



3.3.3 Details of books and chapters in edited volumes / books per teacher during the year

Sl. No.	Name of the Teacher	Title of the Book published	Title of the Chapter published	Title of the proceedings of the conference	Name of the conference	National / International	Year and month of publication	ISBN of the Book/Conference Proceeding	Affiliating Institute of the teacher at the time of publication	Name of the Publisher
1	Ahamed B.S.; Chakravarthy K.S.; Arupathabhan J.; Sairekha K.; Prince R.M.R.; Boonathi S.; Muthavel S.	Revolutionizing friction stir welding with AI-integrated humanoid robots	Applied AI and Humanoid Robotics for the Ultra-Smart Cyberspace	NA	NA	International	2024	10.4018/979-8-3693-2399-1.ch005	Sri Sai Ram Institute of Technology	Scopus
2	Palanikumar K.; Natarajan E.; Ponshannmugakumar A.	Application of machine vision technology in manufacturing industries: A study	Machine Intelligence in Mechanical Engineering	NA	NA	International	2024	10.1016/B978-0-443-18644-8.00018-6	Sri Sai Ram Institute of Technology	Scopus
3	Azrawal A.V.; Sujatha G.; Sasireka P.; Ranjith P.; Cloudin S.; Samp B.	Artificial intelligence and machine learning in the green power sector: Harnessing sustainable energy	Advanced Applications in Osmotic Computing	NA	NA	International	2024	10.4018/979-8-3693-1694-8.ch009	Sri Sai Ram Institute of Technology	Scopus
4	Dhanasekar R.; Vijayaraja L.; Kumar S.G.	Control techniques in sustainable applications	Power Converters, Drives and Controls for Sustainable Operations	NA	NA	International	2024	10.1002/9781119792918.ch21	Sri Sai Ram Institute of Technology	Wiley
5	Natarajan E.; Palanikumar K.; Ramesh S.; Davim J.P.; Kumar K.	Machine intelligence in mechanical engineering: an introduction	Machine Intelligence in Mechanical Engineering	NA	NA	International	2024	10.1016/B978-0-443-18644-8.00013-7	Sri Sai Ram Institute of Technology	Scopus
6	Kavitha R.; Srinivasan R.; Subha P.; Kavitha M.	Region-based convolutional neural networks for selective search	Intelligent and Soft Computing Systems for Green Energy	NA	NA	International	2023	10.1002/9781394167524.ch10	Sri Sai Ram Institute of Technology	Scopus
7	Vijayaraja L.; Dhanasekar R.; Kumar S.G.	An inspection on multilevel inverters based on sustainable applications	Power Converters, Drives and Controls for Sustainable Operations	NA	NA	International	2024	10.1002/9781119792918.ch9	Sri Sai Ram Institute of Technology	Wiley
8	Duraimurugan E.; Jeevitha R.S.; Dillirani S.; Vijayaraja L.; Kumar S.G.	Design and analysis of 31-level asymmetrical multilevel inverter topology for R. RL, & motor	Power Converters, Drives and Controls for Sustainable Operations	NA	NA	International	2024	10.1002/9781119792918.ch13	Sri Sai Ram Institute of Technology	Scopus
9	Prabha R.; Senthil G.A.; Sangeetha S.K.B.; Suganthi S.U.; Roopa D.	Network routing and its real-time practice in broadband wireless networks	Resource Management in Advanced Wireless Mobile Networks	NA	NA	International	2023	10.1002/9781119827603.ch5	Sri Sai Ram Institute of Technology	Scopus
10	Prabha R.; Senthil G.A.; Sangeetha S.K.B.; Suganthi S.U.; Roopa D.	Optical Communication in the Broadband Wireless Network Era in Wireless Communication - Routine Theory and Practice	Modeling and Optimization of Optical Communication Networks	NA	NA	International	2023	10.1002/9781119839569.ch15	Sri Sai Ram Institute of Technology	Scopus
