1st INTERNATIONAL CONFERENCE ON

SUSTAINABLE ELECTRONICS AND INTELLIGENT SENSING

(ICSEIS 2026)

Organized by Department of ECE,
National Institute of Technology Warangal

Conference Dates: **31st July – 2nd August**, 2026

PRE-CONFERENCE WORKSHOP: 30th July 2026

1: EDGE AI ,IoT and Intelligent Sensors :Building Smart Health Care and Precision Agriculture Systems- From Intelligent Sensing to Real-Time Decision Making at the EDGE



- Edge AI, TinyML, Intelligent Sensing, and Embedded Intelligence.
- Modern AIoT architectures, smart sensor integration, edge computing, and real-time data acquisition.
- Remote patient monitoring and intelligent analytics.
- Smart farming, real-time sensing, and autonomous decision-making.

2: 5G Communication Support for Low-Altitude Drones: Hands-on Demonstration Workshop



- Live 5G Drone Emulation: Real commercial 5G setup using Raspberry Pi & Quectel 5G modem.
- End-to-End Flight Demo: Real-time C2 (Command & Control), telemetry, and live HD video streaming.
- Future Aerial Networks: Insights into BVLOS, 5G-Advanced, Non-Terrestrial Networks (NTN), and 6G

3: Smart Grids for Renewable ERA: Unlocking Hidden Transmission Capacity with Sensor less Digital Dynamic line



- Why the Grid Is Under Unprecedented Stress and Available Solutions.
- What is Digital Dynamic Line Rating and how it works.
- Practical use case demonstration.
- Live DDLR Product Demo.
- Simulation Results showing benefits of DDLR on a test systems

4: A practical RTL to GDS tutorial on Physical Design, AI EDA, and Sign off evidence



- Hands-on synthesis, floor planning, CTS, and routing.
- Smart placement, congestion prediction, and PPA closure..
- Static timing analysis, setup/hold fixing, and crosstalk mitigation.
- Power network synthesis, electro migration, and noise reduction.
- Generating signoff verification reports and compliance documentation.

5: Introduction to Autonomous Drone



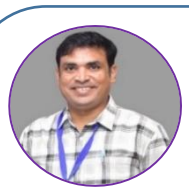
- Understand the basic components of a drone and the function of each subsystem.
- Learn the fundamental principles of quadcopter flight and flight control.
- Gain an introduction to autonomous navigation, including GPS, sensors, and waypoint-based missions.

6: 5G Core Design and Development



- Setup using Raspberry Pi & Quectel 5G modem.
- End-to-End Flight Demo: Real-time C2, telemetry, and live HD video streaming.
- Network Performance & Mobility: Hands-on analysis of RSRP, SINR, throughput, latency, and handover dynamics.
- Future Aerial Networks: Insights into BVLOS, Non-Terrestrial Networks (NTN), and 6G.

PRE-CONFERENCE WORKSHOP

Session 1 9.00-11.00am	Session 2 9.00-11.00am	Session 3 11.00-1.00pm	Session 4 11.00-1.00pm	Session 5 2.00-5.00pm	Session 6 2.00-5.00pm
					
Dr Mohammad Farukh Hashmi Asst. Professor, Dept. of ECE, NITW	Mr.Mohnish Kamalaksha Mr.Kanthuri Jaswanth Bixbi Systems Pvt Ltd, Bangaloree	Ms Srujana Yenigalla Mr. Samarth Dhingra GE Vernova	Mr.Srinivasan Gopalakrishnan Qualcomm	Dr. Shiva Uppu Dr. Sanjay Kumar NT TiHAN-IIT Hyderabad	Dr. K Krishna Naik Assoc.Professor IITDM Kurnool

WORKSHOP COORDINATOR & CONTACT

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CONVENOR

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