



AVIT
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY



**VINAYAKA MISSION'S
RESEARCH FOUNDATION**
(Deemed to be University under section 3 of the UGC Act 1956)



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

-AVIT

Expert talk on

“From Basics to Phased Arrays : Antenna Design, Simulation and Future Research Directions”

29.09.2025 [Monday]

Time: 10:00am to 12:00pm

Name of Event : “From Basics to Phased Arrays : Antenna Design, Simulation and Future Research Directions”

Resource Person : Dr. Richards Joe Stanislaus, Associate Professor, School of Electronics Engineering, VIT, Chennai Campus

Date of Event : 29th Nov. 2025

Event coordinator : Mr. J Vijay, A.P (Gr-II)/ ECE

&

Mr. Rajat Kumar Dwibedi, A.P (Gr-II)/ ECE

Participant : II, III, IV Year, Research scholars & faculty of our Department.

Internal Participants: 36 (30 Student & 6 Faculties)

Total Number of Participants: 36

Mode of Conduction : OFF LINE

PROGRAM DETAILS:

Department of Electronics and Communication Engineering in association with the IEEE Student Branch- AVIT & IETE students Forum organized a Expert talk on “From Basics to Phased Arrays : Antenna Design, Simulation and Future Research Directions” on 29.11.2025. The program was conducted in offline mode at TBSC04. Ms. Sajitha Parveen R, Student IETE Member ECE Department, welcomed the gathering and also briefed about the Antenna Design, Simulation and Future Research Directions. At the onset Dr. L. K. Hema HOD/ECE & BME delivered the Welcome address and explained about the course which will be helpful for students in their research and project work. **Tejasree J, II Year student**, ECE Department gave a brief introduction about the speaker Dr. Richards Joe Stanislaus, Associate Professor, School of Electronics Engineering, VIT, Chennai Campus, Chennai.

The session aimed to enhance the technical knowledge of learners in the field of antenna engineering. The resource person Dr. Richards Joe Stanislaus, Associate Professor, School of Electronics Engineering, VIT, Chennai Campus began the talk by explaining the **fundamentals of antennas**, including radiation mechanisms and antenna parameters. Key concepts such as **gain, directivity, bandwidth, VSWR, and radiation patterns** were simplified for easy understanding. The expert highlighted various **types of antennas** used in communication systems. He introduced the basics of **antenna design procedures** and important design considerations. The session included demonstrations of **simulation tools** commonly used in antenna modeling. Students were shown how electromagnetic simulation helps in predicting antenna performance. The speaker then transitioned to the concept of **phased array antennas** and their strategic importance. He explained how phased arrays enable **beamforming** and **electronic beam steering** without mechanical movement. Real-world applications such as **radar, satellite communication, 5G, and defense systems** were discussed. The expert elaborated on **array factor, element spacing, and phase control** in phased array design. A live simulation demonstration helped students understand radiation pattern shaping. He discussed common challenges such as **mutual coupling** and **feed network design**. Future research opportunities in **metamaterials, reconfigurable antennas, and intelligent surfaces** were highlighted. The speaker emphasized the growing demand for antenna engineers in modern industries. Students actively participated and raised questions related to design software and career prospects. The session was highly interactive and enriched the participants’ practical knowledge. The speaker encouraged students to take up antenna-related projects. Feedback from participants indicated that the session was informative and inspiring. The event successfully bridged basic antenna concepts with advanced phased array research. Overall, the expert talk provided valuable insights into current trends and future innovations. Students had learned new concepts with very much enthusiasm.

The organizing team and students ensured smooth coordination of the event. The session concluded with a vote of thanks By Mr. Vishal, IV Year student to the resource person.

EVENT GALLERY:

The poster features a blue background with a central white rounded rectangle containing the event details. At the top, there are logos for Vinayaka Mission's Research Foundation, AVIT, and I-GAUGE. The central text is in white and blue, and the speaker's photo is centered below the title. The bottom section includes the date, time, and location, followed by the organizing department and logos for ETE, IEEE, and the Institution's Innovation Council.

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DIAMOND
I-GAUGE
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Cordially invites you all to the expert talk on

**“From Basics to Phased Arrays:
Antenna Design, Simulation &
Future Research Directions”**



Resource Person:
Dr. Richards Joe Stanislaus
Associate Professor
School of Electronics Engineering
VIT, Chennai Campus

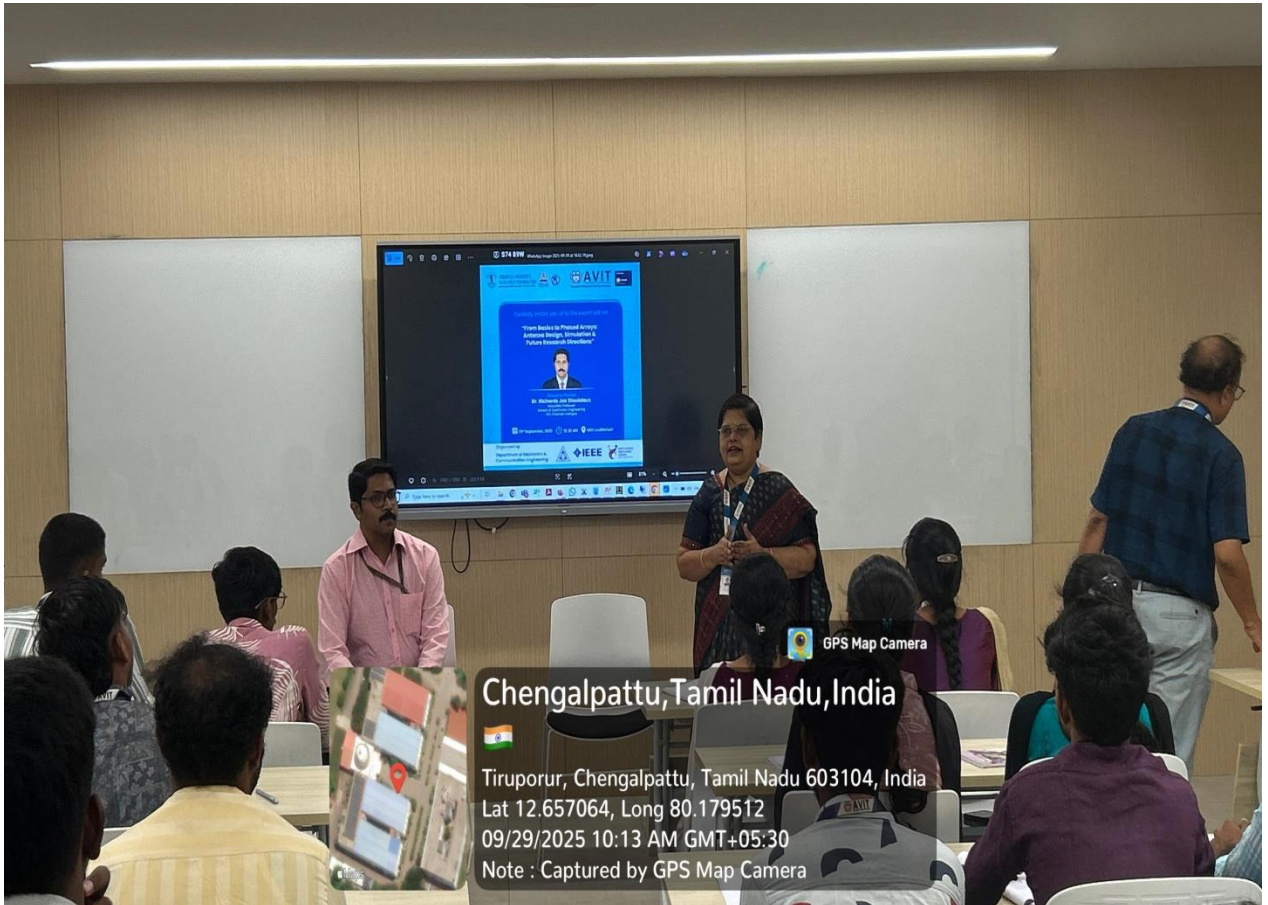
29th September, 2025 10.30 AM Mini auditorium

