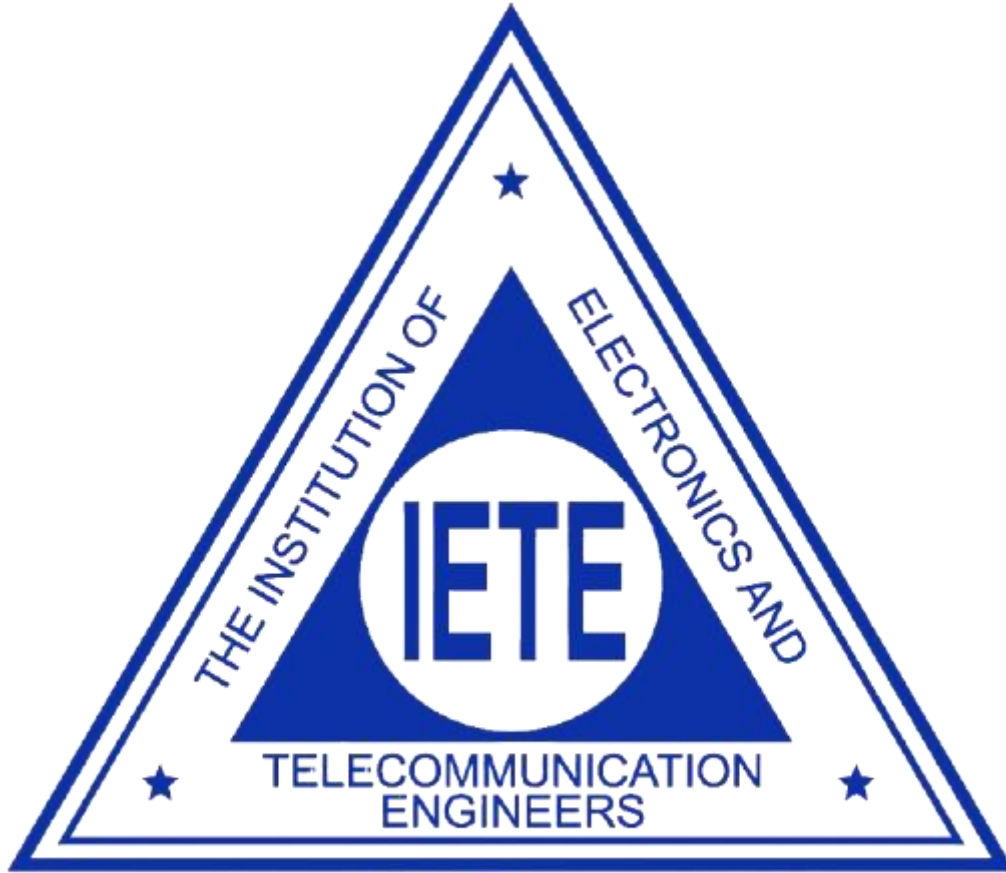


NEWSLETTER

2025-26



सह वीर्यं करवावहे

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**IETE STUDENT FORUM (ISF),
RAMDEOBABA UNIVERSITY, NAGPUR**

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Dr. A.H. Harkare
In-charge, ISF, RBU, Nagpur

It gives me immense pride and satisfaction to present this comprehensive report detailing the activities and milestones achieved by the IETE Student Forum (ISF) at Ramdeobaba University (RBU), Nagpur during the Academic Year 2025–26. As technology relentlessly reshapes our global landscape, the Institution of Electronics and Telecommunication Engineers (IETE) remains steadfast in its mission to nurture the next generation of engineers, innovators, and visionary leaders. At RBU, the ISF acts as a vital bridge between rigorous academic curriculum and rapidly evolving industry standards. The academic year 2025–26 has been exceptionally dynamic, marked by an array of workshops covering critical technical skill sets, including advanced PCB design, and foundations of automated electronic components. Our hands-on training sessions and active collaborations, such as working alongside the Industry Experts, have empowered students to push beyond textbook paradigms and cultivate practical, technical fluency. This compilation stands as a testament to the creativity, focus, and unrelenting efforts of our student committee and the department's collective spirit. I extend my deep gratitude to the university management, our respected faculty members, and our driven student leaders for turning our shared vision into measurable outcomes. I am confident that the skills honed through these activities will inspire our students to champion breakthrough innovations in the field of electronics and communication engineering.

