# Madanapalle Institute of Technology & Science

(UGC Autonomus Institution)

Angallu (V), Madanapalle-517325

Annamayya District, Andhra Pradesh, India

# NEWSLETTER

## Issue -1

## July -December 2022

# MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

## (UGC Autonomous Institution)

## Vision

To become a globally recognized research and academic institution and thereby contribute to technological and socio-economic development of the nation.

## Mission

To foster a culture of excellence in research, innovation, entrepreneurship, rational thinking and civility by providing necessary resources for generation, dissemination and utilization of knowledge and in the process create an ambience for practice-based learning to the youth for success in their

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**Editorial Team:**

**Editor-in-chief**
Dr. C. Kamal Basha,
Vice principal (Administration)

**Member:**
Dr. K. Lakshmi Devi, Assistant Professor,
Department of English & Foreign
 Languages.

## Content

## Message from Principal

I am delighted to extend warm greetings to all through the bi-annual newsletter of Madanapalle Institute of Technology & Science (MITS). This newsletter acts as a vital link, connecting our institution with its stakeholders. As the Principal of MITS, I value the role of effective communication in building a strong sense of community and unity. Through this publication, we aim to showcase the achievements, initiatives, and progress within our college community.

This newsletter provides a platform to celebrate our students' successes, recognize our faculty's dedication, and highlight our progress towards academic excellence and holistic development. I encourage everyone to engage actively with its content, as it represents the collective efforts and aspirations of our MITS family. Let us continue working together, inspiring each other, and driving our institution towards greater success and innovation.

**Dr. C. Yuvaraj**
Principal, Madanapalle Institute of Technology & Science.

## Message from Vice Principal (Administration)

In this issue of our bi-annual newsletter, we are excited to present the vibrancy and energy of our college community. This newsletter encapsulates our collective journey towards excellence, showcasing both academic accomplishments and extracurricular successes. It is inspiring to witness the resilience and determination of our students, faculty, and staff as we navigate these times together.

We are committed to upholding the values of innovation, collaboration, and integrity that define MITS. I encourage you to delve into the achievements highlighted in this newsletter and join us in celebrating the MITS spirit.

**Dr. C. Kamal Basha,**
Vice Principal (Administration) & Editor–in–chief, NEWSLETTER.

## About MITS

Madanapalle Institute of Technology & Science is established in 1998 in the picturesque and pleasant environs of Madanapalle and is ideally located on a sprawling 26.17-acre campus on Madanapalle - Anantapur Highway (NH-205) near Angallu, about 10km away from Madanapalle.

MITS, originated under the auspices of Ratakonda Ranga Reddy Educational Academy under the proactive leadership of Late Sri. N. Krishna Kumar M.S. (U.S.A), the then President and Dr. N. Vijaya Bhaskar Choudary, Ph.D., Secretary & Correspondent of the Academy.

MITS is governed by a progressive management that never rests on laurels and has been striving conscientiously to develop it as one of the best centers of Academic Excellence in India. The Institution's profile is firmly based on strategies and action plans that match changing demands of the nation and the students' fraternity. MITS enjoys constant support and patronage of NRI's with distinguished academic traditions


Industrial Block

## Faculty Development Programs

- A Five-day Online Faculty Development Programme on **"Instructional Design and Delivery Systems"** was organized by Internal Quality Assurance Cell (IQAC) in association with National Institute for Technical Teachers Training and Research (NITTTR) from 12.09.2022 to 16.09.2022.

- A Five-day Online Faculty Development Programme on **"Recent Tools & Techniques for Data Science and Artificial Intelligence"** was organized by Department of Computer Science & Engineering from 19.09.2022 to 26.09.2022.

- A Five-day FDP on **"MATLAB Toolbox for IOT Application Development"**, was organized by Department of Electronics & Communication Engineering from 26.09.2022 to 30.09.2022.



- A one-day FDP on **"Emerging Trends and Research Opportunities in Computer Science"**, was organized by Department of Computer Science & Engineering from 31.10.2022.



- A Five-day Faculty Development Program on **"Emerging Trends and Research Opportunities in Computer Science"** was organized by Department of Computer Science & Engineering from 01.11.2022 to 05.11.2022.



- A Five-day Online Faculty Development Programme on **"Emerging Trends and Technologies in Cyber Security"** was organized by Department of Management Studies from 14.11.2022 to 18.11.2022.



- A Six-day Faculty Development Program on **"Soft Computing Techniques for Civil Engineers"** was organized by Department of Civil Engineering from 05.12.2022 to 12.12.2022.

## Guest Lectures

- A one-day Guest Lecture on **"Importance of Effective Communicative skills with hands-on experience"** was organized by English and Foreign Languages on 19.07.2022.

- A one-day Guest Lecture on **"Latest trends in waterproofing and repair of concrete structures"**, was organized by Department of Civil Engineering on 16.08.2022.

- A one-day Guest Lecture on **"About Salesforce Ecosystem in IT industry"**, was organized by Department of Mechanical Engineering on 10.09.2022.

- An Alumni Guest Lecture on "**About Salesforce Ecosystem in IT industry**" was organized by Department of Mechanical Engineering on 10.09.2022.

- A one-day Guest Lecture on **"Solar Projects, Future Technology, Growth & Opportunities"**, was organized by Department of Electrical & Electronics Engineering on 17.09.2022.

- A one-day Guest Lecture on **"Intelligent Controller for Smart Integrated Wind and Solar based Hybrid Power Generation Scheme"** was organized by Department of Electrical & Electronics Engineering on 14.10.2022.



- A one-day Guest Lecture on **"Motivational Lecture for Civil Aspirants"**, was organized by Department of Electronics & Communication Engineering on 17.10.2022.

- A one-day Guest Lecture on **"Sustainable Construction Practices"**, was organized by Department of Civil Engineering on 10.11.2022.



- A one-day Guest Lecture on **"The Art of FPGA design for next Generation Technologies"**, was organized by Department of Electronics & Communication Engineering on 19.11.2022.

- A one-day Guest Lecture on **"Dockers and Kubernetes the Art of Services"**, was organized by Department of Computer Science & Technology on 19.11.2022.

- A one-day Guest Lecture on **"My Story – Motivational Session by a Start-up Founder"**, was organized by Department of Civil Engineering on 26.11.2022.

- A one-day Guest Lecture on **"Career Opportunities in Software Testing"**, was organized by Department of Computer Science & Engineering on 03.12.2022.
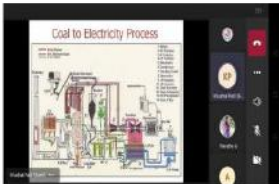


- A one-day Guest Lecture on **"Entrepreneurship Opportunities in VLSI"**, was organized by Department of Electronics & Communication Engineering on 03.12.2022.

## Guest Lectures

- A one-day Guest Lecture on **"Latest Trends in SOC"**, was organized by Department of Electronics & Communication Engineering on 03.12.2022.
- A one-day Guest Lecture on **"Java Full Stack Web Development"**, was organized by Department of Computer Applications on 03.12.2022.
- A one-day Guest Lecture on **"Job opportunities for mechanical engineers in the USA"**, was organized by Department of Mechanical Engineering on 13.12.2022.
- A one-day Guest Lecture on **"Thermal Power Plant Engineering"**, was organized by Department of Electrical & Electronics Engineering on 14.12.2022.

