



Marri Laxman Reddy

Institute of Technology and Management, Hyderabad

(An Autonomous Institution)

Dundigal, Hyderabad, Telangana, India-500 043

**1st International Conference
On
Emerging Trends in Electrical, Electronics &
Communication Applications
(ICEECA-2025)**



Organized By

Department of Electronics & Communication Engineering (NBA Accredited)

Department of Electrical & Electronics Engineering

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ज्ञान-विज्ञान विमुक्तये



ICEECA-2025

Website Link: <https://iceeca2025.mlritm.ac.in/>

24rd -25th February 2025

ABOUT THE INSTITUTION

Marri Laxman Reddy Institute of Technology and Management (MLRITM), Dundigal, Hyderabad was established in 2009 with the approval of All India Council for Technical Education (AICTE), New Delhi and affiliated to Jawaharlal Nehru Technological University Hyderabad, Hyderabad with a vision to continually develop excellent professional capable of providing sustainable solutions to challenging problems in their fields and prove responsible global citizens. The institute has got accreditation from NAAC with 'A' grade in 2015. The institute has got various international and national certifications which enhances the rank of the institution. The institute is conducting programs in B. Tech in ECE, EEE, CSE, CSE(AI/ML), CSE(DS), CE, ME, and MBA program.

The institute stands for quality embedded higher education at par with global standard and an excellent learning environment backed by innovative research infrastructure. Further, it aims to add greater value to the world of crucial engineering developments and technological breakthroughs through an active focus on research and development skills.

ABOUT THE DEPARTMENT

Electronics and Communication Engineering (ECE)

Electronics and Communication Engineering is one of the core engineering majors and it represents a rapidly developing field, including wireless communications, micro- and nano-electronics. The Department is accredited by NBA and focuses on outcome-based education. Department provides the advanced courses in Communication Engineering, Microwave & Antenna Engineering, VLSI Design, Digital/Analog Integrated Circuit, and Internet of things (IoT) etc. Technical trips to several Industries, Industrial training and expert talks on the emerging technologies are organized to make the students aware about the latest advancement in the field of Electronics and Communication Engineering. The department always encourages the students to be an entrepreneur. In this regard the department organizes several Entrepreneurship awareness programs. The faculty members have received various projects from DST/SERB/AICTE and published many research papers in referred journals and conferences.

Electrical and Electronics Engineering (EEE)

Electrical and Electronics Engineering has been active in teaching and research since its inception 2017. The Department has state of Art Laboratories with fully equipped latest equipment and modern technical software. The Department has rich experienced and dedicated faculty from reputed institutes. Faculty members of the department are working and engaged in research in the areas of Electrical Machines, Control systems and Power Electronics etc. The faculty members have published many research papers in referred journals and conferences. Faculty members are encouraged to take independent initiatives with collective responsibility in all the relevant academic and R&D dimensions like innovative teaching, student projects and research supervision, continuous education by organizing conferences, symposia etc.

ABOUT THE CONFERENCE

(ICEECA-2024) is the premier conference addressing advances in all Electrical, Electronics, Antennas, Communication and Signal Processing including theory, tools, applications, systems, test-beds, and field deployments. The conference focuses on the core science to develop fundamental principles that underpin the integration of cyber and physical elements, as well as on the development of technologies, tools, architectures, and infrastructure for building Electrical, Electronics, and Communication systems, highlighting the design, implementation, and investigation of communication applications. The scope of (ICEECA-2024) is to provide an international forum to promote, enhance and stimulate international research interactions and collaboration in the fields of Electrical, Electronics, and Communication Technologies. It will facilitate to promote the exchange of ideas among interested researchers, students, industrialist, developers, and practitioners. This conference will also feature plenary talks, workshops, and parallel technical sessions.



TRACK 1: COMMUNICATION, NETWORKING AND SIGNAL PROCESSING

- Wireless Communications & Networks
- 5G & 6G Technologies
- Modulation and Coding Techniques
- Ad-hoc & Sensor Networks
- Vehicular Networks
- Internet-of-Things (IoT) Networks
- Cognitive Radio Networks
- Device-to-Device (D2D) Communications
- Social Network Aware Wireless Network
- Biomedical Imaging
- RADAR/Satellite Signal Processing
- Digital Signal Processing (DSP) Techniques
- Image and Video Processing
- Audio Signal Processing
- Embedded Systems Design and Applications
- IoT Architectures and Protocols
- Wearable Electronics and Health Monitoring Systems
- Security and Privacy in Embedded Systems
- Edge Computing and Distributed IoT Systems
- Quantum Communication Systems

TRACK 2: RF, MICROWAVE, AND MMWAVE

- Antennas, DRAs, MIMO and Massive Antennas, Integrated Antennas
- Radio-wave Propagation and Computation Electromagnetics
- RFICs, MICs and MMICs
- mmWave and THz Systems
- High Frequency Materials and Structures
- Microwave Imaging and Metrology
- Antenna Design and Propagation
- Electromagnetic Compatibility (EMC)
- Microwave and Millimeter-Wave Technology
- Metamaterials and Plasmonics
- Computational Electromagnetics

TRACK 3: MICRO/NANO ELECTRONICS DEVICES AND CIRCUITS

- Device Physics and Quantum Electronics
- Compact Device Modeling
- LED, MOSFET, MESFET, Fin FET, TFET
- Beyond CMOS, III-VHEMT, Ga2O3 HEMT, SET, UWB
- Semiconductor Materials and Devices
- 2D Materials: Graphene, Spintronics, Carbon Nanotubes,
- Nanotechnology: Nanowires, Nanostructures,
- Flexible Electronics
- Analog/ Digital VLSI Circuits
- MEMS and NEMS
- System on Chip (SoC), etc.
- Quantum Computing Hardware and Algorithms
- Superconducting Circuits and Devices
- Quantum Sensors and Metrology
- Integration of Quantum and Classical Electronics

