enhancement In Advanced Computing Technologies - 'React'16'

Workshop & Conferences

- Coordinator for TEDX-SriSairamIT and Hackathon Events.
- Organized first International Conference on Computing and Information Technology (ICCIT'15) during 2015.
- Organized a Staff development programme on "Soft Computing with AI" sponsored by AICTE for Rs.700000/- during 2011.
- Organized National Conferences on "Information & Communication Engineering Systems"-NICE '11, NICE'17 and NICE'18.
- International Seminar on "Recent Trends in Computer Technology" by Dr.Emerson Raja Joseph, Multimedia University, Malaysia during 2014.
- National Event on" CSI Golden Tech Bridge Programme" by Computer Society of India during 2014.
- FDP on Python Programming by ICTACT of Tamilnadu during 2018.
- Attended a seminar on "Stem Cell and Regenerative Medicine" during Nov 2016 at Anna University
- Delivered a session in FDP on "Internet Programming" at Loyola ICAM Institute of Technology, Chennai
- Attended STTP in Pondicherry Engineering College during 2016 on "Recent trends in optimization techniques".
- Attended FDP on "Hadoop" conducted by ICTACT at Sri Sai Ram Institute of Technology during 2016.



Sri

SAI RAM INSTITUTE OF TECHNOLOGY

Sai Leo Nagar, West Tambaram, Chennai - 44



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - II

HOD ROOM

DOOR

MOBILE APPLICATION LAB / SECURITY LAB



CASE TOOL LAB / OS LAB / GRAPHICS LAB



DOOR

COMPILER LAB / INTERNET PROGRAMMING LAB



COMPUTER NETWORK LAB / GRID AND CLOUD COMPUTING LAB



DOOR

UPS ROOM

Network Rack



6 KV



10 KV



10 KV



6 KV



10 KV



DOOR





Sri

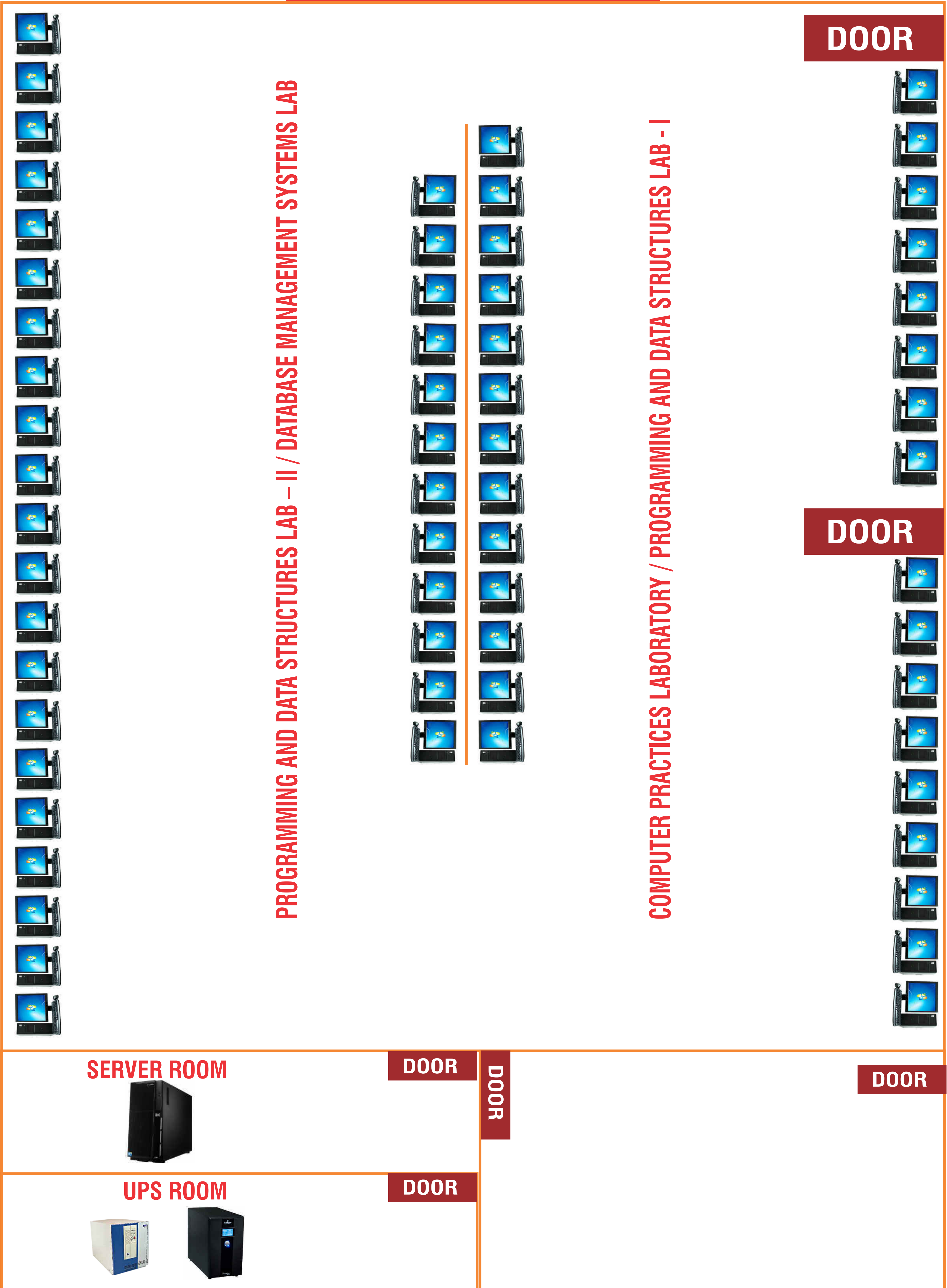
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - I