Organized by
Department of Electronics & Communication Engineering

ETE

IEEE

INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)



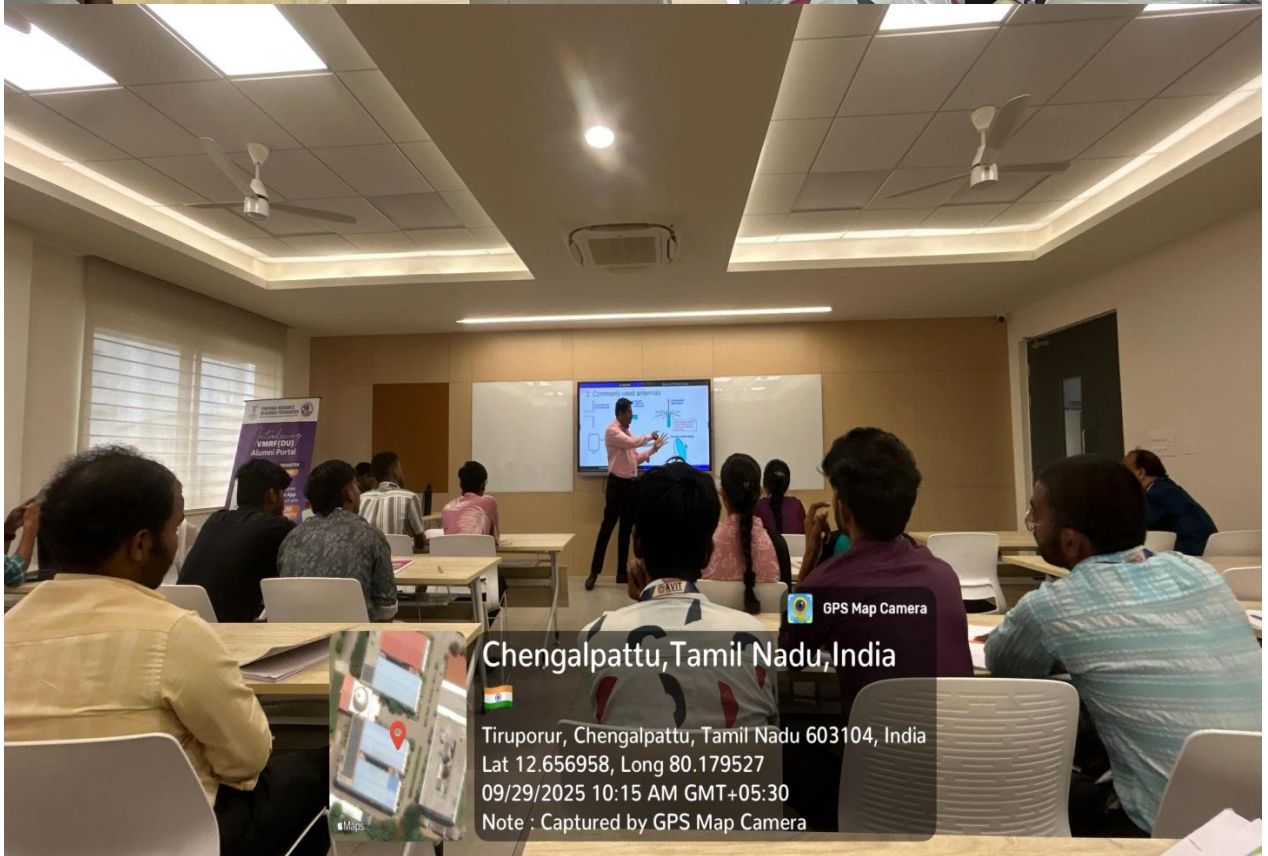
Chengalpattu, Tamil Nadu, India

Tiruporur, Chengalpattu, Tamil Nadu 603104, India

