

ABOUT THE INSTITUTION

Vellore Institute of Technology (VIT) was founded in 1984 and attracts students from around the world due to its academic excellence. The credentials of VIT in academics and research have placed 14th position among the research and 14th position in the university category in India by NIRF, Govt. of India. The world ranking body, namely the QS, has given 4 STAR rating to VIT, with which VIT becomes the first institution in India to have the 4 STAR rating. In addition to this, the consortium of industries, FICCI, has adjudged VIT as the “Excellence in Faculty”. VIT has completed 4 cycles of NAAC accreditation and has been rated as an “A++” grade institution. VIT has introduced many innovations in academic processes, such as FFCS (Fully Flexible Credit System), PBL (Project-Based Learning), which adds value to every student for better learning. Fully digitalized academic portals and library access assist the students in equipping themselves for the 2027 marketplace. Hack-a-thon, Math-a-thon, Stat-a-thon as part of curriculum exercise (which kindles the interest and the curiosity of students and motivates them to be better problem solvers) of the last module in every subject being handled by the industrial experts, making the students contextualize the concepts they study in the classroom, are a few of the innovations that VIT has introduced in their learning system.



ABOUT THE SCHOOL

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 DEPARTMENT

The **Department of Embedded Technology** is dedicated to advancing education and research in embedded systems, IoT, real-time systems, and intelligent automation. The department provides a strong foundation in both hardware and software aspects of embedded product design, enabling students to develop industry-ready skills in microcontrollers, processors, embedded Linux, communication interfaces, and system-level integration. With well-equipped laboratories and access to advanced tools, the department focuses on experiential learning through hands-on experiments, mini-projects, and industry-aligned coursework. By fostering creativity and technological competence, the Department of Embedded Technology prepares students to become skilled engineers capable of meeting the evolving demands of embedded and intelligent system development.



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



**Simulate the Future:
A NetSim Workshop
on
5G, IoT & ML Security**



**14 December, 2025
TT134 - Networking Lab**

**Organized by
School of Electronics Engineering
Vellore Institute of Technology
Vellore - 632014**



VIT - A Place to Learn; A Chance to Grow

ABOUT THE EVENT

A hands-on workshop on NetSim designed to provide practical exposure to network simulation, performance analysis, and protocol behavior. Participants will learn to model networks, configure scenarios, run simulations, and analyze results using NetSim's graphical interface and advanced features.

COURSE CONTENT

Session 1:

- NetSim features and Capabilities
- Designing a basic scenario in Internetworks Wi-Fi, WAN: Analyzing the results through performance metrics, NetSim Animation, Plots, Trace files, and Radio measurement logs
- Walk through NetSim In-built examples and experiments: TCP, Wi-Fi, Routing
- Introduction to MANET, Battery model, and Mobility models
- Writing your own code in NetSim by rebuilding the NetSim source code.
- Covering Release Highlights across multiple networks: Plots, Measurement logs, RF Heatmaps, Redesigned GUI.

Session 2:

- Introduction to IoT-WSN, Routing protocol RPL, Energy consumption metrics.
- R&D example on Network Attacks
- NetSim 5G Introduction: SA and NSA modes
- 5G MAC and PHY layer: Scheduling algorithm, 5G Handover, Carrier Aggregation, Channel, and fading model.
- Network Slicing: Static and Dynamic slicing 5G Inbuilt examples: 5G Handover in 5G using Guaranteed Bit Rate, Impact of HOM and TTT.
- ML-based classifier to detect attacks in RPL-based IoT networks

RESOURCE PERSONS

Ms. Sarithala Asha, Application Engineer

Ms. Nidhi Mariswamy, Senior Application Engineer

TETCOS LLP, Bangalore

ORGANIZING COMMITTEE

Honorable Patron

Dr. G. Viswanathan, Founder & Chancellor

Chief Patrons

Shri. Sankar Viswanathan, Vice President

Dr. Sekar Viswanathan, Vice President

Dr. G.V. Selvam, Vice President

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Co-Chairman

Dr. Sakthivel R, Asso. Dean / SENSE

Conveners

Dr. Sundar S, HoD / DET

Coordinators

Dr. Sangeetha N

Dr. Shanmugasundaram M



WHO CAN ATTEND

The training program is open to Faculties, Research Scholars, and UG/PG students.

REGISTRATION FEE

Rs.500 /- (excluding GST)

- The number of participants is restricted to 50 (First-Come First-Served basis)
- E-Certificate will be given on successful completion.

REGISTRATION

<https://events.vit.ac.in/>

CONTACT

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This workshop is aligned with the following SDG Goals:

