

# INTERNATIONAL CONFERENCE ON SMART ELECTRONICS AND COMMUNICATION SYSTEMS

ISENSE 2024

6-7 DECEMBER 2024

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The 2024 International Conference on Smart Electronics and Communication Systems (ISENSE 2024) provides a platform for scientists, researchers and faculty from academia, research laboratories, as well as researchers from industry and government to come together to share and learn about state of the art developments in the fields. Smart solutions are the need of the hour for sustainable development. Smart electronics and communication systems drive innovation and growth today and create new sustainable opportunities and have become essential for day to day living.

ISENSE 2024 is the first conference being organized at the Electronics and Communication Engineering Department of the Indian Institute of Information Technology Kottayam (IIITK), India. The aim of the conference is to bring together leading academicians, scientists, researchers and engineers working in emerging cutting-edge technologies to discuss novel ideas, technologies and applications in the fields of VLSI, Signal Processing, Communications and Artificial Intelligence. It also aims to create an interdisciplinary platform to share research ideas on developing new models and systems for sustainable development and provide intelligent paradigm shifts to deal with uncertainties in real world; as ways of achieving growth that is inclusive and resilient. The conference will feature prominent speakers and parallel technical sessions. The conference is organized in technical collaboration with the IEEE Kerala Section. Accepted and presented papers of the conference will be submitted for possible publication in IEEE Xplore.

**Call for Papers Announcement:** 15/05/2024  
**Draft Paper Submission:** 18/08/2024  
**Notification of Acceptance:** 25/10/2024  
**Final Camera-ready Paper:** 15/11/2024

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ISENSE 2024 invites contributions in the following tracks, but not limited to:

**VLSI AND EMBEDDED SYSTEMS**  
SEMICONDUCTOR MEMORIES  
DEVICE DESIGN AND MODELLING  
LOW POWER VLSI CIRCUITS  
ANALOG/RFIC/MIXED-SIGNAL VLSI DESIGN  
3D INTEGRATION AND PACKAGING  
VLSI PHYSICAL DESIGN AUTOMATION  
HIGH SPEED VLSI CIRCUITS  
DIGITAL VLSI DESIGN  
VLSI TESTING AND VERIFICATION  
NANOTECHNOLOGY AND BEYOND CMOS  
SYSTEM-ON-CHIP (SOC)  
VLSI CIRCUITS FOR COMMUNICATIONS  
ASIC/FPGA DESIGN  
DSP IMPLEMENTATION AND ARCHITECTURES  
AUTOMOTIVE EMBEDDED SYSTEMS  
EMBEDDED SYSTEM  
EMBEDDED SYSTEMS TESTING AND VALIDATION  
CYBER-PHYSICAL SYSTEM (CPS)  
NANO-ENGINEERED ENERGY STORAGE MATERIALS

**COMMUNICATION SYSTEMS**  
SOURCE CODING AND DATA COMPRESSION  
CODING FOR DATA COMMUNICATIONS AND STORAGE  
MIMO AND MILLIMETRE-WAVE COMMUNICATIONS  
COMMUNICATION TECHNOLOGIES FOR 5G/6G  
NETWORK CODING AND APPLICATIONS  
INTEGRATED SENSING AND COMMUNICATIONS  
CYBER PHYSICAL SYSTEMS  
INFORMATION AND CODING THEORY  
WIRELESS COMMUNICATIONS  
SATELLITE AND SPACE COMMUNICATIONS  
QUANTUM COMMUNICATIONS AND COMPUTING  
NETWORK AND LEARNING THEORY  
5G/B5G/6G/NEXT-GENERATION NETWORKS  
WIRELESS AND WIRELINE NETWORKS  
NETWORK AND LEARNING THEORY  
WIRELESS AND WIRELINE NETWORKS  
QUANTUM NETWORKING  
DETECTION AND ESTIMATION  
FREE SPACE OPTICAL COMMUNICATION  
VISIBLE LIGHT COMMUNICATION

**EMERGING TECHNOLOGY**  
DIGITAL TWIN, METAVERSE AND BLOCKCHAIN  
PATTERN RECOGNITION AND MACHINE LEARNING  
BIG DATA, MACHINE LEARNING AND AI FOR NETWORKS  
ENERGY-EFFICIENT EMBEDDED SYSTEMS  
EMERGING MEMORY TECHNOLOGIES  
CYBER-PHYSICAL SYSTEM (CPS) DESIGN  
ENERGY HARVESTING AND GREEN COMMUNICATIONS  
SMART GRID AND POWER LINE COMMUNICATIONS

**SECURITY & PRIVACY**  
SECURITY AND PRIVACY ISSUES IN COMMUNICATIONS  
NETWORK SECURITY AND PRIVACY  
MACHINE LEARNING IN HARDWARE SECURITY  
SECURE NETWORK CONTROL SYSTEM  
CLOUD, WSN AND QUANTUM SECURITY  
SECURITY OF EMERGING MEMORY CHIPS

**IOT AND SENSOR NETWORKS**  
INTERNET OF THINGS (IOT)  
EDGE COMMUNICATIONS  
SENSOR AND AD HOC NETWORKS  
SOFTWARE-DEFINED NETWORKING  
BIO-MEDICAL INSTRUMENTATION  
BIO-SIGNAL PROCESSING

**RF, MICROWAVE & OPTICS**  
MICROWAVE DEVICES AND META SURFACES  
ANTENNAS AND PHASED ARRAYS  
MICROWAVE/MM-WAVE/TERAHERTZ COMMUNICATION  
AND IMAGING  
OPTIMIZATION AND MACHINE LEARNING AIDED DESIGN  
OF ANTENNAS AND MICROWAVE COMPONENTS  
RADARS, REMOTE SENSING AND WIRELESS POWER  
TRANSFER  
OPTICAL COMMUNICATION  
OPTICAL NETWORKS AND SYSTEMS  
OPTICAL NETWORK SECURITY  
VISIBLE AND IR FREE-SPACE OPTICAL  
COMMUNICATION SYSTEMS  
OPTICAL INTERCONNECT TECHNOLOGIES

**SIGNAL, SPEECH AND IMAGE PROCESSING**  
BIOMEDICAL SIGNAL PROCESSING  
GRAPH SIGNAL PROCESSING  
QUANTUM SIGNAL PROCESSING  
ADAPTIVE SIGNAL PROCESSING  
SPEECH, AUDIO, AND LANGUAGE PROCESSING  
DEEP LEARNING/MACHINE LEARNING FOR SIGNAL  
PROCESSING  
COMPUTATIONAL IMAGING

For more details please visit: <https://isense24.iiitkottayam.ac.in/>