

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A Report on  
One Week SDP on  
"Unleashing the Potentials of Communication Techniques: A Design Approach"  
from 18/06/2024 to 22/06/2024

The Research Group NICO<sub>N</sub> of Department of ECE successfully conducted one week workshop on "Unleashing the Potentials of Communication Techniques: A Design Approach" for III B.Tech. students from 18<sup>th</sup> June 2024 to 22<sup>th</sup> June 2024. The aim of this workshop is to provide an insight on importance of ANSYS HFSS & MATLAB Software for student development in the field of wireless communication, signal processing, antenna design, simulink, image processing, and so on. The workshop comprises of theoretical lectures and demonstration of the software and various toolboxes by the department faculties.

The students got an exposure to MATLAB coding, wireless communication, LIFI technology, Antenna design, simulink usage for communication and Image processing toolboxes. As an outcome of the workshop, the students are able to develop programming code, process of communication, Antennas design and simulation.

Totally 42 students were participated in the workshop. The workshop is organized in association with IETE student forum (ISF). Dr S. Rekha, Mr. N.Raju and Mr. Prashant Kulkarni worked as Faculty Coordinators for this one week workshop.



**On 18<sup>th</sup> June 2024:**

**Day-1 INAUGURATION (9:45 am to 11 am):**

The workshop was inaugurated by Director, Dean-School of Engineering and ECE-Head at the ECE seminar hall from 9:45 am to 11 am.

### III yr ECE SDP Inaugural Group Photo



Majarguda, Telangana, India  
CM23+M6Q, Majarguda, Telangana 500088, India  
Lat 17.401959°  
Long 78.653227°  
18/06/24 10:35 AM GMT +05:30



Majarguda, Telangana, India  
CM23+M6Q, Majarguda, Telangana 500088, India  
Lat 17.401953°  
Long 78.6532°  
18/06/24 10:37 AM GMT +05:30



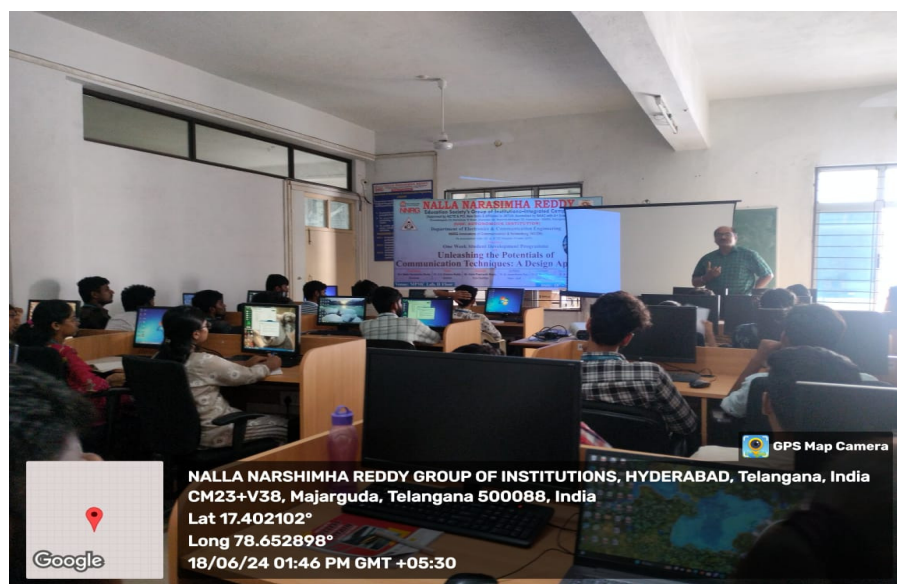
Majarguda, Telangana, India  
CM23+M6Q, Majarguda, Telangana 500088, India  
Lat 17.401843°  
Long 78.653181°  
18/06/24 10:38 AM GMT +05:30

### **Day-1 Forenoon (11:15 am to 12:50 pm) and Afternoon (1:30 pm to 4:00 pm):**

In morning session, resource person **Mr. A. Aravind** delivered lecture on "OTFS". The afternoon session is handled by **Mr. Prashant Kulkarni** on "Concepts of wireless communication" with hands-on session.



