IEEE 18th INTERNATIONAL CONFERENCE ON INDUSTRIAL AND INFORMATION SYSTEMS (ICIIS 2024)

21st- 23rd DEC 2024

About The Conference

The Department of Electrical Engineering, IIT Madras is planning to organise the IEEE 18th International Conference on Industrial and Information Systems (ICIIS 2024) during 21st-23rd December 2024 (HYBRID MODE)

Vision

To promote innovative international research and source the development of tomorrow's industry.

Mission

To provide the most effective forum to disseminate new knowledge and share expertise among researchers, scientists, engineers, and professionals in academia and industry encompassing a wide spectrum of sub-disciplines in Electrical and Electronic Engineering.

Scope

The conference scope comprises a wide spectrum of Integrated Engineering sub-disciplines, which includes but is not limited to

- Power, Energy, and High Voltage Engineering
- Signal and Image Processing
- Control, Robotics and Automation
- Communication and Information Technology
- Electronics, Instrumentation and Bio-Medical Engineering.

Important Dates

Full paper submission date	: 25th Nov 2024
Notification of acceptance	: 30th Nov 2024
Final Paper Submission	: 1st Dec 2024
Pre-conference workshop	: 21st Dec 2024
Last date for Registration	: 15th Dec 2024
Conference date	: 21st-23rd Dec 2024

* Registered candidates can attend 1 Workshop

* *The details is provided in the website

*At Least one member need to register for the conference and present, to include your manuscript in IEEE xplore.

* copyright form need to be signed

SAARC countries Academic/Research Scholar: 150 USD, UG and PG Students: 125 USD

Author Category	Indian Delegates (In person)	Indian Delegates (online)	Foreign Delegates (In person)	Foreign Delegates (online)
Academic/Research Scholar:	Rs 8000/-	Rs 7000/-	350 USD	250 USD
UG and PG Students:	Rs 6000/-	Rs 5000/-	250 USD	150 USD
Industry, R&D Institutes and others:	Rs 12000/-	Rs 10000/-	350 USD	250 USD

Call for Papers

Original contributions are sought in the wide and multi-disciplinary areas of Power, Energy, and High Voltage Engineering; Signal and Image Processing; Communication and Information Technology; Control, Robotics and Automation; Electronics, Instrumentation and Bio-Medical Engineering.

Topics of Interest

Power, Energy and High Voltage Engineering

- Planning, operation, and control of power system
- Smart grids and active distribution networks
- Microgrids and standalone power systems
- Power system protection, reliability & resiliency
- Power system education
- Power quality
- Electricity markets and system economics
- New modelling and simulation approaches
- Circuits, systems, control and application of power electronics
- Electrical machines and drives
- Problems of the power industry
- Socio-economic impact of electric power system
- Renewable and sustainable energy technologies
- Distributed, embedded & dispersed generation
- Grid integration of new technologies
- Carbon pricing and low-carbon energy policy
- Energy management, policies and regulation
- Impact of high penetration of renewable energy sources
- Electric vehicles and transportation
- Alternative energy and the environment
- High voltage testing and diagnosis
- Asset management and condition monitoring
- Lightning protection
- Alternative Insulation materials

Artificial Intelligence, Signal and Image Processing

- Audio, acoustic and speech signal processing
- Biomedical signal and Image processing
- Design and implementation of signal and Image processing systems
- Video and multidimensional signal processing
- Signal processing for industrial applications
- Artificial Intelligence (AI) and Machine Learning (ML) in signal processing
- Information Forensics and Security
- Pattern Recognition and Machine Learning for signal processing
- Internet of Things
- Computer vision for stereoscopic and multi-view systems and 3D processing
- Artificial Intelligence (AI) and Machine Learning (ML) in image analysis
- Signal and image processing for remote sensing and geo science
- Sensor array and multichannel signal processing
- Signal processing for communication systems and networking
- Signal processing for smart systems
- Signal processing for education
- Signal processing for the smart grid

- Image segmentation and analysis
- Computational imaging
- Image and video restoration and enhancement
- Color, multi spectral and hyper spectral imaging
- Deep learning for image and video processing
- Biometrics, motion estimation, and biological image processing
- Detection, recognition, and classification of images
- Image and video compression and coding
- Image interpretation and understanding

Controls, Robotics and Automation

- Control systems
- Smart robotics science and technology
- Intelligent robots
- Industry 4.0 applications
- Distributed autonomous robotic systems
- Informatics in control, automation, and robotics
- Underwater robotics
- Intelligent autonomous vehicles
- Mechatronics
- Autonomous robot systems and competitions
- Computer, embedded and intelligent systems and data engineering
- Artificial Intelligence (AI), Machine Learning (ML), expert systems, and evolutionary computing
- Big data analysis
- Computer and data networking
- Cryptography, cryptanalysis, and computer security and privacy
- Data fusion, data mining, and knowledge discovery
- Distributed systems and cloud computing
- Hardware-software co-design and reconfigurable computing
- Internet of Things (IoT)
- Operating systems, compilers, programming languages
- Pattern recognition and computer vision
- Power-aware design and computing
- Real-time systems
- System reliability and security
- Software engineering

Communications and Information Technology

- Optical and photonic communications
- Wireless and sensor networks
- Antennas, propagation, and computational electromagnetics
- Microwave theory and techniques, mmWave, and sub-THz communication
- Radar, sonar, and remote sensing applications
- Multi-antenna communication systems, massive MIMO, Cloud RAN, distributed antenna systems
- PHY layer wireless solutions, LTE-Advanced, 5G technologies, cloud architectures
- OFDM, multi-carrier modulation, waveform design
- MAC layer design, routing in wireless networks and Cross layer optimization
- Congestion and admission control
- WLAN, WPAN, and other home/personal networking technologies
- Architectures and design of cognitive radio networks
- Security and privacy for mobile and wireless networks, information systems
- Energy efficient design and energy harvesting for Green communications
- Internet-of-Things (IoT), applications, technologies and testbeds
- Software defined networks, network slicing and softwarization
- Wireless sensor, ad hoc, and vehicular networks, mobile social networks
- Fog computing and networking, mobile edge computing
- Visible light communication (VLC) networks
- Localization and ranging techniques for communication applications
- Context and location-aware wireless services and applications, E-health, network data analytics
- Artificial intelligence (AI) and Machine Learning (ML) for networking and communications
- Satellite and space communications and networking

Electronics, Instrumentation and Bio-medical Engineering

- Industrial electronics and instrumentation
- Biomedical electronics and instrumentation
- Biomedical sensors
- Medical devices
- Brain-machine interfacing
- Microelectronic design, manufacturing, and integration
- Optoelectronics & photonics
- Power electronic topologies and applications
- Precision instrumentation and measurements
- Nanoelectronic systems, components & devices
- Nanosensors
- Smart sensors and instrumentation systems
- Automobile electronics

Venue

IC & SR Building IIT Madras
Near Gajendra Circle,
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