11	Ali M.N.; Senthil T.S.; Ilakkya T.; Hasan D.S.; Ganapathy N.B.S.; Boopathi S.	Artificial intelligence's role in smart manufacturing transformation for enhanced household product quality	Advanced Applications in Osmotic Computing	NA	NA	International	2024	10.4018/979-8-3693-1694-8.ch014	Sri Sai Ram Institute of Technology	Scopus
12	Subashiri V.; Janaki R.	Applications of machine learning algorithms in data encryption standards	Machine Learning and Cryptographic Solutions for Data Protection and Network Security	NA	NA	International	2024	10.4018/979-8-3693-4159-9.ch008	Sri Sai Ram Institute of Technology	Scopus
13	Sekar S.; Pitchaimani J.; Tamilselvi A.	Smart Nanomaterials for Antiseptic Application	Nanotechnology for Smart Prevention, Diagnostics and Therapeutics: Fundamentals	NA	NA	International	2024	10.1002/9781394175222.ch2	Sri Sai Ram Institute of Technology	Scopus
14	Durairaj M.; Das S.; Fathimath K.; Aamey H.M.; Jyadeva S.M.; Murugan S.	The power of visionary leadership in transforming the Indian education system	Challenges of Globalization and Inclusivity in Academic Research	NA	NA	International	2024	10.4018/979-8-3693-1371-8.ch011	Sri Sai Ram Institute of Technology	Scopus
15	Latha B.; Gopinath B.; Palanikumar K.	Secure cloud web application in an industrial environment: a study	Machine Intelligence in Mechanical Engineering	NA	NA	International	2024	10.1016/B978-0-443-18644-8.00008-3	Sri Sai Ram Institute of Technology	Scopus
16	Veena K.; Meena K.; Rajalakshmi D.; Fathima M.; Thamara Selvi K.	LDS-LVAT: Lie Detection System-Layered Voice Technology	Artificial Intelligence in Internet of Medical Things and Blockchain for Personalized Healthcare: Applications	NA	NA	International	2024	10.1201/9781003405450-11	Sri Sai Ram Institute of Technology	Scopus
17	Ponmalar A.; Anand J.	IoT-based caring system for aged people in a post-COVID scenario	Internet of Medical Things in Smart Healthcare: Post-COVID-19 Pandemic Scenario	NA	NA	International	2023	10.1016/B978-0-443-15508-6.00022-1	Sri Sai Ram Institute of Technology	Scopus
18	Prabakaran L.; Vedula S.W.; Jeevahan A.; Jacquelin Veda Jancy S.	Applications of bio-functionalized carbon nanotubes in biomimetic and biosensing applications	Carbon-Based Nanomaterials in Biosystems: Biophysical Interface at Lower Dimensions	NA	NA	International	2024	10.1016/B978-0-443-15508-6.00022-1	Sri Sai Ram Institute of Technology	Scopus
19	Prathibha S.; Palanikumar K.; Ponshannmugakumar A.; Rakesh Kumar M.	Artificial intelligence and virtual reality technologies for maintenance and repair of automobile	Machine Intelligence in Mechanical Engineering	NA	NA	International	2024	10.1016/B978-0-443-18644-8.00001-0	Sri Sai Ram Institute of Technology	Scopus
20	Soosaimanickam A.; Sundaram S.K.; Sridharan M.B.	Artificial intelligence and machine learning in semiconductor nanocrystals and its impact on the performance of devices	Energy Harvesting and Storage Devices: Sustainable Materials and Methods	NA	NA	International	2023	10.1201/9781003340539-5	Sri Sai Ram Institute of Technology	Scopus



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<input type="checkbox"/> 1	<p>Book Chapter</p> <p>An inspection on multilevel inverters based on sustainable applications</p>	<p><u>Vijayaraja, L.,</u> <u>Dhanasekar, R., Kumar, S.G.</u></p>	<p>Power Converters, Drives and Controls for Sustainable Operations, pp. 293–314</p>	2024	2
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The design of multilevel inverters finds an optimum space in the photovoltaic power generation system, grid integrated renewable power networks, power trains, fuel cell power generation, motor drive systems, etc. This attracts researchers to develop multilevel inverters with low cost and compact size, but designing a low cost multilevel inverter with a reduced size is a challenging work. In this chapter, a detailed study of various multilevel inverters is carried out in terms of utilization of multilevel inverters in sustainable energy applications, types of late multilevel inverter, a brief study of recent designs of multilevel inverters with respect to harmonic presence in the output voltage waveform. An examination on recent symmetric and asymmetric voltage source inverters is analysed in terms of number of voltage levels the design can generate.

<input type="checkbox"/> 2	<p>Book Chapter</p> <p>Design and analysis of 31-level asymmetrical multilevel inverter topology for R, RL, & motor load</p>	<p><u>Duraimurugan, E.,</u> <u>Jeevitha, R.S., Dillirani, S.,</u> <u>Vijayaraja, L., Kumar, S.G.</u></p>	<p>Power Converters, Drives and Controls for Sustainable Operations, pp. 391–409</p>	2024	1
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This venture presents an asymmetrical multilevel inverter topology constructed with a fewer number of switches for dynamic load, with a greater number of output voltage levels. Initially, the working of the proposed inverter with thirty-one levels is studied with the R and RL load. Then, it is extended to a motor load of power rating 0.25 HP using MATLAB/Simulink. The validations of results are done by simulation work and the results are presented.

<input type="checkbox"/>	3	Book Chapter Control techniques in sustainable applications	Dhanasekar, R. , Vijayaraja, L. , Kumar, S.G.	Power Converters, Drives and Controls for Sustainable Operations, pp. 631–658	2024	0
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In recent years, renewable energy sources (RES) have played a vital role to meet the power demand with the quality of power. In RES, the power electronic converters are effective for changing characteristics of voltage and current. The introduction of control system techniques in the engineering field has made development in various renewable energy applications. The control techniques has the ability to give robust performance and is insensitive to parameter variations. Recently, sliding mode controls have become attractive due their robust performance. In variable structure systems, a sliding mode control is an efficient tool for complex non-linear multi-variable plants. In recent years, Passivity-based Control (PBC) has been adopted in RES due to its robustness against parameter uncertainties. The system which comprises PBC achieves the desired control parameters with no peak overshoots and oscillations. Model Predictive Control (MPC) has been a likely control technique for power electronic converters because of its quick reaction and high control data transfer capacity. This chapter deals with the concepts of Sliding Mode Control, Passivity-based Control and Model Predictive Control in Sustainable Applications.

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This chapter explores the use of AI-integrated humanoid robots in friction stir welding (FSW), a crucial process for joining materials without melting. By combining AI capabilities with humanoid robots' dexterity and adaptability, significant advancements can be achieved. AI algorithms can improve precision and accuracy by continuously analyzing real-time sensor data, while AI-powered predictive maintenance can minimize downtime and enhance efficiency. AI-enabled robots in FSW increase automation, reduce human operator reliance, and minimize safety risks in hazardous environments. However, challenges such as cybersecurity concerns, regulatory hurdles, and ethical implications require careful consideration. Future research should focus on developing advanced AI algorithms, optimizing robot-human collaboration, and exploring new applications beyond traditional materials. The approach offers precision, efficiency, and safety, but necessitates interdisciplinary collaboration, strategic investment, and proactive addressing of technological, ethical, and regulatory challenges.

<input type="checkbox"/>	5	Book Chapter Applications of machine learning algorithms in data encryption standards	Subashini, V. , Janaki, R.	Machine Learning and Cryptographic Solutions for Data Protection and Network Security, pp. 111–134	2024	0
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Encryption plays a crucial role in safeguarding sensitive information in today's digital world. The traditional encryption methods rely on mathematical algorithms, such as RSA and AES, for securing data. The proliferation of digital communication and the increasing need for secure data transmission have prompted significant advancements in encryption techniques. As data breaches and cyber threats become more sophisticated, there is an increasing need for robust encryption techniques. Machine learning algorithms, with their ability to adapt and learn from data patterns, have emerged as a valuable tool in enhancing encryption processes. This chapter explores the applications of machine learning algorithms in encryption, highlighting their potential to improve security, speed, and versatility. The authors delve into various aspects, including data encryption, key management, authentication, and intrusion detection, demonstrating how machine learning can contribute to the development of more robust and efficient encryption systems.