PROGRAMMING AND DATA STRUCTURES LAB - II / DATABASE MANAGEMENT SYSTEMS LAB

COMPUTER PRACTICES LABORATORY / PROGRAMMING AND DATA STRUCTURES LAB - I

SERVER ROOM



DOOR

DOOR

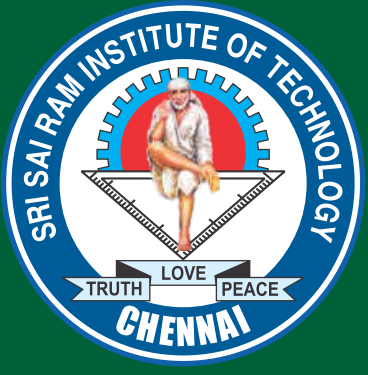
DOOR

UPS ROOM



DOOR





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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER CENTRE - III



SERVER



COMMUNICATION SKILLS LAB



DOOR





To,

The Principal
Sri Sairam institute of technology
West Tambaram
Chennai-600044

We are pleased to know that Sri Sairam Institute of Technology is submitting a proposal with SERB (Scientific Engineering and Research board) under the title “**An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer’s Disease Progression and Intervention**” to facilitate Research and Development in the campus.

Vectra Technosoft Pvt. Ltd is herewith agreed to support this initiative by providing technical software requirements.

Sri Sairam Institute of Technology is solely responsible for the safety and insurance measures to safeguard against any loss incurred.

Vectra Technosoft Pvt Ltd.


Ranjit Sengupta
Director





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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL
SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
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9. The University/ Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of the SERB.
10. University/ Institute agrees to undertake the financial and other management responsibilities of the project as per SERB guidelines.
11. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:




Signature


Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
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Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

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 +91 98848 45678




www.sairamgroup.in

Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai



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Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
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Seal of
Host Institute

Date:



Signature
Head of the Institute

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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
5. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
6. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
7. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research objectives.
8. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
9. The University/ Institute will take into its books all assets received under this sanction and its disposal would be at the discretion of the SERB.
10. University/ Institute agrees to undertake the financial and other management responsibilities of the project as per SERB guidelines.
11. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:




Signature

Head of the Institute

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Admn Office : "SAI BHAVAN", #31 B, Madley Road, T. Nagar, Chennai - 600 017.
Tel : 044 - 4226 7777 e-mail : sairam@sairamgroup.in

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 +91 98848 45678




www.sairamgroup.in

Certificate from the Investigators (PI & all Co-PIs)

Project Title: An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention

It is certified that

1. The same project proposal has not been submitted elsewhere for financial support or is currently under progress with financial support from any funding agency.
2. The research work proposed in the scheme/project is not duplicate or significantly overlap with the work already done or being carried out elsewhere on the same topic.
3. We undertake that equipment procured in the project will be notified through SERB website and be made available to other users in spare time whenever possible.
4. We certify that the proposal in part or full is free from plagiarism and conforms to all ethical norms of SERB.
5. We agree to submit a certificate from Institutional Biosafety Committee, if the project involves the utilization of genetically engineered organisms. We/I also declare that while conducting experiments, the Biosafety Guidelines of Department of Biotechnology, Department of Health Research, Ministry of Environment Forest and Climate Change, GOI would be completely followed.
6. We agree to submit ethical clearance certificate from the concerned ethical committee, if the project involves field trials/experiments/exchange of specimens, human and animal materials etc.
7. We agree to abide by the terms and conditions of SERB grant including (a) submission of progress report, utilization certificate and statement of expenditure as per SERB norm, and (b) utilization of fund (purchase, travel, staff, etc.).
8. Intellectual property (IP) generated in this project will be shared and governed by the existing norm of the host Institute/University without violating the SERB norms.

Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai

Undertaking by the Principal Investigator

To

The Secretary
SERB, New Delhi

Sir

I Dr K.Palanikumar hereby certify that the research proposal titled *An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention* submitted for possible funding by SERB, New Delhi is my original idea and has not been copied/taken verbatim from anyone or from any other sources. I further certify that this proposal has been checked for plagiarism through a plagiarism detection tool i.e. TURNITIN approved by the Institute and the contents are original and not copied/taken from any one or many other sources. I am aware of the UGCs Regulations on prevention of Plagiarism i.e. University Grant Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulation, 2018. I also declare that there are no plagiarism charges established or pending against me in the last five years. If the funding agency notices any plagiarism or any other discrepancies in the above proposal of mine, I would abide by whatsoever action taken against me by SERB, as deemed necessary.



Signature of PI with date

Name / designation

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY
SAI LEO NAGAR, CHENNAI-600 044.



Sri SAI RAM INSTITUTE OF TECHNOLOGY

(Managed by Sathagiri Educational Trust, Chennai - 17)

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Sai Leo Nagar, West Tambaram, Chennai. Tel : 044 - 2251 2111 . www.sairamit.edu.in

Founder Chairman : MJF. Ln. Leo Muthu



Endorsement from the Head of the Institution of Co-PI

This is to certify that:

1. Institute welcomes participation of Name : Dr.K.Palanikumar Designation : Professor as the Principal Investigator (Lead PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) (Co-PI) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The Co-PI, Dr.B.Sreedevi, Mr.R.Udendhranas is a permanent or regular employee of this Institute/University/Organization and has 18 years of regular service left before superannuation.
3. The Co-PI and other Investigators will be governed by the rules and regulations of University/Institute/Organization/College and will be under administrative control of the University/ Institute/Organization/College for the duration of the project.
4. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
5. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
6. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research project.
7. The University/ Institute/Organization/College will take into its books all assets created in the above project and its disposal would be at the discretion of SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
8. The University/ Institute/Organization/College assumes to undertake the financial and other management responsibilities of the project.
9. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
10. The University/ Institute shall settle the financial accounts to the SERB as per the prescribed guidelines within the three months from the date of termination of the Project.

Seal of
Host Institute

Date:



Signature
Head of the Institute

Dr.K.PALANI KUMAR
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Founder Chairman : M.J.F. Ln. Leo Muthu



Endorsement from the Head of the Institution of PI

This is to certify that:

1. Institute welcomes participation of Name :Dr.K.Palanikumar Designation :Professor as the Principal Investigator (PI) and Dr.B.Sreedevi, Mr.R.Udendhranas the Co- Investigator(s) for the project titled An Intelligent Assistive Cognitive Development Tool using High Performance Computing to Continuously Assess Alzheimer's Disease Progression and Intervention and that in the unforeseen event of discontinuance by the Principal Investigator, the Co-Investigator will assume the responsibility of the fruitful completion of the project with the approval of SERB.
2. The PI, Dr.K.Palanikumar is a permanent or regular employee of this Institute/University/Organization and has 10 years of regular service left before superannuation.
3. The applicant, Dr.K.Palanikumar, will assume full responsibility of implementing the project as the PI as per the proposed objective, deliverables, and timeline. He/she will also take the primary responsibility of submitting the progress report, utilization certificate and statement of expenditure as stipulated by Science & Engineering Research Board (SERB).
4. The project starts from the date on which the University/Institute/ Organization/College receives the grant from SCIENCE & ENGINEERING RESEARCH BOARD (SERB), New Delhi.
5. The grant-in-aid by the SERB will be used to meet the expenditure on the project and for the period for which the project has been sanctioned as indicated in the sanction letter/ order.
6. No administrative or other liability will be attached to SCIENCE & ENGINEERING RESEARCH BOARD (SERB) after the tenure of the project.
7. The University/ Institute will provide basic infrastructure and other required facilities to the PI and investigators for undertaking the research objectives.
8. University/Institute will provide the necessary support (administrative and financial) to run the Centre for at least another Five (5) years after the completion of project tenure (SERB support) towards fulfilling the goal.
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Head of the Institute

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Signature: 

Name and Designation: Dr.K.Palanikumar, Professor & Principal, Sri Sairam Institute of Technology


Date: 29/12/2021

Place: Chennai

Dr.K.PALANI KUMAR
PRINCIPAL

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI-600 044.

Signature: 

Name and Designation: Dr.B.Sreedevi, Professor & Head of Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai


Dr. B. SREEDEVI

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

SRI SAIRAM INSTITUTE OF TECHNOLOGY

SATLEO NAGAR, CHENNAI - 600 044.

Signature: 

Name and Designation: Mr.R.Udendhran, Assistant Professor, Department of Computer Science & Engineering, Sri Sairam Institute of Technology

Date: 29/12/2021

Place: Chennai