

# ICFAITECH NEWSLETTER

MAY  
2025



## *From the Director's Desk*

It gives me immense pride to reflect on the academic vibrancy and research excellence demonstrated by our faculty in recent months. At IcfaiTech, our mission has always been to foster a culture of innovation, interdisciplinary learning, and scholarly contribution. The accomplishments of our faculty exemplify these values and reaffirm our commitment to creating a forward-looking, research-driven academic environment.

Notably, our Department of Electronics and Communication Engineering successfully organized a Short-term Course on "Fundamentals of Materials and Fabrication for Nanoelectronics", which equipped participants with in-depth knowledge of materials science and semiconductor fabrication. This initiative is a significant step toward preparing our students and researchers for the evolving demands of nanoelectronics and VLSI design industries. I commend the efforts of Dr. Rajesh Kumar Jha and the entire team for orchestrating such an impactful program.

Our faculty members continue to contribute to global research in diverse domains. I would like to congratulate Dr. Asisa Kumar Panigrahy and Dr. Anjanna Matta for their publications in reputed journals including IEEE Xplore, Springer Nature, and Mathematical Methods in the Applied Sciences. These publications not only reflect academic depth but also contribute to the broader discourse in technology and applied sciences.

Further, the participation of our faculty in national initiatives—such as the Quantum Computing course supported by MeitY, Government of India—highlights their drive to stay ahead of emerging technological trends. I am also pleased to see faculty like Dr. Sudheer H actively contributing as reviewers for high-impact journals, strengthening our engagement with the international research community.

From delivering guest lectures to chairing sessions at prestigious conferences like INCET 2025, our faculty are **establishing themselves** as thought leaders and mentors in their respective fields. These achievements elevate the academic stature of IcfaiTech and inspire our students to pursue excellence.

As we move forward, let us continue to support and celebrate such milestones. I encourage our faculty and students to remain curious, stay committed to quality, and contribute meaningfully to the world of science, technology, and education.

**– Dr. K. L. Narayana**  
**Director, IcfaiTech,**  
**Hyderabad**

# FACULTY ACHIEVEMENTS

## Research Publications



**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE, published a research paper titled "Reliability Issues and Degradation Mechanisms of p-GaN Gated E-Mode AlGaIn/GaN Power HEMTs: A Critical Review," in IEEE Xplore.

**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE, published a research paper titled "IoT Sensor-Based Systems in Real-Time Monitoring of Health and Environment: A Review" in the SCI-indexed Journal of the Korean Physical Society (Springer Nature).

**Dr. Anjanna Matta**, Associate Professor, Department of Mathematics, published a research paper titled "Nonlinear magneto convection in an inclined porous layer with artificial neural network prediction" in the journal 'Mathematical Methods in the Applied Sciences'.



## Certification

**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE, attended a one-month course on "Quantum Computing" organized by Centre for Development of Advanced Computing, Hyderabad & Indian Institute of Technology, Roorkee with the support of Ministry of Electronics and Information Technology, Government of India.



**Dr. Sudheer H**, Associate Professor, Dept. of ECE, attended a one-month course on "Quantum Computing" organized by Centre for Development of Advanced Computing, Hyderabad & Indian Institute of Technology, Roorkee with the support of Ministry of Electronics and Information Technology, Government of India.



# FACULTY ACHIEVEMENTS

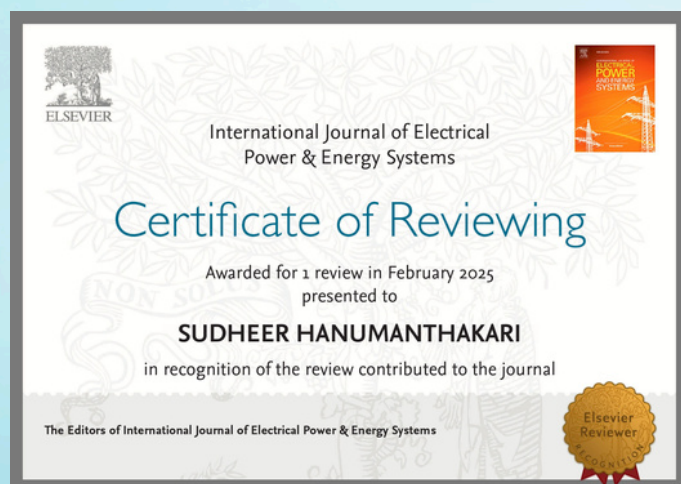
## Paper review

**Dr. Sudheer H**, Associate Professor, Dept. of ECE, reviewed a research paper titled “Unpaired to paired data synthesis and generative ensemble network for smudged image restoration” for the Applied Soft Computing Journal.



**Dr. Sudheer H**, Associate Professor, Dept. of ECE, reviewed, a research paper titled “Electric Vehicle Charging Load Forecasting: An Investigation into the Optimization of Deep Echo State Network with Feature Decomposition and Extraction” for the Journal of Energy Storage

**Dr. Sudheer H**, Associate Professor, Dept. of ECE, reviewed, a research paper titled “Enhancing Electric Vehicle Charging Load Forecasting: An Investigation into the Optimization of Deep Echo State Network with Feature Decomposition and Extraction” for the Journal of Energy Storage.



**Dr. Sudheer H**, Associate Professor, Dept. of ECE, reviewed, a research paper titled “Two-Stage Stochastic Scheduling of Diverse Flexible Resources for Enhancing Resilience of High Wind-Penetrated Power Systems” for the International Journal of Electrical Power and Energy Systems.

# FACULTY ACHIEVEMENTS

## Paper Presentations

**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE, presented a research paper titled “Leveraging LSTM Networks for CFO Estimation in MIMO-OFDM System Optimization” in the 6th International Conference of Emerging Technology (INCET 2025) during 22nd to 24th May 2025.



## Session Chair



**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE chaired a session in the 6th International Conference of Emerging Technology (INCET 2025) during 22nd to 24th May 2025.

## Participation

**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE, attended a webinar on “Next-Gen Motor Design for High Efficiency and Performance” on 27-05-2025 organised by ARK Info Solution Pvt.Ltd.



## Guest lectures

**Dr. Asisa Kumar Panigrahy**, Associate Professor, Dept. of ECE delivered a guest lecture on "More than Moore Technology for Future IC Integration Applications" on 5th April 2025 AT PMEC Berhampur, Odisha (Govt. of Odisha), India.



# EVENTS

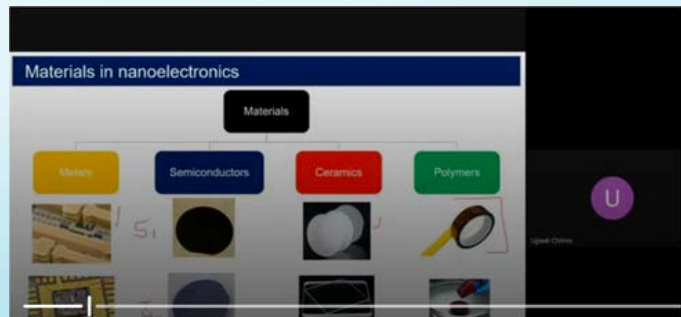
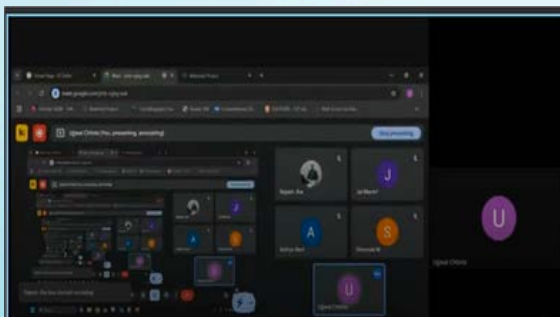
## Short-term Course on Fundamentals of Materials and Fabrication for Nanoelectronics

The **Department of Electronics and Communication Engineering (ECE)**, IcfaiTech, IFHE Hyderabad, successfully conducted a short-term course titled "Fundamentals of Materials and Fabrication for Nanoelectronics". This intensive program was designed to introduce students and researchers to the critical materials, fabrication methods, and characterization techniques that underpin modern nanoelectronic device development.

The course was coordinated by **Dr. Rajesh Kumar Jha**, Associate Professor, ECE, and featured lectures by **Mr. Ujjwal Chitnis**, Prime Minister Research Fellow at IIT Delhi and Raman Charpak Fellow. His sessions provided deep insights into electronic materials for spintronic devices and nanofabrication.

Over 17 expertly curated sessions, the course covered a wide array of topics including crystallography, thin-film deposition (e.g., sputtering, PLD, CVD, ALD), cleanroom practices, defect analysis, epitaxial growth, and state-of-the-art characterization techniques such as XRD, SEM, TEM, AFM, XPS, and APT. The program emphasized both theoretical foundations and real-world applications, equipping participants with essential knowledge relevant to VLSI design, semiconductor processing, and advanced materials research.

This initiative aligns with IcfaiTech's commitment to providing interdisciplinary, industry-relevant education and reflects the department's growing focus on cutting-edge domains like nanoelectronics and semiconductor technology.



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