



## Five days Faculty Development Program (FDP)

on

### Advancements in RF, mm-Wave, and THz Technologies: Shaping the Future of Communication, Sensing, and Imaging (Hybrid Mode)

26<sup>th</sup> – 30<sup>th</sup> May 2025

Organized by

**Department of Communication**

**Engineering**

**School of Electronics**

**Engineering (SENSE)**

**Vellore Institute of**

**Technology**

**Vellore-632014**

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#### About SENSE:

SENSE at VIT was established for imparting state-of-the-art knowledge in Electronics and Communication Engineering and allied areas. The school has set up laboratories with excellent infrastructure in the areas of Electronics, Communication, VLSI, Embedded, Sensors and Nanotechnology. Faculties are actively involved in R&D activities and are working on research projects funded by government organizations like DRDO, ISRO (RESPOND), and DST.

#### About the event:

The rapid evolution of Radio Frequency (RF), millimeter-wave (mm-Wave), and Terahertz (THz) technologies has opened new frontiers in high-speed communication, advanced imaging, and non-invasive sensing. These frequencies, spanning from GHz to THz, offer an unprecedented combination of high data rates, fine spatial resolution, and the ability to penetrate materials in ways previously not possible. As the demand for next-generation wireless technologies such as 5G/6G, radar systems, and health diagnostics grows, it is essential that educators and researchers stay ahead of the curve.

#### Course Content:

- 3D Adaptive Printing technology
- Integration of antennas in small-scale devices
- 5G and beyond: Role of mm-Wave and THz
- Design challenges in mm-Wave/THz wireless communication
- Design and Applications in medical imaging
- Power amplifiers and low-noise amplifiers at high frequencies
- Simulation of communication systems at mm-Wave/THz frequencies
- Virtual Lab-based demonstrations of RF/mm-Wave/THz communication systems

**Resource Persons:** Experts from Reputed Institutions in India and Abroad.

**Eligibility:** The training program is open to Industry personnel, Engineering Faculties, Research Scholars and UG/PG students.

#### Registration Fee :

Rs. 500 + 18% GST (For Faculty),

Rs. 300 + 18% GST (For PG and Research Scholars)

Rs. 700 + 18% GST (For Industry Persons),

**Payment Link:** <https://events.vit.ac.in/>