ICFAI TECH NEWSLETTER

November 2025

From the Director's Desk:

It gives me immense pleasure to present this edition of our newsletter, which reflects the vibrant academic, research, and outreach culture of our institution. The past few months have been marked by significant scholarly achievements, meaningful collaborations, and impactful community engagements by our faculty and students.

I am proud to highlight the commendable research contributions of our faculty members, including publications in prestigious platforms such as **IEEE Xplore** and internationally recognized academic publications. These accomplishments reinforce our commitment to advancing knowledge, fostering innovation, and contributing to global research ecosystems. The active participation of our faculty in conferences, distinguished lectures, workshops, and reviewer roles at national and international levels further strengthens our academic presence and thought leadership.

Our academic community has also demonstrated excellence through knowledge dissemination initiatives such as guest lectures, faculty seminars, and hands-on technical workshops.

These platforms not only enhance teaching-learning processes but also bridge the gap between academia and industry, particularly in emerging areas like AI, semiconductor technology, VLSI design, and sustainable energy systems.

Equally inspiring are our outreach and student engagement initiatives such as **EduSpark 2025** and the **Vidhyadhan Program**, which reflect our deep commitment to social responsibility. By nurturing young minds, promoting environmental awareness, and supporting school education, we continue to contribute meaningfully to society beyond the classroom.

I sincerely appreciate the dedication, passion, and collaborative spirit of our faculty, students, and staff in achieving these milestones. I also extend my gratitude to our industry partners, academic collaborators, and community stakeholders for their continued support.

As we move forward, let us continue to strive for excellence in research, innovation, and societal impact, while nurturing a culture of curiosity, integrity, and lifelong learning.

Wishing you all continued success and inspiration.

Warm regards,
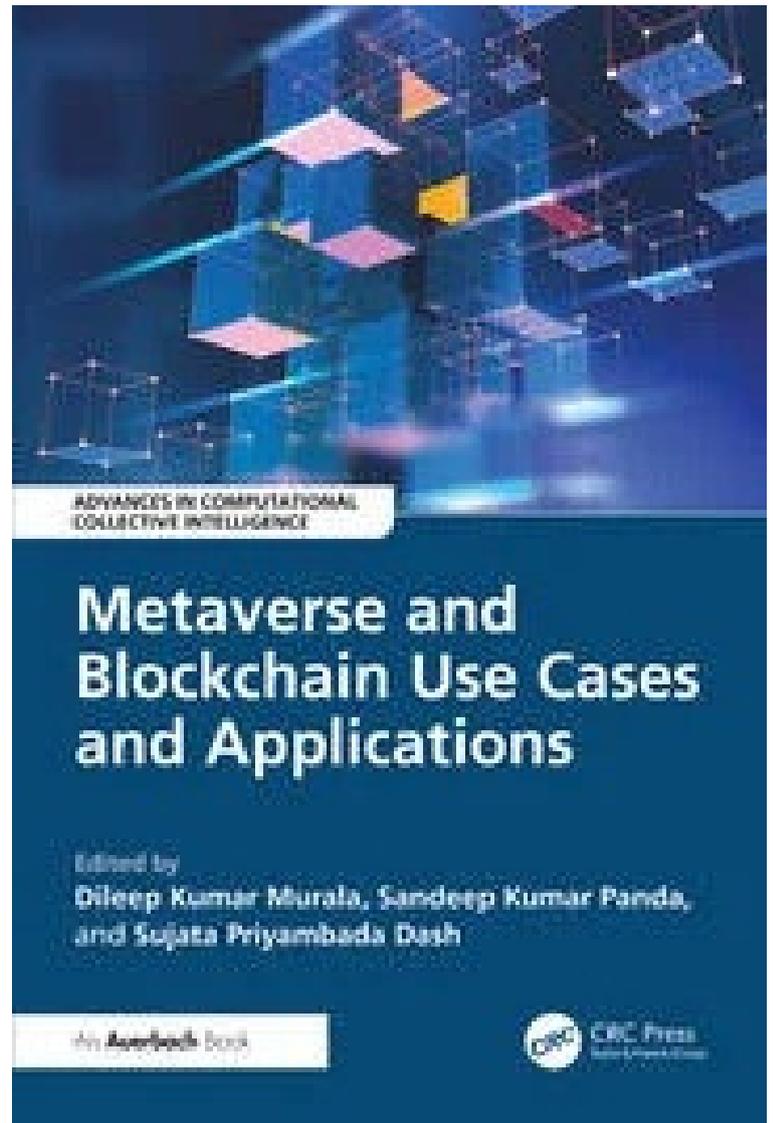*Prof. K.L. Narayana*
Director, ICFAI Tech