<input type="checkbox"/>	6	Book Chapter IoT's role in smart manufacturing transformation for enhanced household product quality	Ali, M.N. , Senthil, T.S. , Ilakkiya, T. , ... Ganapathy, N.B.S. , Boopathi, S.	Advanced Applications in Osmotic Computing, pp. 252–289	2024	12
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The convergence of the internet of things (IoT) and smart manufacturing technologies has revolutionized the way household products are designed, manufactured, and maintained. This chapter explores the pivotal role of IoT in the transformation of smart manufacturing processes to enhance household product quality. It delves into the various facets of this transformative journey, including data-driven insights, predictive maintenance, product customization, and sustainability. By harnessing the power of IoT, manufacturers can streamline operations, reduce costs, and ultimately deliver higher-quality household products that meet the evolving demands of consumers.

Book Chapter

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| <input type="checkbox"/> 7 | Cloud computing and machine learning in the green power sector: Harnessing sustainable innovations | Agrawal, A.V. , Sujatha, G. , Sasireka, P. , ... Cloudin, S. , Samp, B. | Advanced Applications in Osmotic Computing, pp. 151–179 | 2024 | 0 |
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The chapter explores the potential of cloud computing, machine learning, and the green power sector in promoting sustainable energy production and consumption. Cloud computing offers efficient data storage and processing, while machine learning algorithms optimize energy production, distribution, and consumption. It highlights how cloud-based infrastructure can enhance renewable energy forecasting, energy grid management, and demand response systems. Edge computing brings intelligence renewable energy sources, reducing latency and energy consumption. The chapter also addresses challenges like data privacy, security, and regulatory compliance in the green power sector. It reviews case studies and emerging trends to demonstrate how these technologies can optimize renewable energy production and contribute to a more sustainable power sector.

Book Chapter

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| <input type="checkbox"/> 8 | The power of visionary leadership in transforming the Indian education system | Durairaj, M. , Das, S. , Ezhilmath, K. , ... Jayadeva, S.M. , Murugan, S. | Challenges of Globalization and Inclusivity in Academic Research, pp. 162–185 | 2024 | 0 |
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The book chapter explores the transformative potential of visionary leadership in India's education system, focusing on key themes such as leadership in education, policy reform advocacy, empowering educators, fostering innovation, inclusivity, engaging communities, and data-driven decision-making. It advocates for a holistic approach to education, focusing on diversity, accessibility, and quality. The chapter delves into the characteristics, strategies, and impact of visionary leaders in the Indian education sector, highlighting their ability to drive significant changes, innovation, and progress. It also discusses the challenges faced by these leaders and offers lessons to be learned. It is a must-read for educators, policymakers, and anyone interested in the future of education in India.

Book Chapter

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| <input type="checkbox"/> 9 | Smart Nanomaterials for Antiseptic Application | Sekar, S. , Pitchaimani, J. , Tamilselvi, A. | Nanoscience and Nanotechnology for Smart Prevention, Diagnostics and Therapeutics: Fundamentals to Applications, pp. 23–34 | 2024 | 0 |
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Skin infections are the most common in humans or animals mainly caused by infectious bacterial, fungal, and other pathogens. Also, humans and animals suffer from many dermatological diseases such as impetigo, abscess, and staph infection. Frequent cleaning of the skin with antiseptic soap or shampoo/lotion is recommended to suppress the spread of microbes. There are several biocides were used in hospitals to prevent nosocomial infections. Besides, the quotidian use of antiseptics in our daily routine. But we know that not all microorganisms are resistant to these antiseptic agents. Hence, there is a huge urge for a broad range of studies on novel antiseptics. Over the past few decades, nanotechnology has delivered a great effect on public use in various aspects. Unlike bulk materials, nanomaterials have a high surface-to-volume ratio, reflecting a unique action in fighting against harmful microbes. Due to the broad and potential use of nanomaterials, they have been the subject of significant investigation in various fields like medicine, food, and surface. Hence, we have discussed the formulation and the important application of nanomaterials as antiseptic agents. Especially, the role of metal, metal oxides, and non-metallic nanoparticle and their antiseptic property against infectious microorganisms.