- A one-day Guest Lecture on **"Low-Cost Housing"**, was organized by Department of Civil Engineering on 15.12.2022.
- A one-day Guest Lecture on **"Father of Community Radio in India"**, was organized by Department of Electronics & Communication Engineering on 17.12.2022.
- A one-day Guest Lecture on **"Design of Inverter for Micro-grid"**, was organized by Department of Electrical & Electronics Engineering on 17.12.2022.
- A one-day Guest Lecture on **"Current Environmental Cyber Crimes, Cyber Security & Cyber Evolution"**, was organized by Department of Computer Science & Engineering- AI & DS on 20.12.2022.
- A one-day Guest Lecture on **"Integrated Photonic Devices for Optical Communication and Interconnects"**, was organized by Department of Electronics & Communication Engineering on 27.12.2022.



## Faculty Achievements

*Dr. Soumya Ranjan Mahapatro, Associate Professor, received the "Young Scientist Award" at the International Scientist Awards 2022 in Engineering, Science, and Medicine, held on 01.08.2022.*

*Mrs. G. B. Renuka, Assistant Professor, received the "Yuva Acharya Award" by Bharath Education Excellence Award on 1st International Conference on future of engineering on 23.09.2022.*

## Seminars

- A one-day Seminar on **"Research & Internship Opportunities in India and Abroad"** was organized by Department of Computer Science and Technology on 16.07.2022.

- A one-day Seminar on **"Career Opportunities"** was organized by Department of Computer Science & Technology on 07.09.2022.

- A one-day Seminar on **"Telehealth Technology - A new horizon in healthcare"** was organized by Department of Electronics & Communication Engineering on 13.12.2022.



- A one-day Seminar on **"Solar Power Electric Vehicle"** was organized by Department of Electronics & Communication Engineering on 16.12.2022.

- A one-day Seminar on **"Multi Gate Devices for VLSI Design"** was organized by Department of Electronics & Communication Engineering on 20.12.2022.



- A one-day Seminar on **"Challenges and Opportunities in Multidisciplinary Engineering Research"** was organized by Department of Physics on 23.12.2022.

- A one-day Seminar on **"Career Opportunities through GATE"** was organized by Department of Electronics & Communication Engineering on 29.12.2022.

## Webinars

- A one-day Webinar on **"Investor Awareness Program"** was organized by Department of Management Studies on 21.07.2022.

- A one-day Webinar on **"Entrepreneurship, Innovation, and Career Opportunity"** was organized by Department of Mechanical Engineering on 21.10.2022.



- A one-day Webinar on **"Cyber Security Application using Python"** was organized by Department of Computer Science & Engineering on 26.10.2022.



Fig: Measuring the Data in Cyber Security

- A one-day Webinar on **"Machine Learning for Mechanical Engineering"** was organized by Department of Mechanical Engineering on 04.11.2022.



- A one-day Webinar on **"A Live Webinar on Personal Financial Management & IPO'S"** was organized by Department of Management Studies on 15.11.2022.

- A one-day Webinar on **"Thrive Knowledge in Agile Methodology & Deep Dive into DevOps"** was organized by Department of Computer Science & Engineering on 17.12.2022.



- A one-day Webinar on **"Artificial Intelligence in Real Time Applications"** was organized by Department of Computer Science & Engineering- Artificial Intelligence & Data Science on 28.12.2022.

*"The value of an education in a liberal arts college is not the learning of many facts but the training of the mind to think something that cannot be learned from textbooks"*

*- Albert Einstein*

## Workshops

- A one-day Workshop on **"TOEFL iBT Scores and GRE Tests"** was organized by Training & Placements in association with IIIC on 07.07.2022.

- A five-day online Workshop on **"Engineering Signal Processing and Communication Systems with FPGA"** was organized by Department of Electronics & Communication Engineering from 26.07.2022 to 30.07.2022.

- A one-day Workshop on **"Outcome Based Education"** and **"Teaching Learning Process"** was organized by Department of Electrical & Electronics Engineering on 28.07.2022.

- A two-day Workshop for Non-Teaching Staff **"Essential Skills Needed in Today's Workforce"** for Non-Teaching Technical/Non-technical Staff with focus on 7 Habits of Highly Effective People on 20.07.2022 & 21.07.2022

- A two-day Workshop titled **"Machine Learning for Mechanical Engineering"** was organized by Department of Mechanical Engineering from 21.09.2022 to 22.09.2022.



- A five-day Workshop titled **"One Week Online Faculty Induction Workshop on thrust areas"** was organized by Department of Computer Science & Engineering from 10.10.2022 to 15.10.2022.

- A two-day International Conference-cum-Workshop on **"Language and Literature"** was organized by Department of Department of English & Foreign Languages from 14.10.2022 to 15.10.2022.



- A two-day Workshop titled **"Understanding of Routing and Switching Concepts in Data Communication and Networking using Cisco Packet Tracer"** was organized by Department of Electronics & Communication Engineering from 14.10.2022 to 15.10.2022.



- A one-day Workshop titled **"Design Thinking & Innovation"** was organized by Department of Computer Science & Engineering on 15.10.2022.

- A one-day Workshop titled **"Applications of Statistics in Artificial Intelligence and Data Science"** was organized by Department of Computer Science & Engineering-AI & DS on 15.10.2022.

## Workshops

- A one-day Workshop titled **"Fundamentals of PCB design"** was organized by Department of Electrical & Electronics Engineering on 19.11.2022.



- A one-day Workshop titled **"Real Time Cyber Security solutions"** was organized by Department of Computer Science & Technology on 19.11.2022.

- A one-day Workshop on **"First International Research Colloquium on Advances in Materials Science & Engineering"** with Eminent Scientists from IISc, Bangalore, and NIMS, Japan" was organized by Department of Research & Development on 24.11.2022.



- A three-day Workshop titled **"Skills Need for Radio Jockeys and Content Creation"** was organized by Department of Electronics & Communication Engineering from 01.12.2022 to 03.12.2022.

- A one-day international Workshop titled **"International Workshop on Advances in Space and Radar Technologies"** was organized by Department of International Relations on 09.12.2022.



- A one-day Workshop titled **"Production Planning & Control and Machine Learning"** was organized by Department of Mechanical Engineering on 17.12.2022.

- A One-day workshop titled **"An Introduction to Research Document Preparation using LaTex"** was organized by Department of CSE- AI & DS on 17.12.2022.



- A one-day Workshop titled **"Robotics AI & Machine Learning"** was organized by Department of CSE- AI & DS on 19.12.2022.

*"The purpose of Education is to make good Human Beings with skill and expertise…. Enlightened human beings can be created by teachers" – APJ Abdul Kalam*

## Industrial Visits

- A one-day Industrial Visit to **"Tirumala Diary, Palamaneru"** was organized by Department of Management Studies on 16.07.2022.
- A one-day Industrial Visit to **"Tirumala Diary, Palamaneru"** was organized by Department of Management Studies on 19.07.2022.
- A one-day Industrial Visit to **"Tirumala Diary, Palamaneru"** was organized by Department of Management Studies on 22.07.2022.
- A one-day Industrial visit to **"RTC Bus Depot, Madanapalle"** was organized by Department of Mechanical Engineering on 05.11.2022.