Faculty Achievements:

RESEARCH PUBLICATIONS

Dr. Dileep Kumar M, Assistant Professor, Dept. of Computer Science and Engineering, published a book titled "Metaverse and Blockchain Use Cases and Applications.

Dr. Dileep Kumar M
Assistant Professor
Dept. of CSE.

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, published a research paper titled, "A Low-Voltage Multistage Output Capacitor-Less LDO Using Dynamic Transient Enhancement Technique for SoC Applications" in IEEE Xplore.

Dr. Asisa Kumar Panigrahy,
Associate Professor,
Dept. of ECE.

GUEST LECTURES

Dr. T. Divya, Dept. of Mathematice, delivered a lecture on **'Basics of Regression, Classification & Forecasting'** in the One Week International Methodology Workshop on Predictive Statistics and AI Approaches in Social & Engineering Sciences organized by the Department of Mathematics, Vishnu Institute of Technology (Autonomous), Bhimavaram, held from 13th to 19th October 2025 at VIT, Bhimavaram.

Dr. T. Divya
Assistant Professor
Dept. of Mathematics

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, delivered a guest lecture titled "Unlock Your Research Potential: From Ideas to Papers & Presentations" at the Cadence office on 27 November 2025.

PARTICIPATION

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, attended "**Nanoprobing: 10 Signals for Device Characterization & Defect Localization**," organized by **ZEISS** on 11th November 2025 in online mode.

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, attended SSCS Distinguished Lecture on **"Continuous-Time Pipelined Analog-to-Digital Converters – Where Filtering Meets Analog-to-Digital Conversion"** organized by the **IEEE-IISc VLSI Chapter**, in association with the **IEEE-IISc Student Branch**. The lecture was delivered by Prof. Shanthi Pavan, Chair Professor, Department of Electrical Engineering, IIT Madras.

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, participated in **IEEE SSCS** Distinguished Lecture on "**High-Performance Energy-Efficient Compute-In-Memory and AI Accelerators for Sub-18A Technologies**" by Dr. Ram K. Krishnamurthy organized by **IEEE-IISc VLSI Chapter** on Nov 15, 2025.

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, attended the insightful session Webinar Series, titled "**In-silico Development of Heterogeneous Adsorbents and Hydrated Polymers for Applications in Carbon Capture and Fuel Cells using Synopsys QuantumATK.**" conducted on 29th November 2025 from 05:00 PM IST, featuring Dr. Angan Sengupta, Associate Professor, Department of Chemical Engineering, IIT Jodhpur.

PRESENTATION

Dr. Soumit Samadder Chaudhury, Senior Assistant Professor, Dept. of Electronics and Communication Engineering, presented a research paper titled "Compact Multiple Band BandpassFilter with Independent Passband Control Using Modified Mushroom Resonator-Loaded SIW Cavity" at IEEE MAPCON 2025, 14-18 November. 2025.

Dr. Soumit Samadder Chaudhury,
Senior Assistant Professor,
Dept. of ECE

Mr. Ch. Venugopal, Assistant Professor, Department of Mechanical Engineering, presented a research paper titled 'A machine learning approach for evaluating single-cylinder CI engine emissions with different biodiesel blends' at 3rd International Conference & Exposition on Mechanical, Material, and Manufacturing Technology (ICE3MT2024), Conducted at CVR Engineering College, Hyderabad, Telangana, INDIA, October 24-26, 2024 published in AIP Conference Proceedings, AIP Publishing, Volume 3360, Issue 1, 11 November 2025.

Mr. Ch. Venugopal,
Assistant Professor
Dept. of Mechanical Engineering

REVIEWER

Dr. Asisa Kumar Panigrahy, Associate Professor, Dept. of ECE, acted as a Reviewer towards the success of **5th International Conference on Signal and Data Processing 2025**, to be organized by the School of Electrical and Electronics Engineering, VIT Bhopal University, Madhya Pradesh, India, during November 27-28, 2025.