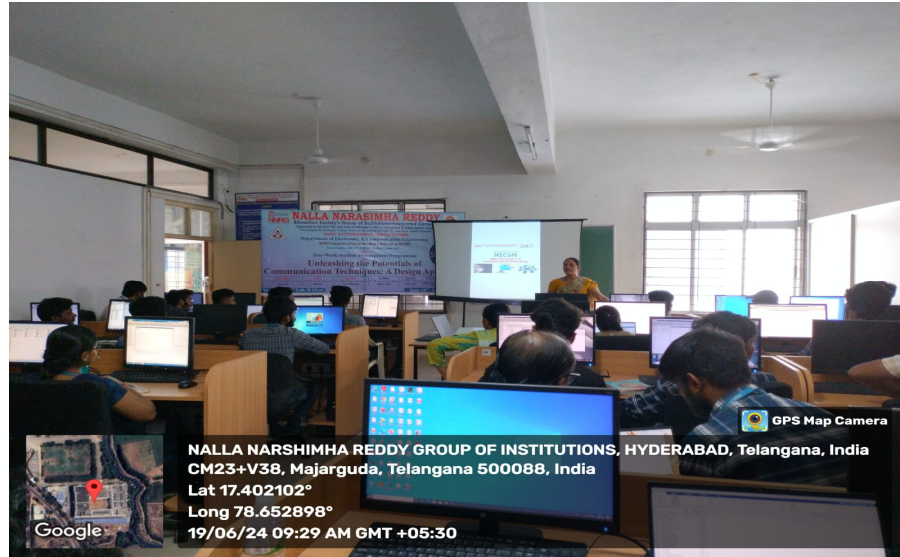
Mr. A. Aravind, Assistant Professor of ECE delivered lecture on OTFS



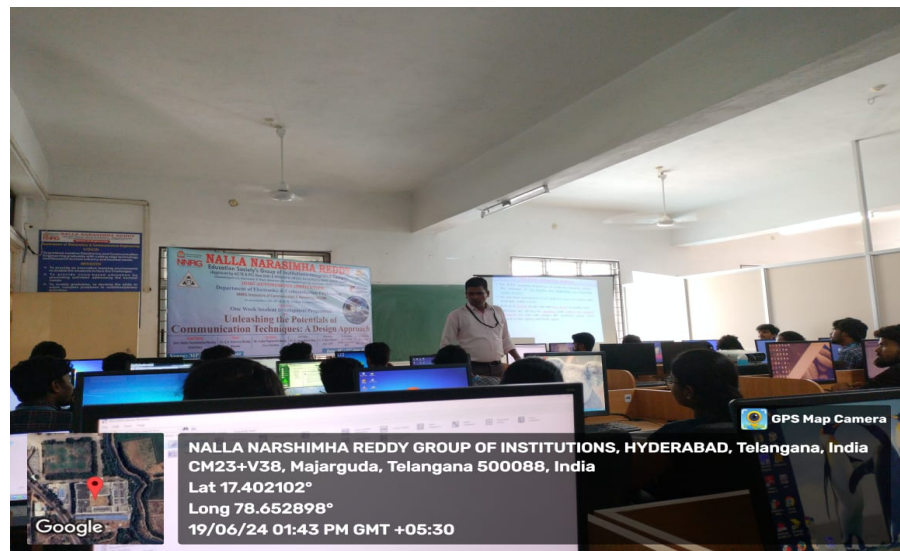
Mr. Prashant Kulkarni, Associate Professor of ECE, delivered the concept of wireless communication

### Day-2 Forenoon and Afternoon Session:

In morning session, Mrs. K. Anuradha handled the theoretical session on "Introduction to Simulink-Design of Communication System" and session 2 is handled by resource person Mr. N.Raju on "The Basic of Antenna" followed by practical sessions in the afternoon.