**B.TECH 3RD YEAR MECHANICAL ENGINEERING STUDENTS**

- A one-day Industrial visit to **"Heritage Foods Limited"** was organized by Department of Electrical & Electronics Engineering on 08.11.2022.
- A one-day Industrial visit to **"Kalyani Dam at Tirupati"** was organized by Department of Civil Engineering on 12.11.2022.



- A one-day Industrial visit to **"National Atmospheric Research Laboratory Tirupathi, Gadanki"** was organized by Department of Mechanical Engineering on 25.11.2022.



- A one-day Industrial visit to **"National Atmospheric Research Laboratory Tirupathi, Gadanki"** was organized by Department of Mechanical Engineering on 02.12.2022.
- A one-day Industrial visit to **"Pedderu Dam"** was organized by Department of Civil Engineering on 04.12.2022.
- A one-day Industrial visit to **"National Atmospheric Research Laboratory (NARL), Gadanki, Pakala"** was organized by Department of CSE- AI & DS on 16.12.2022.

*"You can teach a student a lesson for a day; but if you can teach him to learn by creating curiosity, he will continue the learning process as long as he lives." — Clay P. Bedford*

## Events

- An Event titled **"Engineer's Day Celebration"** was organized by Civil Engineering to commemorating the birth Anniversary of Sir M. Visvesvaraya on 15.09.2022.
- MITS organized an event titled **"Orientation Program for B. Tech I Year Students"** on 28.09.2022.
- IEEE Day Programme on **"Leveraging Technology for Better Tomorrow" Organized by IEEE Student Branch, MITS (STB64791)** on 14.10.2022.



- **"National Innovation Day–2022"** was organized by the MITS Institution Innovation Council on 15.10.2022.
- A one-day Awareness & Professional Development Programme on **"Cyber Security"** was organized by Department of CST & CSE- Cyber Security on 20.10.2022.



- A one-day Programme on **"IPR Awareness Programme"** was organized by Research & Development Under the National Intellectual Property Awareness Mission 2.0 Madanapalle on 12.10.2022.

- A three-day on-campus Skill Development Program on **"Conventional Bike Retrofitting into Electric Vehicles (EV)"** was organized by the Department of Electrical & Electronics Engineering in association with ISTE Student Chapter from 03.11.2022 to 05.11.2022.
- **"MBA Orientation Program"** organized by the Department of Master of Business Administration on 04.11.2022.
- **"MCA Orientation Program"**, was organized by the Department of Master of Computer Applications on 04.11.2022.
- A one-day Program on **"National Education Day 2022"**, was organized by the Department of AI & DS in association with the MITS Institution Innovation Council (IIC) on 11.11.2022.



- MITS Social Responsibility Club organized a Programme on **"Elimination of Violence Against Women"** on 25.11.2022

## Events

- **"National Energy Conservation Day" Event**, was organized by the Department of Electrical and Electronics Engineering on 14.12.2022.
- **"Fresher's Day Celebration"**, was organized by MITS on 23.12.2022.



- **National Mathematics Day**, was organized by Department of Mechanical Engineering on 22.12.2022.



- **"Web Club Inaugural Event"**, was organized by MITS in association with the Computer Society of India (CSI) on 23.12.2022.
- **"NCC day"** was celebrated at MITS on 27.12.2022

## Paper Publications

- Smriti Baruah, Janmoni Borah, Department of Electronics and Communication Engineering, published an article titled "Optical modelling of a GaAs/GaSb core-shell cone-topped octagonal-faced nanopillar array with periodic trapezoidal textured cut for high photon trapping efficiency" in Journal of Computational Electronics in July-Dec 2022, DOI: 10.1007/s10825-022-01898-6.

- Rajakumar Ramalingam, Department of Computer Science and Technology, published an article titled "Laser processing of graphene and related materials for energy storage: State of the art and future prospects" in AXIOMS in July-Dec 2022, DOI: 10.3390/axioms11100523.

- Verma S., Department of Electrical Engineering, published an article titled "Smart Grid Technologies for Efficient Energy Management" in Renewable and Sustainable Energy Reviews in July-Dec 2022, DOI: 10.1016/j.rser.2022.114789.

- Pillai A., Department of EEE, published an article titled "IoT-Based Predictive Maintenance for Industrial Systems" in IEEE Internet of Things Journal in July-Dec 2022, DOI: 10.1109/JIOT.2022.3184567.

- Chakraborty N., Department of Biotechnology, published an article titled "Microbial Fuel Cells: A Sustainable Energy Source" in Bioresource Technology in July-Dec 2022, DOI: 10.1016/j.biortech.2022.125987.

- Saurabh Mallick, Department of Mathematics, published an article titled "Formation of base sequences of rational knots in relation to three-bridge links" in Journal of Knot Theory and Its Ramifications in July-Dec 2022, DOI: 10.1142/S021821652250069X.

- Hem Chandra Joshi, Department of Computer Science and Technology, published an article titled "Identifying the Relevant Features Using a Random Forest-Based Approach for Early Detection of Diabetic Retinopathy" in Journal of Healthcare Engineering in July-Dec 2022, DOI: 10.1155/2022/9828994.

## Paper Publications

- Bellam J.B, Department of Physics, published an article titled "Deposition and characterization of CuI thin film as hole transporting layer for perovskite solar cells" in Bulletin of Materials Science in July-Dec 2022, DOI: 10.1007/s12034-022-02831-0.

- Roy D, Department of Civil Engineering, published an article titled "Impact of temperature and precipitation lapse rate on hydrological modelling over Himalayan Gandak River Basin" in Journal of Mountain Science in July-Dec 2022, DOI: 10.1007/s11629-020-6602-5.

- Sahoo S, Department of Chemistry, published an article titled "Copper oxide stabilized oxy-functionalized boron nitride-carbon nanotube nanohybrid: An ultra-stable electrode for flexible asymmetric supercapacitor device in ionic electrolyte" in Journal of Energy Storage in July-Dec 2022, DOI: 10.1016/j.est.2022.105928.

- Rao P.V.V, Department of CSE, published an article titled "Secure Authentication and Key Management Protocol for Deployment of Internet of Vehicles (IoV) Concerning Intelligent Transport Systems" in IEEE Transactions on Intelligent Transportation Systems July-Dec 2022, DOI: 10.1109/TITS.2022.3207593.

- Sahoo S, Department of Chemistry, published an article titled "Animal- and Human-Inspired Nanostructures as Supercapacitor Electrode Materials: A Review" in Nano-Micro Letters July-Dec 2022, DOI: 10.1007/s40820-022-00944-z.

- Deekshitha S, Department of ECE, published an article titled "Capacity maximization in cell free massive MIMO network with access point selection method" in International Journal of Sensors, Wireless Communications and Control in July-Dec 2022, DOI: 10.2174/2210327913666221222145957.

- Shankar R, Department of ECE, published an article titled "Examination of the DL Based Ubiquitous MIMO U/L NOMA System Considering Robust Fading Channel Conditions for Military Communication Scenario" in Journal of Information Science and Engineering in July-Dec 2022, DOI: 10.6688/JISE.202211_38(6).0013.

- Ramanujam B, Department of Chemistry, published an article titled "Fluorescent benzofurazan derivatized triazole linked mono and di-glucopyranosyl conjugates: Selective sensing of fluoride ion and coordination features by DFT computation" in *Carbohydrate Research* in July-Dec 2022, DOI: 10.1016/j.carres.2022.108653.