Dr. Soumit Samadder Chaudhury, Senior Assistant Professor, Dept. of Electronics and Communication Engineering, acted as a Reviewer **EEE MAPCON 20205 held at Kochi KERALA.**

Dr. Chandrashekhar A, Associate Professor, Dept. of Mechanical Engineering, received the Reviewer Certificate (Certificate No. ICIN_REV_045) for my contribution as a **Reviewer at the International Conference on "Innovations in Engineering and Next-Generation Technologies for Sustainability" (ICINVENTS-25),** organized by Sri Krishna College of Engineering and Technology, Coimbatore, in association with IEEE – Madras Section, and was held on 7th and 8th November 2025.

FACULTY SEMINAR

Title:- Tax Fraud Detection Using Stacking Ensemble Approach
Speaker:- Prof. Sandeep Kumar Panda, Dr. Pallavi Mishra, M. Rohit, Dr. Sukanta Das
Date & Time:- 24-11-2025; 05:00 PM - 05: 30 PM
Venue:- FST-301

Abstract

The advent of automated technologies plays a vital role in solving various issues in real time with utmost efficiency. Similarly, tax fraud detection is also one of the sensitive issues facing across worldwide, that needs to be addressed using advanced and sophisticated techniques. Based on this objective, we have proposed stacking ensemble approach that includes XGBoost (XGB), RandomForest (RF), and K-Nearest Neighbors (KNN) as potential base models and Logistic Regression (LR) as meta-classifiers to detect tax fraud activity. Due to privacy constraints of availability of real time tax fraud data, we have incorporated augmentation technique to synthesize multi-source datasets to ensure better data availability and robustness of the model learning. The experimental analysis of our work has shown promising results when compared to previous research work and other baseline models with highest accuracy of 94%, F1-score of 97%, and Precision of 95%.

Key words: Machine Learning, Stacking Ensemble, Tax fraud

Events

EDUSPARK 2025: IGNITING YOUNG MINDS ON NATIONAL EDUCATION DAY

Organized by: ICFAI Tech Entrepreneurship Club (ITEC)
Date: November 11, 2025
Occasion: National Education Day
Venue: FST Auditorium, ICFAI Foundation for Higher Education Campus
Guest: Siram Sankeerth

The ICFAI Tech Entrepreneurship Club (ITEC) successfully organized EduSpark 2025 on November 11, 2025, at the FST Auditorium, marking **National Education Day**. The event brought together 85 students from Vidya Vikas High School and SMP Universal for an engaging day of learning, innovation, and inspiration.

A highlight of the program was an interactive session by entrepreneur **Siram Sankeerth**, who shared insights from his entrepreneurial journey, the startup ecosystem, and the importance of innovation and resilience. Students actively participated in discussions, gaining exposure to real-world entrepreneurial thinking.

The event also featured interactive activities such as **Riddle Rush** and **Mini Talk**, along with a campus tour that introduced students to the university's academic environment. With warm hospitality and enthusiastic volunteer support, EduSpark 2025 reinforced ITEC's commitment to nurturing creativity, problem-solving skills, and future-ready mindsets among young learners.

VIDHYADHAN PROGRAM: EMPOWERING EDUCATION WITH ENVIRONMENTAL AWARENESS

Organized by: Paritantra Club
Venue: Sri Resu Sathi Reddy – Zilla Parishad School, Maharajpet
Dates: 21st November 2025

The **Paritantra Club** of IcfaiTech conducted the **Vidhyadhan Program** on 21st November 2025 at **Sri Resu Sathi Reddy – Zilla Parishad School, Maharajpet**, as part of its social outreach initiatives. The program focused on strengthening academic support and nurturing environmental responsibility among government school students. Volunteers distributed essential study materials, including notebooks and workbooks, boosting students' motivation and learning enthusiasm. A motivating session by Anjana Matta Sir highlighted the importance of plantation, sustainability, and eco-friendly practices, inspiring students to adopt responsible habits. The initiative also fostered meaningful interaction with school staff, paving the way for future collaborations. Overall, the Vidhyadhan Program made a positive academic and social impact, reflecting Paritantra Club's commitment to education, sustainability, and community engagement.