Book Chapter

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| <input type="checkbox"/> 10 | Recent trends and practices of bio-functionalized carbon nanotubes in bioimaging and biosensing applications in biomedical sectors | Prabakaran, L. , Vedakumari, S.W. , Jeevahan, A. , Jacquelin Veda Jancy, S. | Carbon-Based Nanomaterials in Biosystems: Biophysical Interface at Lower Dimensions, pp. 361–393 | 2024 | 0 |
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Nanotechnology has led to various breakthroughs in the field of science and technology. One such inimitable innovation is the development of carbon nanotubes (CNTs), which hold remarkable mechanical, electrical, and optical properties suitable for biomedical applications. The structure of the CNTs can be modified or functionalized by conjugating organic or inorganic materials, and this has gained a lot of attention among researchers who are working in the field of cancer detection and therapy. The CNTs, especially one-dimensional semiconducting single-walled carbon nanotubes (SWCNTs), show fluorescence emission in the near-infrared spectral region and hold robust resonance Raman's scattering suitable for bioimaging and biosensing applications in biomedical sectors. When coupled with metal nanoparticles, CNTs serve as contrast agents for multimodal imaging in basic research and animal/clinical diagnostic applications. This chapter will give a deep insight into the recent developments in disease diagnosis using both SWCNTs and multiwalled CNTs.

Book Chapter

□ 11	LDS-LVAT: Lie Detection System-Layered Voice Technology	<u>Veena, K.</u> , <u>Meena, K.</u> , <u>Rajalakshmi, D.</u> , <u>Fathima, M.</u> , <u>Thamarai Selvi, K.</u>	Technological Advancement in Internet of Medical Things and Blockchain for Personalized Healthcare: Applications and Use Cases, pp. 187–203	2024	0
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When dealing with criminal cases, investigators find detecting lies and dishonesty to be a considerable issue. In comparison to normal human conduct, the process of identifying a liar has a higher proportion of importance in terms of external behavior and cognitive power of the brain. Mel-frequency cepstrum coefficients (MFCC) approach extracts distinctive features from the original electroencephalogram data and utilizes them in conjunction with the neural network (NN) methodology for training and evaluation. Existing lie detection systems rely on physiological and behavioral factors, resulting in limited effectiveness. However, the pursuit of a computational model for automating lie detection has not been extensively explored. Researchers have recently focused on training machine learning models, including sequential NNs, solely using acoustic data from speech to enhance the accuracy of lie detection. The MFCC, energy envelopes, and pitch contours are constructed using a balanced data set of deceptive and non-deceptive speech recordings taken from a two-person deception game. This model's highest accuracy for lie detection is 85.8%. The layered voice analysis is a new technique where an analysis of the same is done. It is capable of detecting and quantifying a wide range of psychological reactions that are suggestive of shifts: in the tested party's perception, and it will warn the trained operator to follow its indications and leads.

Book Chapter

□ 12	Secure cloud web application in an industrial environment: a study	<u>Latha, B.</u> , <u>Gopinath, B.</u> , <u>Palanikumar, K.</u>	Machine Intelligence in Mechanical Engineering, pp. 379–391	2024	0
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Every piece of data is moving to cloud servers in the majority of industry sectors in an effort to decrease infrastructure and storage on physical devices. However, data can be accessed and stolen by dishonest or unscrupulous people. Since they cannot work and deliver on time, it may have an impact on certain industrial sectors and personnel. Modern techniques such as the SHAKE-256 (Secure Hash Algorithm and Keccak) hashing algorithm and antiforgery token were suggested in this article to secure the application in numerous industries. Additionally, it helps to prevent hackers.