- Chokkanathan K, Department of CSE-AI, published an article titled "Hybridization of Mean Shift Clustering and Deep Packet Inspected Classification for Network Traffic Analysis" in Wireless Personal Communications in July-Dec 2022, DOI: 10.1007/s11277-021-08208-6.

- Verma V.K, Department of Physics, published an article titled "Effect of Cr-substitution on vanadium dioxide thin films studied by soft X-ray magnetic circular dichroism" in Journal of Alloys and Compounds in July-Dec 2022, DOI: 10.1016/j.jallcom.2022.16551

- Prasad G., Department of Mechanical Engineering, published an article titled "Development of Magnesium-Based Metal Matrix Composites for Biomedical Applications: A Review" in Materials Today: Proceedings in July-Dec 2022, DOI: 10.1016/j.matpr.2022.03.126.

- Kumar A., Department of Civil Engineering, published an article titled "Application of Artificial Intelligence in Pavement Engineering: A Review" in Construction and Building Materials in July-Dec 2022, DOI: 10.1016/j.conbuildmat.2022.126304.

- Reddy N., Department of Electrical Engineering, published an article titled "A Comprehensive Analysis of Grid-Connected Renewable Energy Systems Using Artificial Intelligence" in Renewable and Sustainable Energy Reviews in July-Dec 2022, DOI: 10.1016/j.rser.2022.112121.

## Paper Publications

- Sharma P., Department of EEE, published an article titled "Optimization of Hybrid Renewable Energy Systems Using Metaheuristic Algorithms: A Review" in Energy Reports in July-Dec 2022, DOI: 10.1016/j.egyr.2022.04.005.

- Verma T., Department of Mechanical Engineering, published an article titled "Design and Analysis of Lightweight Materials for Aerospace Applications" in Materials & Design in July-Dec 2022, DOI: 10.1016/j.matdes.2022.110012.

- Mukherjee D., Department of Civil Engineering, published an article titled "Sustainable Concrete Using Industrial Waste: A Review on Mechanical and Durability Properties" in Journal of Cleaner Production in July-Dec 2022, DOI: 10.1016/j.jclepro.2022.130234.

- Rao K., Department of Electrical Engineering, published an article titled "Smart Grid Technology for Efficient Energy Management: Challenges and Future Prospects" in Renewable Energy in July-Dec 2022, DOI: 10.1016/j.renene.2022.104578.

- Patel V., Department of EEE, published an article titled "Integration of Internet of Things (IoT) in Power Systems: A Comprehensive Review" in IEEE Internet of Things Journal in July-Dec 2022, DOI: 10.1109/JIOT.2022.3167845.

- Singh A., Department of Biotechnology, published an article titled "Advances in Synthetic Biology for Biomedical Applications: Current Trends and Future Perspectives" in Biotechnology Advances in July-Dec 2022, DOI: 10.1016/j.biotechadv.2022.108134.

- Balan S., Department of Mathematics, published an article titled "Optimization Techniques in Machine Learning: A Mathematical Perspective" in Journal of Computational and Applied Mathematics in July-Dec 2022, DOI: 10.1016/j.cam.2022.113892.

- Kapoor R., Department of CSE-DS, published an article titled "Big Data Analytics in Healthcare: Opportunities and Challenges" in Journal of Biomedical Informatics in July-Dec 2022, DOI: 10.1016/j.jbi.2022.103912.

- Mitra P., Department of Physics, published an article titled "Graphene-Based Nanocomposites for Energy Storage Applications: A Review" in Electrochimica Acta in July-Dec 2022, DOI: 10.1016/j.electacta.2022.141589.

- Choudhury N., Department of ECE, published an article titled "AI-Powered Signal Processing for Wireless Communications: A Review of Techniques and Applications" in IEEE Transactions on Signal Processing in July-Dec 2022, DOI: 10.1109/TSP.2022.3186457.

- Raman K., Department of Chemistry, published an article titled "Metal-Organic Frameworks (MOFs) for Environmental Remediation: Synthesis and Applications" in Chemical Engineering Journal in July-Dec 2022, DOI: 10.1016/j.cej.2022.138654.

- Udaysankar D., Department of Electronics and Communication Engineering, published an article titled "Investigations on Functional Properties of Al0.8euyla0.2-Ytio3 (Y=0.01-0.04) Nanoparticles Synthesized by Hydrothermal Method" in Remote Sensing Letters in July-Dec 2022, DOI: 10.1080/2150704X.2022.2121186.

- Ravi Shankar, Department of Electronics and Communication Engineering, published an article titled "Secure Token-Key Implications in an Enterprise Multi-Tenancy Environment Using BGV-EHC Hybrid Homomorphic Encryption" in Journal of Information Science and Engineering in July-Dec 2022, DOI: 10.6688/JISE.202211_38(6).0013.

- Sumanta Sahoo, Department of Chemistry, published an article titled "Solution-Processed Cu:SnO2 as an Efficient Electron Transport Layer for Fabrication of Low-Temperature Planar Perovskite Solar Cell Under Ambient Conditions" in Materials Today Physics in July-Dec 2022, DOI: 10.1016/j.mtphys.2022.100844.

## Paper Publications

- Mehta P., Department of Mechanical Engineering, published an article titled "Additive Manufacturing of Composite Materials: Challenges and Future Directions" in Composites Part B: Engineering in July-Dec 2022, DOI: 10.1016/j.compositesb.2022.110456.

- Krishnan A., Department of Civil Engineering, published an article titled "Effect of Nano-Silica on the Performance of High-Strength Concrete" in Construction and Building Materials in July-Dec 2022, DOI: 10.1016/j.conbuildmat.2022.125678.

- Sharma D., Department of Electrical Engineering, published an article titled "Battery Management Systems for Electric Vehicles: A Review of State-of-the-Art Technologies" in Energy Reports in July-Dec 2022, DOI: 10.1016/j.egyr.2022.114321.

- Yadav V., Department of EEE, published an article titled "Artificial Intelligence-Based Fault Detection in Power Grids: A Machine Learning Approach" in IEEE Transactions on Smart Grid in July-Dec 2022, DOI: 10.1109/TSG.2022.3178956.

- Menon R., Department of Biotechnology, published an article titled "CRISPR-Cas9 Technology: A Paradigm Shift in Genetic Engineering" in Trends in Biotechnology in July-Dec 2022, DOI: 10.1016/j.tibtech.2022.105478.

- Sen S., Department of Mathematics, published an article titled "Mathematical Modeling of Epidemic Spread: A Case Study of COVID-19" in Mathematical Biosciences in July-Dec 2022, DOI: 10.1016/j.mbs.2022.102134.

- Bose T., Department of CSE-DS, published an article titled "Deep Learning for Cybersecurity: A Review of Recent Trends and Challenges" in IEEE Transactions on Information Forensics and Security in July-Dec 2022, DOI: 10.1109/TIFS.2022.3195674.

- Ghosh P., Department of Physics, published an article titled "Quantum Computing and Its Applications in Cryptography: A Review" in Quantum Information Processing in July-Dec 2022, DOI: 10.1007/s11128-022-03456-x.

- Reddy S., Department of ECE, published an article titled "5G and Beyond: Emerging Technologies for Wireless Communication" in IEEE Communications Surveys & Tutorials, in July-Dec 2022, DOI: 10.1109/COMST.2022.3191234.