Lat 12.657064, Long 80.179512

09/29/2025 10:13 AM GMT+05:30

Note : Captured by GPS Map Camera



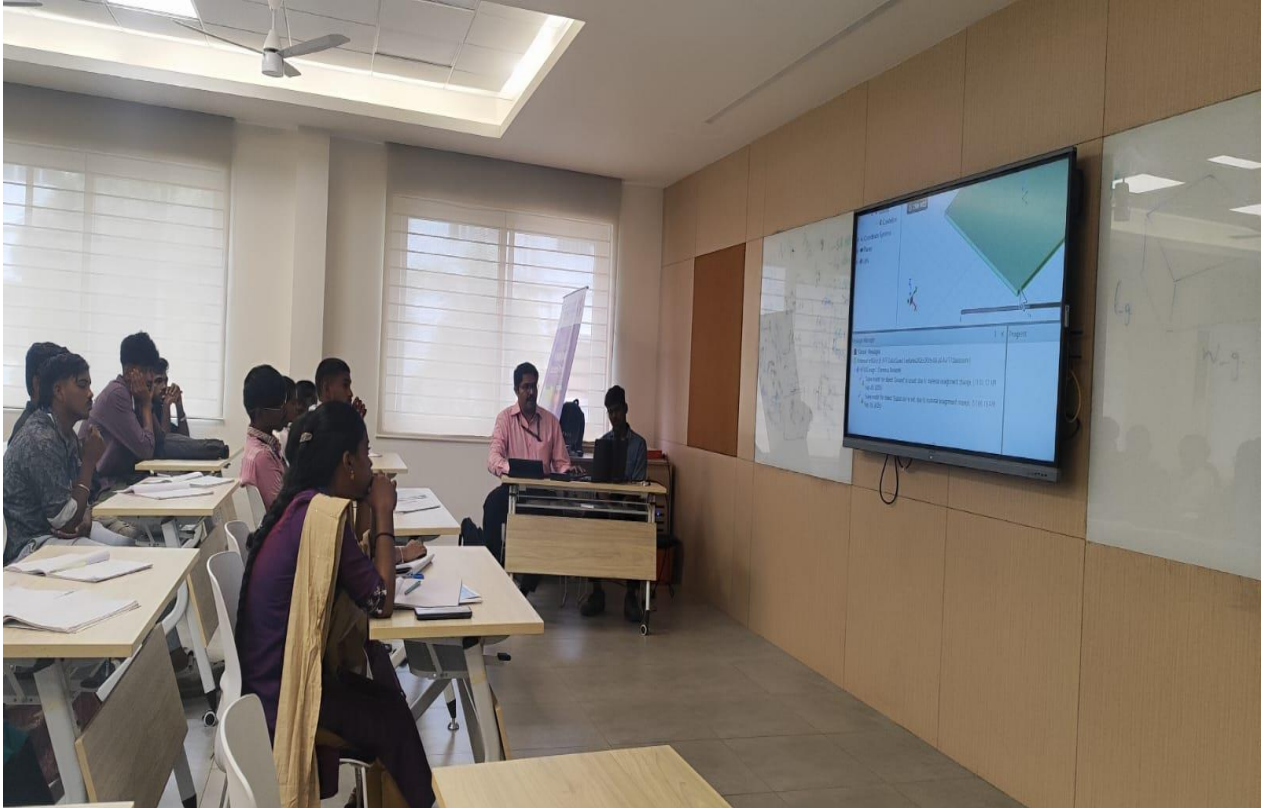
Chengalpattu, Tamil Nadu, India

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