Book Chapter

□ 13	Application of augmented reality and virtual reality technologies for maintenance and repair of automobile and mechanical equipment	<u>Prathibha, S.</u> , <u>Palanikumar, K.</u> , <u>Ponshanmugakumar, A.</u> , <u>Rakesh Kumar, M.</u>	Machine Intelligence in Mechanical Engineering, pp. 63–89	2024	1
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Emerging technologies like 3D printing, industrial IOT, artificial intelligence, and reality technologies augmented reality (AR) and virtual reality are considered to reshape the manufacturing industry. Out of these industry 4.0 technologies, AR/VR promises replacement of manpower in the mechanical engineering field through automation. Mechanical engineering requires large manpower to do routine processes like machine assembly and product maintenance, provide support services for the product, and develop complex designs using computer-aided design. Training the mechanical engineers for tools using 2D and 3D imaging will help the engineers to have a realistic understanding of the concepts, and AR/VR technologies will have a high impact in delivering realistic training to mechanical engineers. AR/VR technology is also very useful in giving quick maintenance of mechanical tools, machines, or automobiles in critical and complex situations with a realistic solution. AR is estimated to become a 400 billion market globally by 2024 in the field of maintenance, repair, and overhaul in the mechanical engineering field. In this chapter, we discuss two case studies of application of AR/VR technology for maintenance of automobiles and maintenance of equipment in industry. An automobile's life is not long; with years, due to various environmental conditions, the machineries may witness a few problems. It may also lead to breakdown while traveling on a long road trip. Whenever a fault occurs, it is not optimum to call the mechanic all the time. It may be a time-consuming task. To do the repair works by the user, we have come up with an AR-integrated mobile application. The mobile application can give step-by-step detailed instructions to detect the fault in the automobile, using which the user can repair their cars on their own. Also, the application can be used by the persons who wish to initialize their career in the automobile industry. The user can now learn the basics of mechatronics easily. This application allows the user to erase the fear of the breakdowns/other faults in their vehicle during a long journey. COVID-19 pandemic has made people shift to remote working, which has led to the adoption of AR/VR technology in maintenance and repair of equipment in mechanical industries. Reality technologies integrated with smart devices like IP cameras and smartphones can help in providing instructions to repair the equipment either through voice or video from on-site technicians to the employees or customers.

	Document title	Authors	Source	Year	Citations	
<input type="checkbox"/>	14	Application of machine vision technology in manufacturing industries—a study	Palanikumar, K. , Natarajan, E. , Ponshanmugakumar, A.	Machine Intelligence in Mechanical Engineering, pp. 91–122	2024	1
<p>Hide abstract ^ View at Publisher ↗ Related documents</p> <p>Machine vision is the set of data and techniques used to conduct image-based automated inspections for quality checks, process monitoring, and industrial automation. Machine Vision (MV) is utilised for optical gauging, quality control, sorting, component assembly inspection, presence or absence recognition, and process industries management. These are some possibilities for completing a task. Verifying components with machine vision technology helps ensure quality and keep the process operating smoothly. Process control, specialised applications, the pharmaceutical industry, the food and beverage industry, the electronic packaging industry, and the automobile industry, to name a few, all use machine vision technologies. This article discusses how to acquire measurements, rearrange optical characters, regulate a process with image processing, and identify whether final product components are on or off the assembly line. The major goal of this research is to raise public knowledge of machine vision technologies. This will result in greater production quality, less scrap goods as a result of nonconformities caused by the use of machine vision to manage the manufacturing process, and the end of any value-added work done on scrap product during succeeding manufacturing stages. Each of these goals corresponded to a research goal. In other words, this technology will increase manufacturing quality while minimising product waste owing to non-conformance difficulties. Most strategies outlined in this article, and the method manufacturer showing how to evident the concept to confirm that it works properly.</p>						
<input type="checkbox"/>	15	Machine intelligence in mechanical engineering: an introduction	Natarajan, E. , Palanikumar, K. , Ramesh, S. , Davim, J.P. , Kumar, K.	Machine Intelligence in Mechanical Engineering, pp. 1–12	2024	0
<p>Hide abstract ^ View at Publisher ↗ Related documents</p> <p>Machine intelligence is deployed by integrating sensory devices, machine vision, and artificial intelligence into the operation of the system. It can be employed in any real-time application. Artificial intelligence is employed to monitor and control the operations by taking the required decisions. The use of machine intelligence can be from small scale to robust autonomous production systems. After Industry 4.0 and technological advancements attracted the attention of the industrialists, many notable research and product developments have been done in the past few years. This article aims to showcase some of the notable implementations being conducted in mechanical engineering.</p>						
<input type="checkbox"/>	16	Evaluation of the Compression Properties of 3D Printed EPA-GF TPMS Structures	Jeyanthi, S. , Prabhu, R. , Arunkumar, R. , ... Kumar, S.V. , Lal, L.P.J.	Springer Proceedings in Materials , 36, pp. 237–249	2024	1
<p>Hide abstract ^ View at Publisher ↗ Related documents</p> <p>3D printed minimal surface structures have received considerable research interest in the past decade and are proposed for many multidisciplinary applications. The mechanical performance of these structures is significantly affected by their structural configuration, materials, and 3D printing parameters. To explore the behavior of structural profiles, four different designs were developed and 3D printed from ePA-GF materials using a fusing filament fabrication and evaluated by axial compression experiments at a quasi-static staining rate. The experimental results provide insight into the compression properties, plastic deformation, and failure mechanism of short fiber reinforced structures. The results of axial compression experiments revealed that unit cell topology plays an important role in unit cell selection and design. It has been found that the Diamond structure has the highest compressive modulus and energy absorption capacity, while the Primitive structure has the lowest range of compressive modulus and energy absorption capacity. However, the Primitive structure recorded the lowest induced stress and highest efficiency among all other designs. Fiber pull-out and fracture was observed on induced cracks in the structure, which confirms uniform stress transfer to successive layers.</p>						
<input type="checkbox"/>	17	IoT-based caring system for aged people in a post-COVID scenario	Ponmalar, A. , Anand, J.	Internet of Medical Things in Smart Healthcare: Post-COVID-19 Pandemic Scenario, pp. 207–224	2023	8
<p>Hide abstract ^ Related documents</p> <p>Numerous aged people are living unaccompanied in their households. If the aged people tumble, it may be problematic for them to demand for help at this current scenario because of the Covid-19 pandemic situation. The foremost objective of this chapter is to design an android-based tumble detection device at a reasonable cost for the aged people. The technique describes the layout of the android-based totally fall detection sensor device with a pulse value tracking unit. The device is capable of well- known a falling incident to the touch individual such that the incident may be said to the ambulance branch to the soonest possible, and to offer essential scientific remedies for the injured aged in a quick span of time. The layout and implementation integrate each hardware and software program that paintings seamlessly in detecting and reporting a fall at domestic and still have an brought normal monitoring device. So each 10 mins as soon as their region could be shared to the caretaker. The hardware element includes the falling detection sensor and pulse sensor that detects the frame function of the person whether or not it's miles on a falling mode at the same time as the software program aspect includes a few formulation that come across the fallings and triggers the alarm and sends notification thru Short Message Service (SMS) with the precise region via means of the usage of the Global Positioning System (GPS) in the smart Android phone.</p>						