Mrs. K.Anuradha, Assistant Professor of ECE, delivered basic concepts of SIMULINK



Mr N.Raju, Assistant Professor of ECE, delivering lecture on "Basics of Antenna"

### Day-3 Forenoon and Afternoon Session:

In morning session, resource person Mrs T Swetha delivered lecture on "LIFI Technology". The afternoon session is followed by hands-on and project implementation.



Mrs. T.Swetha, Assistant Professor of ECE, delivered concept of "LIFI Technology"

### Day-4 Forenoon and Afternoon Session:

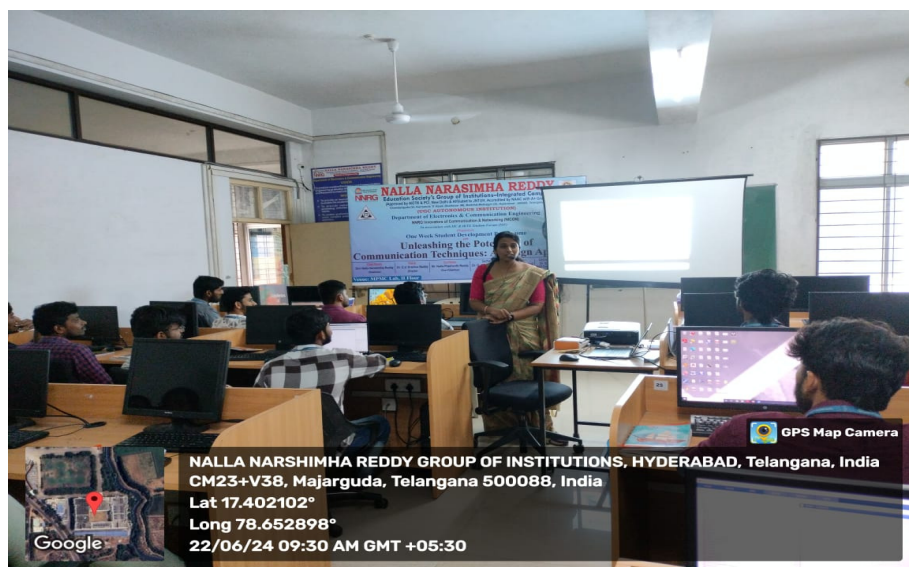
In morning session, resource person Mrs. G. Soumya had delivered lecture on "Visualizing Communication: Essential Digital Image Processing fundamentals" followed by hands-on training on Image processing tools in the afternoon session.



Mrs. G.Soumya, Assistant Professor of ECE, delivered basic concepts of Image processing

### Day-5 Forenoon and Afternoon Session:

The forenoon session 1 is handled by **Dr. S Rekha** who delivered the lecture on “**Realizing Antennas using MATLAB**” and related concepts and followed by hands-on training using MATLAB



Dr.S.Rekha, Associate Professor as resource person delivered the concepts of “Realizing Antennas using MATLAB”

### Day-5 Afternoon session (Valedictory):

The valedictory program is organized during the afternoon session. The program is felicitated by Dean, Director and R&D Co-ordinator.



Dr Ravi, R&D Co-ordinator addressing the gathering



**NICO team group photo during Valedictory**



**Student participants receiving merit certificates from Director**



# NALLA NARASIMHA REDDY

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(UGC AUTONOMOUS INSTITUTION)

School of Engineering



## Outcomes of the Workshop:

After the completion of workshop, the students are able to

- 1) Implement WSN in MATLAB
- 2) Design antenna and simulation using ANSYS HFSS tool
- 3) Implement Li-Fi coding
- 4) Implement Simulink for designing a communication system
- 5) Develop code for image processing applications.

**Place:** Hyderabad

**Date:** 25/06/2024

**NICoN-SPoC**

**R & D Co-ordinator**

**HOD-ECE**