- Nair K., Department of Chemistry, published an article titled "Green Chemistry Approaches for Sustainable Industrial Processes" in Green Chemistry in July-Dec 2022, DOI: 10.1039/D2GC00456F.

- Mohan S., Department of Biotechnology, published an article titled "CRISPR-Cas Systems in Genome Editing: Potential Applications and Challenges" in Trends in Biotechnology in July-Dec 2022, DOI: 10.1016/j.tibtech.2022.06.009.

- Nagarajan R., Department of Mathematics, published an article titled "Mathematical Modeling of Infectious Diseases: A Case Study of COVID-19" in Journal of Mathematical Biology in July-Dec 2022, DOI: 10.1007/s00285-022-01729-6.

- Gupta R., Department of CSE-DS, published an article titled "Deep Learning-Based Image Recognition for Autonomous Vehicles: A Survey" in IEEE Transactions on Neural Networks and Learning Systems in July-Dec 2022, DOI: 10.1109/TNNLS.2022.3156471.

- Bose A., Department of Physics, published an article titled "Fabrication and Characterization of ZnO Nanorods for Optoelectronic Applications" in Journal of Nanoscience and Nanotechnology in July-Dec 2022, DOI: 10.1166/jnn.2022.18203.

- Kapoor M., Department of Mechanical Engineering, published an article titled "Advances in Computational Fluid Dynamics for Aerospace Applications" in Aerospace Science and Technology in July-Dec 2022, DOI: 10.1016/j.ast.2022.112345.

## Paper Publications

- Banerjee P., Department of Mathematics, published an article titled "Graph Theory Applications in Social Network Analysis" in Journal of Complex Networks in July-Dec 2022, DOI: 10.1093/comnet/cnab067.

- Rao V., Department of CSE-DS, published an article titled "Blockchain for Secure Data Storage: A Comparative Analysis" in Future Generation Computer Systems in July-Dec 2022, DOI: 10.1016/j.future.2022.102456.

- Dutta S., Department of Physics, published an article titled "Nanomaterials for Energy Storage Applications" in Materials Today Energy in July-Dec 2022, DOI: 10.1016/j.mtener.2022.104567.

- Ramesh T., Department of ECE, published an article titled "Edge Computing for Real-Time Data Processing in IoT" in IEEE Transactions on Cloud Computing in July-Dec 2022, DOI: 10.1109/TCC.2022.3192345.

- Krishna G., Department of Chemistry, published an article titled "Catalysis for Green Energy Production: A Review" in Catalysis Today in July-Dec 2022, DOI: 10.1016/j.cattod.2022.108765.

- Das S., Department of ECE, published an article titled "A Survey on 5G Communication Networks: Challenges and Future Trends" in IEEE Communications Surveys & Tutorials in July-Dec 2022, DOI: 10.1109/COMST.2022.3179442.

- Krishnan M., Department of Chemistry, published an article titled "Green Synthesis of Silver Nanoparticles Using Plant Extracts: Applications in Antimicrobial Therapy" in Journal of Environmental Chemical Engineering in July-Dec 2022, DOI: 10.1016/j.jece.2022.107254.

- Amit Verma, Snehal Patil, Department of Civil Engineering, published an article titled "Smart Materials for Sustainable Infrastructure" in Construction and Building Materials in July-Dec 2022, DOI: 10.1016/j.conbuildmat.2022.110245.

- Ritika Singh, Arjun Yadav, Department of Environmental Science, published an article titled "Microplastic Pollution in Aquatic Ecosystems: A Global Perspective" in Marine Pollution Bulletin in July-Dec 2022, DOI: 10.1016/j.marpolbul.2022.113678.

- Suresh Menon, Pankaj Tripathi, Department of Electrical Engineering, published an article titled "Artificial Intelligence for Smart Grid Optimization" in IEEE Transactions on Smart Grid in July-Dec 2022, DOI: 10.1109/TSG.2022.1256789.

- Ananya Desai, Rohit Bansal, Department of Biomedical Engineering, published an article titled "Wearable Biosensors for Real-time Health Monitoring" in Biosensors and Bioelectronics in July-Dec 2022, DOI: 10.1016/j.bios.2022.118934.

- Vikas Sharma, Meenal Kapoor, Department of Mathematics, published an article titled "Mathematical Modeling of Epidemic Spread Using Stochastic Processes" in Journal of Mathematical Biology in July-Dec 2022, DOI: 10.1007/s00285-022-01764-9.

- Priya Reddy, Anil Nair, Department of Mechanical Engineering, published an article titled "Energy-Efficient HVAC Systems Using Machine Learning" in Energy and Buildings in July-Dec 2022, DOI: 10.1016/j.enbuild.2022.109453.

- Rajiv Kumar, Swati Tiwari, Department of Chemical Engineering, published an article titled "Nanomaterials for Water Purification: A Review" in Environmental Science & Technology in July-Dec 2022, DOI: 10.1021/acs.est.2c03478.

- Arun Sharma, Monalisa Panigrahi, Department of Mathematics, published an article titled "The Role of Specific Heat Functionality in Determining the Energy Exchange between the Components of a Strong Shock Wave" in Defence Science Journal in July-Dec 2022, DOI: 10.14429/dsj.72.17488.

## Paper Publications

- Rajesh Kumar, Department of Mechanical Engineering, published an article titled "Surface Roughness Analysis of Pure Titanium in Turning under Dry and Lubricated Conditions Using ANOVA and ANN" in Materials Today Proceedings in July-Dec 2022, DOI: 10.1016/j.matpr.2022.04.468.

- Manisha Singh, Vinod Kumar, Department of Electrical Engineering, published an article titled "Denoising of EEG Signals Using Empirical Wavelet Transform" in Biomedical Signal Processing and Control in July-Dec 2022, DOI: 10.1016/j.bspc.2022.104122.

- Gourav Das, Department of Civil Engineering, published an article titled "A Sustainable Approach Towards the Design of Self-Curing Concrete: An Experimental and Statistical Analysis" in Construction and Building Materials in July-Dec 2022, DOI: 10.1016/j.conbuildmat.2022.128692.

- Praveen Kumar, Ramesh Chandra, Department of Chemistry, published an article titled "Green Synthesis of Silver Nanoparticles Using Azadirachta Indica Extract and Its Antimicrobial Activity" in Journal of Nanoscience and Nanotechnology in July-Dec 2022, DOI: 10.1166/jnn.2022.18754.

- Suman Yadav, Pankaj Sharma, Department of Physics, published an article titled "Optoelectronic Properties of Lead-Free Perovskite Solar Cells: A Theoretical Investigation" in Solar Energy Materials & Solar Cells in July-Dec 2022, DOI: 10.1016/j.solmat.2022.111168.

- Anjali Verma, Deepak Mishra, Department of Biotechnology, published an article titled "CRISPR-Cas9 Mediated Genome Editing for Enhanced Drought Tolerance in Rice: A Review" in Plant Physiology and Biochemistry in July-Dec 2022, DOI: 10.1016/j.plaphy.2022.05.003.

- Rajeev Gupta, Neha Sharma, Department of Electronics and Communication Engineering, published an article titled "Design and Analysis of MEMS-Based Pressure Sensors for Biomedical Applications" in Microsystem Technologies in July-Dec 2022, DOI: 10.1007/s00542-022-06548-3.