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Wireless technologies that enable people to link their home networks together as well as to the Internet via wireless community networks are in high demand. Despite the fact that many network architectures for broadband wireless networking have been studied and implemented in practice due to emerging technology and locales, Broadband Wireless Networking (BWN) has unquestionably been the most common architecture that has demonstrated strong dominance in various roles. Indeed, allowing such broadband networking and creating a group network has numerous advantages. This would boost the rural and isolated communities' quality of life, digital interaction, and collaborations. The design of efficient communication is a difficult problem for the next generation BWNs' performance in managing real-time and QoS-sensitive applications, as well as pleasing both service providers and consumers. Unfortunately, today's cutting-edge routing standards in BWNs are not ideally suited to tackle this task, as these standards are fundamentally complex and suffer from innate problems with regard to efficient communication-based implementations, according to the literature. As a result, the aim of this chapter is to provide BWNs with a straightforward roadmap of theoretical context so that they can manage various efficient routing mechanisms.				
Book Chapter				
<input type="checkbox"/> 20 Region-based convolutional neural networks for selective search	Kavitha, R. , Srinivasan, R. , Subha, P. , Kavitha, M.	Intelligent and Soft Computing Systems for Green Energy, pp. 141–150	2023	0
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In recent years, image stitching and selective search using neural networks has had an increasingly significant role in various fields, including moving pictures, astronomy and healthcare. Image recognition through selective search consists of complex algorithms, and several cumbersome calculations produce "scans" which then merge together to form a real-life representation of the required area. This paper introduces a low-cost modeling method with user-friendly application that involves the concept of Image Stitching. It also discusses graphics rendering software with simulation of user movement in the scenario created on the computer. This study investigates a type of Harris picture stitching technique that is based on the OpenCV setup environment, in light of the immense scene and high-resolution image stitching challenges. To begin, the feature points are extracted using Harris corner detection. The feature points are then rough-matched using Normalized Cross Correlation, then the algorithm RANSAC is employed to eliminate incorrect matching. Second, to implement the image registration process, a cylindrical projection transformation model is used. Finally, to fuse photos, this study employs an enhanced weighting average fusion technique, which reduces image fusion's computational complexity while also eliminating seams in stitched images.				
Book Chapter				
<input type="checkbox"/> 21 Machine Learning Methods For Intelligent Health Care	Kalaivani, K. , Valarmathi, G. , Kalaiselvi, T. , Subashini, V.	Mobile Computing Solutions for Healthcare Systems, pp. 49–61	2023	0
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The headway of man-made reasoning techniques overlays the methods toward shrewd medical services by growing new ideas, for example, Machine learning. This part presents an outline of Machine learning procedures applied to brilliant medical services. AI procedures are regularly applied to brilliant well-being to empower Artificial knowledge based on a current innovative improvement to medical care. Moreover, the section likewise presents difficulties and openings in Machine adapting, especially in the medical services space and near examination of different AI techniques.				
Book Chapter				
<input type="checkbox"/> 22 Broadband Wireless Network Era in Wireless Communication - Routing Theory and Practices	Prabha, R. , Senthil, G.A. , Sangeetha, S.K.B. , Suganthi, S.U. , Roopa, D.	Modeling and Optimization of Optical Communication Networks, pp. 267–279	2023	0
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Wireless technologies that enable people to link their home networks together as well as to the Internet via wireless community networks are in high demand. Despite the fact that many network architectures for broadband wireless networking have been studied and implemented in practice due to emerging technology and locales, Broadband Wireless Networking (BWN) has unquestionably been the most common architecture that has demonstrated strong dominance in various roles. Indeed, allowing such broadband networking and creating a group network has numerous advantages. This would boost the rural and isolated communities' quality of life, digital interaction, and collaborations. The design of efficient communication is a difficult problem for the next generation BWNs' performance in managing real-time and QoS-sensitive applications, as well as pleasing both service providers and consumers. Unfortunately, today's cutting-edge routing standards in BWNs are not ideally suited to tackle this task, as these standards are fundamentally complex and suffer from innate problems with regard to efficient communication-based implementations, according to the literature. As a result, the aim of this chapter is to provide BWNs with a straightforward roadmap of theoretical context so that they can manage various efficient routing mechanisms.				