TRACK 4: POWER SYSTEM, SMART GRID AND CONTROL SYSTEM

- Renewable and Green Energy
- Electrical Machines
- Power Converters
- Green Technologies in Electrical Engineering
- E-Waste Management and Recycling
- Energy Efficiency and Conservation
- Sustainable Practices in Electronics Manufacturing
- Advanced Control Strategies (PID, Model Predictive Control)
- Industrial Control Systems and IoT Integration
- Fault Detection and Diagnosis in Control Systems
- Power Devices, Components and Magnetic Materials
- Renewable Energy & Energy Storage
- Process Control and Instrumentation
- Recent Developments in Automation and Control
- Design and Control of Electric Motors
- Advanced Drive Systems and Applications
- Electric and Hybrid Vehicle Drives
- Fault Diagnosis and Reliability of Electrical Machines

TRACK 5: ELECTRIC AND HYBRID VEHICLES

- Advancements in Battery Technology
- Charging Infrastructure Development
- Vehicle-to-Grid (V2G) Integration
- Autonomous Driving and Electrification
- Economic and Policy Impacts
- Power train Innovations
- Vehicle Design and Aerodynamics
- Integration with Renewable Energy Sources
- Cyber security in Electric Vehicles
- Economic Feasibility and Cost Analysis
- Global Trends and Comparisons
- User Experience and Interface Design
- Impact of EVs on Automotive Supply Chains
- Charging Infrastructure and Fast Charging
- Lifecycle Analysis of Electric Vehicles
- Reducing the Carbon Footprint of EV Manufacturing
- Recycling and Disposal of EV Batteries
- The Future of Fuel Cells
- Next-Generation Electric Vehicles
- Educating Consumers on EV Benefits

TRACK 6: ROBOTICS AND AUTOMATION

- Robot Kinematics and Dynamics
- Robot Control and Navigation
- Robot Perception and Sensing
- Mobile Robots and Autonomous Systems
- Human-Robot Interaction and Collaboration
- Industrial Automation
- Service Robotics and Healthcare Robotics
- Soft Robotics and Bio-inspired Robotics
- AI Algorithms for Robot Perception and Control
- Machine Learning for Autonomous Robotics
- AI-Enhanced Robot Path Planning and Navigation
- Human-Robot Interaction and Collaboration Using AI
- Predictive Maintenance of Robotic Systems Using AI
- Robotics and Vision-based Navigation

TRACK 7: AI IN COMMUNICATIONS, NETWORKING, EMBEDDED SYSTEMS, AND SIGNAL PROCESSING

- AI-Enhanced Network Traffic Management and Optimization
- Machine Learning for Wireless Network Optimization
- AI-Based Security Measures for Communication Networks
- Predictive Maintenance for Network Infrastructure Using AI
- AI for Channel Estimation and Signal Processing in Communication Systems
- AI-Enabled Edge Computing and Processing
- Efficient AI Algorithms for Resource-Constrained Embedded Systems
- AI-Based Power Management in Embedded Systems
- Real-Time AI Applications in Embedded Systems
- Security and Privacy for AI-Driven Embedded Systems
- Deep Learning Approaches for Signal Processing
- AI-Based Image and Video Processing Techniques
- Machine Learning Models for Noise Reduction and Signal Enhancement
- AI Algorithms for Feature Extraction and Pattern Recognition

TRACK 8: AI FOR POWER SYSTEMS, RENEWABLE ENERGY SYSTEMS, ELECTRICAL MACHINES AND DRIVES

- AI-Based Fault Detection and Diagnosis in Power Systems
- AI Techniques for Power System Stability and Security
- Smart Grid Optimization with Machine Learning
- AI-Driven Demand Response and Load Forecasting
- AI-Driven Optimization of Renewable Energy Resources
- Predictive Analytics for Solar and Wind Energy Systems
- AI-Based Fault Detection and Performance Monitoring in Renewable Systems
- AI for Grid Integration of Renewable Energy Sources
- AI-Based Control Strategies for Electric Motors
- Machine Learning Models for Fault Diagnosis in Electrical Machines
- AI-Driven Optimization of Motor Drive Systems
- Predictive Maintenance and Performance Monitoring of Electric Drives
- AI Techniques for Enhancing Efficiency in Electrical Machines
- AI-Enhanced Building Energy Management Systems
- Intelligent Control of Smart Grids and Smart Cities
- AI for Real-Time Data Analysis and Decision-Making in Smart Infrastructure

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Full paper in IEEE Two column format should be submitted through on-line paper submission process (Easy chair submission system) Manuscripts for ICEECA-2025 will ONLY be accepted in electronic format through Easy Chair online submission system. Please do not send hard copy of your paper. If you are unable to submit your contribution electronically, please contact us through mail.

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Registration Type	Full Offline Mode Fee for Non-IEEE Members	Full Offline Mode Fee for IEEE Members
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Academicians	INR 7500	INR 6750
Industry	INR 12000	INR 10800
Authors with affiliation outside India	300 USD	270 USD
Attendees	INR 3000	INR 2700

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- Current Account Number:** 9612816566
- IFSC Code:** KKBK0007530

Contact Person: Dr. Srinivas Nallagonda, Convener ICEECA-2025

Email ID: iceeca2025@gmail.com

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Website Link: <https://aece2025.mlritm.ac.in/>

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Important Dates

Paper Submission Open	September 1, 2024
Paper Submission Deadline	November 15, 2024
Final Acceptance Notification	December 15, 2024
Registration Deadline	January 10, 2025
Camera Ready Paper	February 10, 2025
Date of Conference	February 24-25, 2025