GUEST LECTURE ON SEMICONDUCTOR TECHNOLOGY IN ADVANCED INDUSTRIAL SOLAR CELLS

Venue: ICFAI Tech
Dates: 20th November 2025
Guest: Dr. Meenakshi Bhaisare
Organized by: ECE Dept.

The Department of Electronics and Communication Engineering, IcfaiTech (FST), IFHE Hyderabad, organized an expert guest lecture on **"Semiconductor Technology in Advanced Industrial Solar Cells"** on **20th November 2025**. The session was coordinated by **Dr. Kousik Midya** and Dr. **Asisa Kumar Panigrahy**, with the objective of bridging academia and industry in the rapidly evolving renewable energy sector.

The lecture was delivered by **Dr. Meenakshi Bhaisare**, an industry expert from Premier Energies, one of India's leading solar cell manufacturing companies. She provided valuable insights into modern semiconductor technologies used in industrial solar cells, including fabrication processes, characterization techniques, and large-scale manufacturing practices. The event witnessed active participation from over 60 students and faculty members, enriching their understanding of advanced solar technologies and potential research directions in non-conventional energy systems. The session concluded with an interactive discussion, where possibilities for collaborative research between academia and industry were explored, making the lecture both informative and impactful.

HANDS-ON WORKSHOP ON POST-LAYOUT SIMULATION USING SPICE TOOLS

Venue: ICFAI Tech
Dates: 20th November 2025
Guest: Dr. Meenakshi Bhaisare
Organized by: ECE Dept.

The Department of Electronics and Communication Engineering, IcfaiTech (FST), IFHE Hyderabad, organized a **Hands-on Workshop on Post-Layout Simulation using SPICE Tools** on **14th November 2025**. The workshop was coordinated by **Dr. Asisa Kumar Panigrahy** with the objective of strengthening practical skills in advanced VLSI design and simulation.

The session was conducted by **Dr. J. Ajayan, Professor & Dean (PG Programs), SR University, and a globally recognized researcher ranked among the Top 2% Scientists worldwide (Stanford–Scopus)**. The workshop offered an in-depth, practice-oriented understanding of post-layout simulation, SPICE-based analysis, delay and power estimation, and industry-relevant EDA workflows.

With active participation from over 60 students and faculty members, the workshop successfully bridged theoretical concepts with hands-on implementation. The interactive demonstrations and guided practice enhanced participants' technical competence and research orientation. The event concluded with discussions on potential collaborative research, reinforcing the department's commitment to industry-aligned learning and advanced research in VLSI systems.
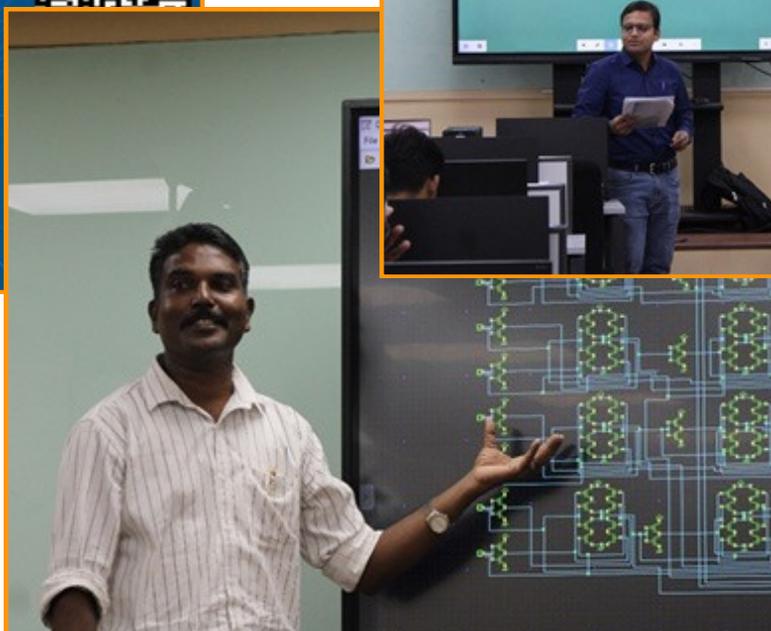
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