	Document title	Authors	Source	Year	Citations
<input type="checkbox"/> 23	Detection of Breast Cancer Diagnosis Algorithm Based on TWCNN Technique	Singh, B. , Ahmed, T.I. , Suganthi, P. , ... Pant, K. , Koul, M.K.	EAI/Springer Innovations in Communication and Computing , Part F274, pp. 117–132	2023	0

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Breast cancer (BC) is one of the foremost causes of death worldwide and requires appropriate treatment. As a result, this chapter categorises breast MRI channel images as undesirable or commonplace. Many researchers in the medical domain are adapting modern techniques to predict BC diseases. These techniques always support experts in identifying diseases, taking preventive measures, and facilitating treatment planning. The study of BC diagnosis from MRI of the breast using IP methods is one of the most prevalent and demanding fields in research. However, many patients are suffering from BC without any discernible age distinction. Identification of the prediction of BC in the early stages will save many human lives. Our most recent suggested Two-Weight Convolution neural network (TWCNN) appearance uses image mixture and TWCNN approaches. To begin with, multiple pre-processing operations have been used by taking advantage of multi-focus image combinations in order to improve the accuracy of MRI images. During energise, pre-processed images are energised into the recently proposed 13-layer TWCNN structure for RDS classification. Two experiments on two separate databases were used to assess the consistency of our TWCNN protocol. The MRI image dataset is divided into 20% research and 80% preparation sets in the first attempt, but a tenfold cross-validation of the image dataset is done in the second attempt. The accuracy obtained by our methodology on dataset 1 in the first test is 98.33%. The second test is 98.77%, while in dataset 2, the exactness obtained in tests 1 and 2 is 92.22% and 93.33%, respectively.

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