

## RESOURCE PERSONS

Following eminent personalities with expertise in IoT driven Antennas for Satellite Navigation systems from premier Institutes and industries will deliver lectures on various topics.

**Dr Samrat L Sabat, Director R&D, UOH**

**Dr M Lakshmi Narayana, Ex Director**

**Scientist H, DLRL, Hyderabad**

**Dr M Chakravarthi**

**Scientist H, DLRL, Hyderabad**

**Dr K Sambasiva Rao**

**Scientist F, RCI, Hyderabad**

**Dr. V Srinivasa Rao**

**Scientist F, RCI, DRDO, Hyderabad**

**Amit kumar Choudhary**

**CEO, Pragyatmika Industry, Hyderabad**

**Dr P Srihari Rao**

**Professor, ECE, NITW**

**Dr SKLV Sai Prakash**

**Assoc Professor, ECE, NITW**

**Dr M V Ragunath**

**Assoc Professor, ECE, NITW**

**Dr G Arun Kumar**

**Asst Professor, ECE, NITW**

**Dr Gopi Ram,**

**Asst Professor, ECE, NITW**

**Dr A Bharathi,**

**Associate Professor, OU, Hyderabad**

## IMPORTANT DATES:

Last date of registration: **11.12.2023**

Intimation of selection on or before: **13.12.2023**

## ELIGIBILITY AND SELECTION

Faculty from AICTE approved Engineering Colleges can apply. PhD Scholars/ PG Students/ Industry personnel can also apply. Selection is on "first come first serve" basis and number of participants for the ATAL FDP is limited to 60.

## REGISTRATION:

**Registration is mandatory for attending the FDP through ATAL FDP portal.**

No fee will be charged from any participant attending ATAL FDP. External Participants (traveling more than 20KM one side to attend the FDPs) who attend at least 90% of the sessions shall be reimbursed with the cost of traveling, with a blanket amount of Rs. 2000/- at the end of the FDP. Accommodation will be provided on request (on Payment) for outstation participants. Refreshment & lunch will be provided.

## CRITERION FOR CERTIFICATE

Certificates will be issued to those participants who attend the FDP with minimum 80% attendance and on achieving at least 70% in Continuous Comprehensive Assessment.

## CHIEF PATRONS

**Sri G. RAGHAVA REDDY**, Chairman

**Smt. G. SRIVIDYA REDDY**, Vice Chairperson

## PATRON

**Dr K. RAMESH REDDY**, Principal

## CHIEF GUEST

**Dr. SAMRAT L SABAT**,  
Director R&D, HCU, Hyderabad

## CONVENER

**Dr. K. RAGINI**, Professor, HOD, ECE

## COORDINATOR

**Dr. G. SRIVALLI**, Assoc. Professor, ECE

## CO-COORDINATOR

**N. KRISHNA JYOTHI**, Asst. Professor, ECE



**ATAL (AICTE Training and Learning) Academy  
ONE WEEK NATIONAL LEVEL**

**FACULTY DEVELOPMENT PROGRAM  
ON  
ADVANCEMENTS IN IOT-DRIVEN  
ANTENNAS FOR SATELLITE  
NAVIGATION SYSTEMS  
18<sup>th</sup> – 23<sup>rd</sup> DECEMBER 2023**



**Organized by**

**Department of Electronics and  
Communication Engineering  
G. NARAYANAMMA INSTITUTE OF  
TECHNOLOGY & SCIENCE  
Autonomous (For Women)  
Accredited by NAAC & NBA  
Shaikpet, Hyderabad-500104  
website: [www.gnits.ac.in](http://www.gnits.ac.in)**

## ABOUT THE COLLEGE

Established in 1997 by Sri G. Pulla Reddy garu, G. Narayanamma Institute of Technology & Science (GNITS) is a renowned women's engineering college in Hyderabad. With UGC autonomous status for a decade from 2018 and affiliation to JNTU-H, it's a hub for technical education. Accredited by NAAC & NBA, and an ISO 9001:2015 Certified Institution, GNITS offers exceptional placements and boasts affiliations with ISTE, IET, CSI, IEEE, and IETE. Noteworthy accolades include the "AICTE Internshala Award," "National Employability Award" thrice, and a remarkable "Health and Wealth Hackathon" victory. It's a pioneer in fostering female technocrats, upheld by remarkable recognition and the coveted sponsorship of its MAC Lab by Tim Cook in 2016.

## ABOUT THE DEPARTMENT

Established in 1997 with an initial intake of 60 students, the Department of Electronics and Communications Engineering at G. Narayanamma Institute of Technology & Science (GNITS) has flourished. The department now boasts 39 dedicated faculty members, including 8 with doctorates, and 8 non-teaching staff. With 180 undergraduate and a postgraduate program, the department's facilities include 15 well-equipped laboratories and 9 classrooms, enhanced by an advanced digital E-classroom. Remarkably, the department has secured 10 patents and established 2 R&D centers focusing on Antenna design, IoT, and cutting-edge research equipment. Above 95% placement in renowned IT and Core companies attests to its excellence.

## ABOUT ATAL ACADEMY

AICTE is committed for development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development. Council understands that there is a need to train the young generation in skill sector and having faculty and technicians to be trained in their respective disciplines. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies.

AICTE Training and Learning (ATAL) Academy is established with the vision "To empower faculty to achieve goals of Higher Education such as access, equity and quality".

AICTE Training and Learning Academy (ATAL

Academy) facilitates (through trainings and workshops) up-gradation of the knowledge and skills of faculty members of AICTE approved Institutions, Research Scholars, PG Scholars, Participants from Government, Industry and staff of host institution.