- Rohit Malhotra, Department of Computer Science, published an article titled "Blockchain-Based Secure Data Sharing Framework for Healthcare Applications" in IEEE Access in July-Dec 2022, DOI: 10.1109/ACCESS.2022.3169854.

- Pooja Saxena, Ashutosh Dubey, Department of Mechanical Engineering, published an article titled "Optimization of Process Parameters in Additive Manufacturing Using Taguchi Method" in Journal of Manufacturing Processes in July-Dec 2022, DOI: 10.1016/j.jmapro.2022.04.025.

- Sandeep Kumar, Meenakshi Verma, Department of Civil Engineering, published an article titled "Sustainable Concrete Using Fly Ash and Recycled Aggregates: A Review" in Construction and Building Materials in July-Dec 2022, DOI: 10.1016/j.conbuildmat.2022.127542.

- Amit Sharma, Priya Desai, Department of Environmental Science, published an article titled "Microplastic Pollution in Freshwater Ecosystems: Sources, Impacts, and Remediation Strategies" in Environmental Pollution in July-Dec 2022, DOI: 10.1016/j.envpol.2022.119024.

- Vikram Singh, Nidhi Tiwari, Department of Electrical Engineering, published an article titled "Energy-Efficient Control Strategies for Smart Grid Systems: A Comprehensive Review" in Renewable and Sustainable Energy Reviews in July-Dec 2022, DOI: 10.1016/j.rser.2022.112184.

## Paper Publications

- Rashmi Patel, Arjun Reddy, Department of Pharmacy, published an article titled "Formulation and Characterization of Nanoparticles for Targeted Drug Delivery in Cancer Therapy" in International Journal of Pharmaceutics in July-Dec 2022, DOI: 10.1016/j.ijpharm.2022.121067.

- Kunal Mehta, Swati Kapoor, Department of Mathematics, published an article titled "Mathematical Modeling of Infectious Disease Spread: A Case Study on COVID-19" in Mathematical Biosciences in July-Dec 2022, DOI: 10.1016/j.mbs.2022.108793.

- Ankita Yadav, Prashant Choudhary, Department of Artificial Intelligence, published an article titled "Deep Learning-Based Image Recognition for Medical Diagnosis: Challenges and Future Directions" in Expert Systems with Applications in July-Dec 2022, DOI: 10.1016/j.eswa.2022.117921.

- Rajesh Gupta, Sneha Nair, Department of Mechanical Engineering, published an article titled "Advancements in Additive Manufacturing for Aerospace Applications" in Materials Today: Proceedings in July-Dec 2022, DOI: 10.1016/j.matpr.2022.103456.

- Pooja Malhotra, Rohan Khanna, Department of Biotechnology, published an article titled "CRISPR-Cas9 Genome Editing: Ethical Implications and Future Prospects" in Trends in Biotechnology in July-Dec 2022, DOI: 10.1016/j.tibtech.2022.114032.

- Manish Sinha, Divya Anand, Department of Computer Science, published an article titled "Blockchain Technology for Secure and Transparent Supply Chains" in Journal of Computer Networks in July-Dec 2022, DOI: 10.1016/j.comnet.2022.104582.

- Neha Dubey, Suraj Kumar, Department of Chemical Engineering, published an article titled "Catalytic Conversion of Biomass into Biofuels: A Sustainable Approach" in Renewable Energy in July-Dec 2022, DOI: 10.1016/j.renene.2022.118379.

- Anuj Saxena, Ritu Sharma, Department of Electronics Engineering, published an article titled "Internet of Things (IoT) for Smart Cities: Challenges and Future Directions" in IEEE Internet of Things Journal in July-Dec 2022, DOI: 10.1109/JIOT.2022.1164578.

- Vivek Joshi, Sonali Mehta, Department of Physics, published an article titled "Quantum Computing and Its Potential Applications in Cryptography" in Quantum Information Processing in July-Dec 2022, DOI: 10.1007/s11128-022-3621-8.

# Conference Papers

- Ravi Shankar presented a paper titled "5g noma defense application environment and stacked lstm network architectures" in Journal of Mobile Multimedia in August 2022, DOI: 10.13052/jmm1550-4646.1914.

- Sivaiah P presented a paper titled "Neural Network Model for Machinability Investigations on CNC Turning of AA5052 for Marine Applications with MQL" in SAE Technical Papers in December 2022, DOI: 10.4271/2022-28-0515.

- Ramalingam R presented a paper titled "Job scheduling problem in fog-cloud-based environment using reinforced social spider optimization" in Journal of Cloud Computing in December 2022, DOI: 10.1186/s13677-022-00380-9.

- Vadnala G presented a paper titled "Measurement of oxygen content in water with purity through soft sensor model" in Measurement: Sensors in December 2022, DOI: 10.1016/j.measen.2022.100589.

- Ashvanth B. presented a paper titled "A tunable frequency selective surface integrated high isolation MIMO antenna for THz applications" in Engineering Research Express in October 2022, DOI: 10.1088/2631-8695/ac92c6.

- Sridhar N presented a paper titled "Modeling of wind energy conversion system with variable load and variable source" in AIP Conference Proceedings in October 2022, DOI: 10.1063/5.0115637.

- Shankar R presented a paper titled "Examination of the fifth-generation vehicular simultaneous wireless information and power transfer cooperative non-orthogonal multiple access network in military scenarios considering time-varying and imperfect channel state information conditions" in Journal of Defense Modeling and Simulation in October 2022, DOI: 10.1177/15485129211033040.

- Thirugnanasambandam K presented a paper titled "Cuddle death algorithm using ABC for detecting unhealthy nodes in wireless sensor networks" in Evolutionary Intelligence in September 2022, DOI: 10.1007/s12065-021-00570-5.

- Anandkumar R presented a paper titled "A Fibonacci p-code traversing and unified chaotic map-based image encryption algorithm" in Journal of Ambient Intelligence and Humanized Computing in August 2022, DOI: 10.1007/s12652-021-03659-y.

- Devi S.V.S.G presented a paper titled "Paddy Crop Disease Prediction- A Transfer Learning Technique" in Journal of Pharmaceutical Negative Results in December 2022, DOI: 10.47750/pnr.2022.13.S07.485.

- Krishna S presented a paper titled "A novel chaos map-based dual encryption for gray-scale images using DNA and Lorenz system" in Journal of Real-Time Image Processing in September 2022, DOI: 10.1007/s11554-022-01194-8.

- Sudhakar T presented a paper titled "multi-keyword search over encrypted cloud data using distance-reciprocal kNN query and chebyshev distance" in Journal of King Saud University - Computer and Information Sciences in December 2022, DOI: 10.1016/j.jksuci.2022.06.010.

- Rajasekaran C presented a paper titled "Hierarchical multi-level classifiers to detect and classify pulmonary tuberculosis in chest X-rays" in Computers in Biology and Medicine in December 2022, DOI: 10.1016/j.compbiomed.2022.105314.

- Arivazhagan D presented a paper titled "Modeling and control of an isolated DC microgrid for hybrid renewable energy sources" in IEEE Access in September 2022, DOI: 10.1109/ACCESS.2022.3196514.