Introduction to IETE

Namaste Readers!

The committee was set up in 2024 under the School of Electronics and Electrical Engineering, Ramdeobaba University.

The vision of IETE is to establish the school as a centre of excellence in technical affairs and foster a quality environment for enthusiasts to learn about advanced technologies.

The committee is formed under the guidance of Dr. A.H. Harkare, Assistant Professor at school of EEE, RBU.

The body comprises of 10 members, with the President binding everyone together.

COMMITTEE 2025-26

 ADVAIT JOG President		Advait Jog Sem-VIII, ECE
 ANSH SHAHU Secretary		Ansh Shahu Sem-VIII, ECE
 ANUSHKA POTE Treasurer		Anushka Pote Sem-VIII, ECE
 MEHAR CHOPKAR Technical Head		Mehar Chopkar Sem-VI, ECE
 PRIYANSHI DONGRE Creative Head		Priyanshi Dongre Sem-VI, ECE

 TANISHA DESHPANDE Event Manager		Tanisha Deshpande Sem-VI, ECE
 ISHAN JAISWAL Executive		Ishan Jaiswal Sem-IV, ECE
 RINKESH AMRUTE Executive		Rinkesh Amrute Sem-IV, ECE
 SAFALYA MOHOD Executive		Safalya Mohod Sem-IV, ECE
 VEDIKA AMRITKAR Executive		Vedika Amritkar Sem-IV, ECS

OUR COMMITTEE



1. PCB Desining Workshop:

A 2-day tutorial session

Objective: The objective of the PCB design workshop was to understand the basic concepts and importance of Printed Circuit Boards in electronic circuit development. It aimed to provide knowledge about designing and routing PCB layouts using appropriatedesign tools. The workshop also focused on giving practical exposure to the fabrication and assembly of electronic circuits on a PCB.

Students registered – 38

Day-1: Basic PCBDetails and Connections



Day-2: Live Designing on Kicad



Outcomes:

The workshop helped us gain practical knowledge and hands-on experience in designing and understanding Printed Circuit Boards (PCB).

2. Enabling Advanced RFIC/MMIC Design for Aerospace & Defense Systems using EDA Tools



A technical workshop organized by the Department of Electronics and Communication Engineering, Ramdeobaba University on 5th February. The session was delivered by **Shrutika Solat**, Senior Solutions Engineer at Keysight Technologies, and was attended by **80 participants**.

The workshop focused on **Radio Frequency Integrated Circuits (RFICs)** and **Monolithic Microwave Integrated Circuits (MMICs)** used in high-frequency applications, especially in **aerospace and defense systems**. It highlighted how **Electronic Design Automation (EDA) tools** are used in industry for simulation, verification, and design of complex circuits.

Key Takeaways:

- Gained understanding of **RFIC and MMIC design fundamentals** and their applications in aerospace and defense systems.
- Learned how **EDA tools** are used for:
 - i. High-frequency circuit simulation
 - ii. Layout design
 - iii. Performance verification
- Understood the **complete workflow of RF circuit design**, from concept to implementation.
- Gained exposure to **industry standards and design protocols** required for mission-critical systems.
- Learned about **high-frequency design challenges**, including:
 - i. Signal interference
 - ii. Noise
 - iii. Power loss
 - iv. Maintaining signal integrity
- Understood the importance of **RF and microwave technologies** in:
 - i. Radar systems

- ii. Communication systems
 - iii. Defense applications
- Developed awareness of **real-world engineering practices** used by companies like Keysight Technologies.
- Gained insights into **career opportunities** in:
 - i. Semiconductor industry
 - ii. RF & microwave engineering
 - iii. Aerospace and defense electronics
- Learned how **theoretical concepts are applied in practical hardware design.**
- The workshop helped **bridge the gap between academic learning and industry requirements.**

Guest Lectures and Webinars

1) VLSI Revolution: Shaping the Next Era of Semiconductors

Date: October 4th, 2025

Speaker: Nikita Sanghi, Senior Design Verification Engineer, ACL Digital

Audience: 90+ ECE and ENCS students





Key Takeaways:

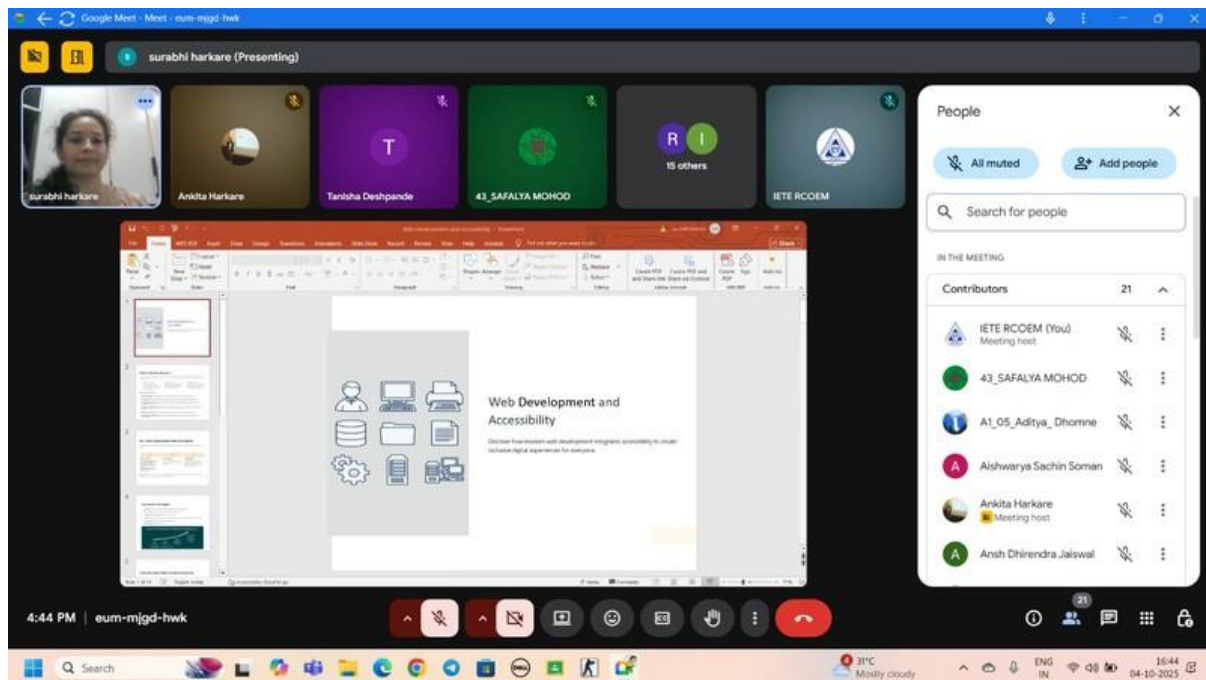
- Flawless Digital Fundamentals: If you mess up Setup/Hold time or FSM questions, the interview is over.
- Ditch VHDL: Master Verilog and learn at least the basics of SystemVerilog.
- The Secret Weapon: Learn Python or Tcl scripting. Industry tools run on scripts; automation is a huge flex.
- Get on Linux: No one uses Windows in the VLSI industry. Get comfortable with the Linux terminal today.

2) Web Development Technologies for Current IT Industry: A Placement Perspective

Date: October 4th, 2025

Speaker: Surabhi Doshi – Tech Lead Developer and Accessibility Specialist at Cognizant.

Audience: 25+ ECE students



Key Takeaways:

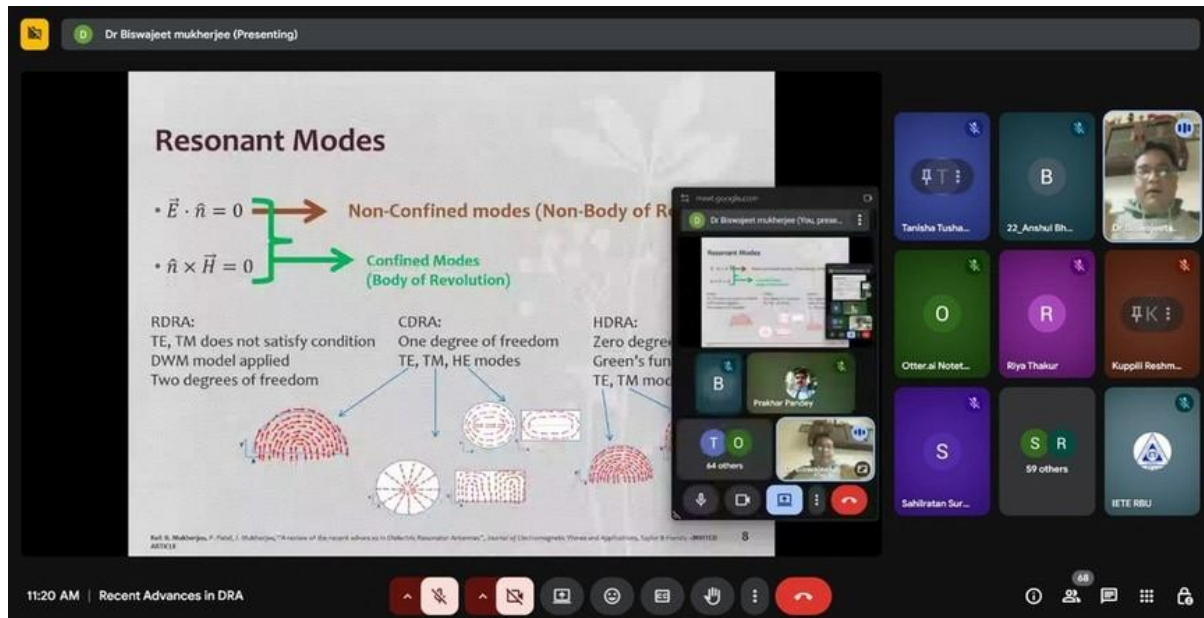
- Students were introduced to **modern web development technologies** like React, Angular, Vue, and Node.js.
- Gained understanding of **front-end and back-end integration**, including how real-world web applications are built.
- Learned the difference between **SQL and NoSQL databases** and their practical usage in industry projects.
- Understood the importance of **web accessibility (WCAG guidelines)** and inclusive design in professional development.
- Became familiar with **industry tools and practices** such as Git and CI/CD used in real software development workflows.
- Received guidance on **placement preparation**, including:
 - i. Strong communication skills
 - ii. Problem-solving ability
 - iii. Logical thinking
- Realized the importance of building **practical projects** and being able to clearly explain them during interviews.
- Gained insights into **current IT industry expectations** and hiring trends.
- Understood how to **bridge the gap between academic learning and industry requirements**.

3) Recent Advances in Dielectric Resonator Antennas.

Date :January 31st, 2026

Speaker :Dr. Biswajeet Mukherjee, Associate Professor at the University of Delhi

Audience : 90+ ECE Students



Key Takeaways:

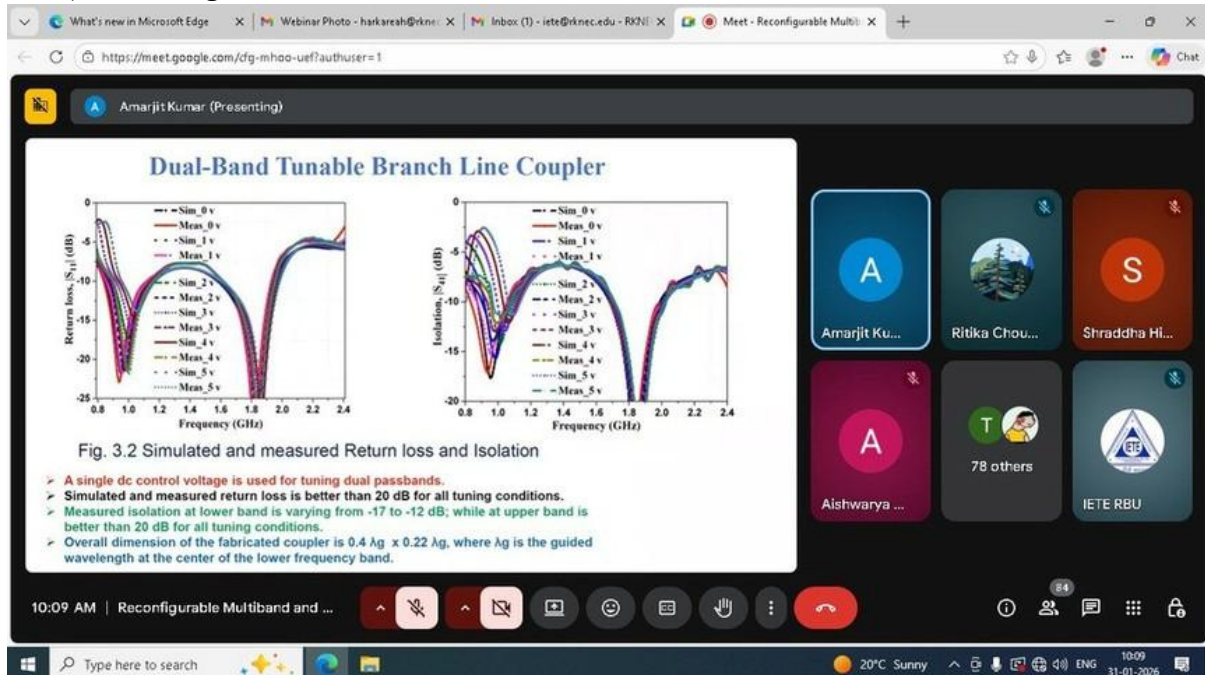
- Gained a clear understanding of **Dielectric Resonator Antennas (DRAs)** and their importance in modern wireless communication systems.
- Learned how **DRAs work using dielectric materials** instead of metallic conductors, reducing losses and improving performance.
- Understood the concept of **resonant modes and dielectric properties**, which control antenna behavior and frequency.
- Identified key advantages of DRAs over traditional antennas:
 - i. Higher radiation efficiency
 - ii. Wider bandwidth
 - iii. Compact size
 - iv. Lower conductor losses
- Explored **design aspects** such as:
 - i. Different shapes (rectangular, cylindrical, hemispherical)
 - ii. Feeding techniques
 - iii. Impedance matching
- Learned about **bandwidth and gain enhancement techniques** like stacking materials and hybrid antenna structures.
- Understood real-world applications in:
 - i. **5G communication**
 - ii. **Millimeter-wave systems**

iii. Radar systems

iv. Satellite communication

- Gained exposure to **current research trends** such as multiband and wideband DRAs.
- Developed better understanding of **antenna theory and practical implementation** in high-frequency systems.
- The session helped **bridge the gap between theoretical electromagnetic concepts and real-world antenna design**.

4) Reconfigurable Multiband and Multifunctional RFICs.



Date : 31st January, 2026

Speaker :**Dr. Amarjit Kumar**, Assistant Professor at NIT Warangal

Audience : 60+ ECE Students

Key Takeaways:

- Gained understanding of **Radio Frequency Integrated Circuits (RFICs)** and their role in modern wireless communication systems.
- Learned how RFICs **integrate multiple components** (amplifiers, mixers, filters, oscillators, switches) into a single chip, improving efficiency and compactness.
- Understood the importance of **multiband operation**, enabling devices to support technologies like LTE, Wi-Fi, Bluetooth, and 5G simultaneously.
- Explored the concept of **reconfigurable RFICs**, which can dynamically change frequency, bandwidth, and functionality based on system requirements.
- Learned about **multifunctional RF circuits** that perform multiple roles (transmission, reception, frequency conversion) within a single architecture.
- Gained insight into **RFIC design challenges**, including:
 - i. Signal integrity
 - ii. Noise reduction
 - iii. Power consumption

iv. Impedance matching

- Understood the importance of **RF front-end design** in modern communication systems.
- Learned about real-world applications in:
 - i. **4G and 5G communication systems**
 - ii. Emerging wireless technologies
- Developed awareness of **advanced research areas** such as:
 - i. RF front-end architectures
 - ii. Semiconductor and SoC design
 - iii. Next-generation communication systems
- The session helped **bridge theoretical concepts with practical RFIC design and industry applications.**



Dr. Ankita Harkare
ISF Coordinator