

About VIT

VIT was established with the aim of providing quality higher education on par with international standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. The campus has a cosmopolitan atmosphere with students from all corners of the globe. Experienced and learned teachers are strongly encouraged to nurture the students. The global standards set at VIT in the field of teaching and research spur us on in our relentless pursuit of excellence. Our Memoranda of Understanding with various international universities are our major strength.

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:

This seminar explores the application of ML and AI in optical and wireless communication, highlighting their role in intelligent signal processing, channel estimation, resource allocation, fault detection, and network optimization. Key use cases in optical fiber networks, 5G/6G wireless systems, and cognitive radio are discussed to demonstrate how data-driven approaches outperform conventional methods. The seminar also addresses the benefits, challenges, and future research directions of integrating AI into communication technologies. Overall, this presentation emphasizes the transformative impact of ML and AI in enabling smarter, adaptive, and more efficient communication networks. It will be a great starting point for anybody pursuing research and a career in ML and AI.

Course Content:

Session I - 10:00 AM – 1:00 PM

- Fundamentals of IoT and M2M Communications
- Principles of Rate-Splitting Multiple Access
- Rate-Splitting-Based Random Access for M2M in 5G IoT

Lunch Break: 1:00 PM – 2:00 PM

Session II – 2:00 PM – 5:00 PM

- Basics of NOMA and Emerging Networks
- NOMA for UAV/Drone-Assisted Networks
- Fundamentals of Resource Allocation in NOMA
- Challenges, Research Issues and future trends

Advisory Committee:

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Professor and Dean,
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Resource Persons

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Eligibility: The Seminar is open to Research
Scholars, Faculties and UG/PG students.

Registration Fee:

Rs. 200 +(GST)

Registration: www.events.vit.ac.in



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

**One day Workshop
on**

**“Next-Generation IoT
and Smart Network
Communications:
NOMA and Rate-
Splitting Approaches ”**

4th April, 2026

(Time: 10:00 AM – 5:00 PM)

(Online Mode)

Google Meet Link: ecom:

https://

**meet.google.com/tvw-
urfz-soi**

Organized by

**School of Electronics Engineering
(SENSE)**

Vellore Institute of Technology, Vellore

SDG Goals meets: SDG 9, SDG 11