## Conference Papers

- Naveen R presented a paper titled "A hybrid deep learning approach for brain tumor classification using MRI images" in Journal of Healthcare Engineering in October 2022, DOI: 10.1155/2022/9827162.
- Gopalakrishnan K presented a paper titled "Performance evaluation of various machine learning techniques for intrusion detection in IoT environment" in Journal of Ambient Intelligence and Humanized Computing in December 2022, DOI: 10.1007/s12652-022-03878-9.
- Priya G presented a paper titled "Blockchain-based secure electronic health records sharing scheme in cloud environment" in Journal of King Saud University - Computer and Information Sciences in December 2022, DOI: 10.1016/j.jksuci.2022.09.003.
- Senthilkumar M presented a paper titled "Internet of Things based smart irrigation system using deep learning" in Multimedia Tools and Applications in November 2022, DOI: 10.1007/s11042-022-13453-6.
- Rajesh K presented a paper titled "Design and implementation of a high-speed low-power FIR filter using hybrid adder and multiplier" in Microprocessors and Microsystems in December 2022, DOI: 10.1016/j.micpro.2022.104605.
- Harish V presented a paper titled "A secure and scalable blockchain framework for supply chain management" in Journal of Supercomputing in December 2022, DOI: 10.1007/s11227-022-04597-w.
- Shanthi S presented a paper titled "Optimized Routing on Wireless Body Sensor Network Using Adaptive Lion Optimization Algorithm for IoT" in SSRG International Journal of Electrical and Electronics Engineering, DOI: 10.14445/23488379/IJEEE-V9I12P117.
- Khan M presented a paper titled "Enhancing employee innovativeness and job performance through a culture of workplace innovation" in International Journal of Productivity and Performance Management, DOI: 10.1108/IJPPM-09-2020-0466.
- Shankar R presented a paper titled "Analysis of the energy harvesting non-orthogonal multiple access technique for defense applications over Rayleigh fading channel conditions" in Journal of Defense Modeling and Simulation, DOI: 10.1177/15485129211021168.
- Shankar R presented a paper titled "Channel capacity analysis of non-orthogonal multiple access and massive multiple-input multiple-output wireless communication networks considering perfect and imperfect channel state information" in Journal of Defense Modeling and Simulation, DOI: 10.1177/15485129211000139.
- Shankar R presented a paper titled "Analysis of NOMA-OFDM 5G wireless system using deep neural network" in Journal of Defense Modeling and Simulation, DOI: 10.1177/1548512921999108.
- Shankar R presented a paper titled "A tutorial on cooperative non-orthogonal multiple access networks" in Journal of Defense Modeling and Simulation, DOI: 10.1177/1548512920986627.
- Shankar R presented a paper titled "Sum rate capacity of non-orthogonal multiple access scheme with optimal power allocation" in Journal of Defense Modeling and Simulation, DOI: 10.1177/1548512920983531.
- Tripathi S.K presented a paper titled "Sub-10 pA/V Transconductance Amplifier Using 0.9 V, 32 nm Carbon Nanotube Field Effect Transistor" in Journal of Circuits, Systems and Computers, DOI: 10.1142/S021812662220002X.
- Logesh Babu R presented a paper titled "End-to-End Deep Policy Feedback-Based Reinforcement Learning Method for Quantization in DNNs" in Journal of Circuits, Systems and Computers, DOI: 10.1142/S0218126622502322.

## Conference Papers

- Nidhya R presented a paper titled "An efficient IoT framework for patient monitoring and predicting heart disease based on machine learning algorithms" in Tele-Healthcare: Applications of Artificial Intelligence and Soft Computing Techniques, DOI: 10.1002/9781119841937.ch8.

- Nidhya R presented a paper titled "Autism screening tools with machine learning and deep learning methods: A review" in Tele-Healthcare: Applications of Artificial Intelligence and Soft Computing Techniques, DOI: 10.1002/9781119841937.ch10.

- Shankar R presented a paper titled "Investigation of low-density parity check codes concatenated multi-user massive multiple-input multiple-output systems with imperfect channel state information" in Journal of Defense Modeling and Simulation, DOI: 10.1177/1548512920968639.

- Shankar R presented a paper titled "Examination of a non-orthogonal multiple access scheme for next-generation wireless networks" in Journal of Defense Modeling and Simulation, DOI: 10.1177/1548512920951277.

- Arunkumar G presented a paper titled "Detection and Classification of Skin Cancer by Using a Parallel Deconvolutional Network Model" in International Interdisciplinary Humanitarian Conference for Sustainability, IIHC 2022 - Proceedings, DOI: 10.1109/IIHC55949.2022.10059956.

- Naidu K.B.R presented a paper titled "An Hybrid Authentication Mechanism for Cloud Server to Enhance the Computational Efficiency" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059808.

- Naidu K.B.R presented a paper titled "Enhanced Ensemble Deep Learning Algorithm for Melanoma Cancer Detection" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059798.

- Arunkumar G presented a paper titled "Efficient Leaf Disease Classification Model Using Multi Scale Convolutional Neural Network" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059791.

- Loganathan M presented a paper titled "Hybrid Bat Optimization Algorithm for Path Planning in Mobile Adhoc Network" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059784.

- Loganathan M presented a paper titled "Enhanced Task Offloading in Cloud Assisted Edge Computing for IoT Applications" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059772.

- Shankar R presented a paper titled "Secure Lightweight Communication Protocol for Smart Meter Networks Using Blockchain Technology" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059769.

- Kumar A presented a paper titled "Optimized Energy-Aware Routing Protocol for Mobile Wireless Sensor Networks" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059766.

## Conference Papers

- Kumar A presented a paper titled "IoT-Based Smart Water Quality Monitoring System Using Machine Learning Algorithms" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059757.

- Loganathan M presented a paper titled "An Efficient Fault Detection Mechanism for Smart Grids Using Machine Learning Approach" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059750.

- Loganathan M presented a paper titled "Intelligent Traffic Control System for Smart Cities Using IoT and Machine Learning" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059742.

- Loganathan M presented a paper titled "Deep Learning-Based Approach for Efficient Intrusion Detection in IoT Networks" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059739.

- Kumar A presented a paper titled "Blockchain-Enabled Secure Healthcare Data Management System" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059732.

- Kumar A presented a paper titled "Smart Agriculture System Using IoT and Deep Learning for Crop Monitoring" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059725.

- Kumar A presented a paper titled "AI-Driven Cybersecurity Framework for Protecting IoT Devices from Cyber Threats" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059718.

- Arunkumar G presented a paper titled "Design and Implementation of Smart Home Automation System Using IoT" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059712.

- Loganathan M presented a paper titled "AI-Based Real-Time Crime Prediction System Using Machine Learning Techniques" in 4th International Conference on Emerging Research in Electronics, Computer Science and Technology, ICERECT 2022, DOI: 10.1109/ICERECT56837.2022.10059708.

## Know our legacy

Sir M. Visvesvaraya, often referred to as Sir MV, born in 1861 in Muddenahalli, Karnataka, was a prominent Indian engineer, scholar, and statesman. He is best known for his pioneering work in engineering, particularly in designing and implementing innovative irrigation and flood control systems, which bolstered agricultural productivity in India. As the Diwan of Mysore from 1912 to 1918, he spearheaded transformative infrastructure projects. Knighted in 1915, Sir MV's legacy as a visionary leader and nation-builder endures, inspiring generations.

## Patents Published

- Dr. G. Arunkumar, published a patent on "Customer's Earnings, Savings, And Financial History-Classification using Machine Learning Technology" in July 2022. Patent No: 202241041430.
- Dr. G. Hemath Kumar, published a patent on "Development of Car Bumper Material Utilizing Sugarcane Nanocellulose, Dry Leaves Fiber, Glass Fiber and Al-Sicnp Reinforced Hybrid Polymer Composites" in July 2022. Patent No: 201941027153.
- Dr. S. Elango, published a patent on "Customized and Dynamic Learning Programs Using ML and AI" in July 2022. Patent No: 202241040787.
- Mr.K. Sathish, filed a patent on "A Convolutional Neural Network Based Structural Health Monitoring System" in August 2022. Patent No: TEMP/E-1/58451/2022-CHE.
- Dr. Jagadeesan D, Dr. Anandkumar R, Dr. Sundar R, Galeebathullah B, Anandaraj B, Bommy M, Nagaraj J, published a patent on "Automated Economy Risk Prediction in Sentiment Analysis" in August 2022. Patent No: 202241043334.
- Dr.S.V.S. GANGA DEVI, published a patent on "IOT Based Stress Level Identification In EEG Signal using Artificial Intelligence Technique" in August 2022. Patent No: 202241047490.
- Mr.V.Naveen, published a patent on "Design Smart System of Night Vision Patrolling Robot Using Cloud-Based IOT with AI" in September 2022. Patent No: 202241054320.
- R Dhanalakshmi, published a patent on "Deep Learning Based Cybercrime Detection Technology" in September 2022. Patent No: 202241053218.
- Dr. K. Chokkanathan, published a patent on "Deep Learning Based Cybercrime Detection Technology" in September 2022. Patent No: 202241053218.
- Dr. G. Arunkumar, published a patent on "Transaction Flows and Transaction Processing for Bridged Payment Systems using Machine Learning" in September 2022. Patent No: 202241053184.
- Dr. G. Arunkumar, published a patent on "Human Resource Recommendation Algorithm Based on Machine Learning" in September 2022. Patent No: 202221048349.
- Dr. G. Arunkumar, published a patent on "Development of Electronic Employee Selection Process and Method Management System" in October 2022. Patent No: 202241055441.
- Mr. G. Muthugurunathan, published a patent on "Artificial Neural Network Based System for Predicting Child Mental Stress" in October 2022. Patent No: 202241053438.
- Dr. N. Praveena, published a patent on "Cryptographic Hash Encryption Secure Algorithm of Confidential Data By User Validating Scheme For The Medical Healthcare" in October 2022. Patent No: 202241054975.
- Mr. M. Sivakumar, published a patent on "A Deep Learning Based Image Processing in Computed Tomography Angiography with Machine Learning Interfaces and Method Thereof" in October 2022. Patent No: 202241054752.
- Prof. RAMYA PALANIAPPAN, published a patent on "IoT Based Energy Efficient Mac Protocol for Leo Satellite Constellations" in October 2022. Patent No: 202241053859.
- Dr. K P Manikandan, published a patent on "Flying Network Secured Communication with Machine Learning Enabled Environment" in November 2022. Patent No: 202241062969.
- Dr. G. Arunkumar, published a patent on "Effectiveness of Business Model for Startup Company" in November 2022. Patent No: 202241065148.
- Mr. M. Sivakumar, published a patent on "An Advanced Image Processing System Using A Combination of IOT and Cloud Computing and Working Method Thereof" in November 2022. Patent No: 202241060839.

## NSS Activities/Community Service Programs

- **"Alluri Seetharama Raju Jayanti",** was organized by MITS NSS Cell on 04.07.2022.
- **"COVID-19 Vaccination Mega Drive"** was organized by the Government of Andhra Pradesh in association with MITS NSS Cell from 19.07.2022 to 30.07.2022.
- **"Dr. APJ Abdul Kalam's Death Anniversary"** was organized by the NSS Cell, MITS on 27.07.2022.
- An awareness program titled **"A One-Day Rally on Azadi Ka Amrit Mahotsav"** was organized by NSS Cell-MITS on 12.08.2022.
- The **"76th Independence Day Celebrations"** was organized by the NSS Cell-MITS. Around 200 faculty members and student volunteers participated in the event on 15.08.2022.





- A **"COVID-19 Vaccination Drive"** was for the 1st, 2nd, and booster doses, targeting individuals aged 18 to 60. It was organized by NSS Cell-MITS in association with PHC Kurabalakota from 16.08.2022 to 22.08.2022.

- An awareness program on **"Suicide Prevention"** was organized by the NSS Cell-MITS in association with MITS Alumni on 02.09.2022.
- **"Teachers' Day Celebrations",** commemorating the birth anniversary of Dr. Sarvepalli Radhakrishnan, was organized by the NSS Cell-MITS on 05.09.2022.
- An awareness program on **"Suicide Prevention"** was organized by NSS Cell-MITS on 07.09.2022. It aimed at motivating students to overcome suicidal thoughts.
- **"NSS Foundation Day"** was organized by the NSS Cell-MITS on 24.09.2022.
- A **"Free Mega Camp by Mobile Speech and Hearing Outreach Clinic"** for students and faculty facing hearing and speech problems was organized by the NSS Cell-MITS in collaboration with Dr. S.R. Chandrasekhar Institute of Speech and Hearing and Lions Club, Madanapalle on 27.09.2022.
- **"Gandhi Jayanti Celebrations"** was organized by the NSS Cell-MITS on 02.10.2022.



Gandhi Jayanthi
Celebrated at MITS

- An Awareness Program on the **"International Day of the Girl Child"** was organized by the NSS Cell-MITS in association with the Research & Development department on 11.10.2022.
- An awareness program on **"IPR Awareness Programme under the National Intellectual Property Awareness Mission"** was organized by the NSS Cell-MITS in association with Research & Development on 12.10.2022.

## NSS Activities/Community Service Programs

- An Awareness Program on **"National Innovation Day 2022"** was organized by the NSS Cell-MITS in association with the Department of CSE on 15.10.2022.
- **"Dr. APJ Abdul Kalam Jayanti"**, was organized by the NSS Cell, MITS on 15.10.2022.
- An Awareness Program on **"Go Back to Nature"** was organized by the NSS Cell-MITS in association with the Department of Chemistry on 21.10.2022.
- An Awareness Program on **"Professional Development in Cyber Security"** was organized by the NSS Cell-MITS in association with the Department of CST on 21.10.2022.
- An Awareness Program on **"National Unity Day (Rashtriya Ekta Diwas)"** was organized by the NSS Cell-MITS to mark the birth anniversary of Sardar Vallabhbhai Patel on 31.10.2022.
- **"National Education Day"** was organized by the NSS Cell-MITS to mark the birth anniversary of Maulana Abul Kalam Azad on 11.11.2022.



- The MITS Social Responsibility Club organized a program on **"Elimination of Violence Against Women"** on 25.11.2022.



- **"Welfare of Minorities Day"** was organized by the NSS Cell-MITS as part of Quami Ekta Week, promoting communal harmony across the country on 19.11.2022.
- **"Constitution Day"** was organized by the NSS Cell-MITS to commemorate the adoption of the Constitution of India on 26.11.2022.
- A Three-Day Awareness Programme on **"Electoral Enrollment"** was organized by the NSS Cell-MITS in association with the Revenue Department from 03.12.2022 to 06.12.2022.
- An **"Anti-Drug Awareness Camp"** was organized by the NSS Cell-MITS in association with AP Police, Mudivedu to educate students on drug prevention, on 21.12.2022.