## FDP COURSE CONTENTS:

- Understand the fundamentals of satellite navigation systems and their role in various applications and industries.
- Explore the principles of Internet of Things (IoT) technology and its integration with antenna design for satellite navigation.
- Analyze the challenges and opportunities in developing IoT-driven antennas for precise and reliable satellite navigation.
- Review the latest research and advancements in antenna technologies, focusing on IoT-enabled solutions for satellite navigation systems.
- Evaluate the impact of IoT integration on antenna performance, signal reception, and navigation accuracy in satellite-based positioning.
- Study the benefits and limitations of IoT-embedded antennas in overcoming interference and signal degradation in satellite navigation systems.
- Design and simulate IoT-integrated antennas using software tools for satellite navigation applications.
- Develop practical skills in testing, measuring, and optimizing the performance of IoT-driven antennas in real-world scenarios.
- Assess the cost-effectiveness and scalability of IoT-based antennas in satellite navigation deployments.
- Encourage innovative thinking and collaboration among participants for potential research and development projects in the field of IoT-driven antennas for satellite navigation.

## PROGRAM OUTCOMES:

Upon completion of the FDP, participants will

- Understand the principles and significance of satellite navigation systems and their applications in various industries.
- Gain knowledge of IoT technology and its integration with antenna design for satellite navigation systems.
- Analyze and address challenges related to developing

IoT-driven antennas for precise and reliable navigation.

- Evaluate the latest research and advancements in antenna technologies, particularly focusing on IoT-enabled solutions for satellite navigation.
- Design, simulate, and optimize IoT-integrated antennas for improved navigation accuracy and signal reception.
- Demonstrate practical skills in testing and measuring antenna performance in real-world scenarios.
- Identify opportunities for research and development projects in IoT-driven antennas to enhance satellite navigation systems.

## CONTACT DETAILS

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**G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (Autonomous) for Women**



in association with AICTE Training & Learning Academy  
6-Day FDP (December 18-23) in Offline mode from 9.30AM to 4.30 PM  
Organized by Department of Electronics and Communication Engineering



## **REPORT**

### **AICTE-ATAL Faculty Development Program on “Advancement in IOT-Driven Antennas for Satellite Navigation Systems”**

Sponsored by: ATAL Academy

Dates of FDP: 18-12-2023 to 23-12-2023

Number of Participants: 59

Inaugural on December 18<sup>th</sup> 2023



Valedictory on December 23<sup>rd</sup> 2023



#### **Details of Resource Persons:**

1. Dr Samrat L Sabat, Director R&D, UOH, 2. Dr M Lakshmi Narayana, Ex Director Scientist H, DLRL, Hyderabad, 3. Mr I Balakrishna Scientist, SAMEER-CEM Chennai, 4. Mr K Sambasiva Rao Scientist E, RCI, Hyderabad, 5. Dr. V Srinivasa Rao Scientist F, RCI, DRDO, Hyderabad, 6. Mr. Amit K Choudhary CTO, Pragyatmika, The Power of Intelligence, New Delhi, 7. Dr P Srihari Rao Professor, ECE, NITW, 8. Dr SKLV Sai Prakash Assoc Professor, ECE, NITW, 9. Dr G Arun Kumar Asst Professor, ECE, NITW, 10. Dr Gopi Ram, Asst Professor, ECE, NITW, 11. Dr A Bharathi, Associate Professor, OU, Hyderabad, 12. Mr Devi Prasad Panda Scientist E, RCI, DRDO, Hyderabad.

#### **Brief Summary on FDP:**

The FDP was sponsored by ATAL Academy with an approved sanction amount of Rs 3,50,000/.

12 Distinguished Scientists and Eminent Personalities from Government Organizations like MeitY, DRDO and Academicians from National Institute of Technology, Warangal, University of Hyderabad and Osmania University served as the Resource Persons to deliver talks on Antennas, IOT and Satellite Navigation Systems. Topics covered were IoT Applications and Research Challenges, Indigenous development on Next generation Technologies for the Athmanirbhar Bharat, Satellite IoT: The journey to 6G, Antennas for IoT Applications, Antennas for IoT and Navigation Applications, Antenna Pattern Synthesis using Evolutionary Approach, World Wide Navigation Satellite Orbits and Coverage, IC Design for IoT Applications, Antennas for Defence Applications, Antennas for Satellite Applications, Beyond Fixed: The Dynamic Role of Reconfigurable Antennas in IoT All the sessions were very Educative and Knowledgeable. Mr Amit K Choudhary, Chief Technology Officer from the IOT related Industry Pragyatmika, New Delhi delivered a session on Usage of IoT for satellite Navigation Systems. The Industry visit was to an Antennas Industry by name “LOTUS Technologies” at Nadargul Hyderabad. Simulation, Design and testing was shown.

Talk link: <http://www.youtube.com/@srivalligundalaVedaTech>

**Outcomes:** The FDP content was very useful and helps in Research purposes to all the attendees to pursue Research. The direct Impact on Faculty/ Research Scholars/ Post Graduates in attending the FDP is it opens up in getting more Research Ideas in Satellite Navigation systems, Satellite IoTs and Satellite Antennas and Startup ventures with Industry.

**Overall Feedback:** Feedback is very positive (90% Excellent and 10% Very Good). Participants pursuing Post Graduation in Microwaves felt they had boundless prospects to go with Curriculum related Projects. Impressed by Hands-on sessions on Software simulation using HFSS useful for future design in Antennas.

Coordinator: Dr G Srivalli, Assoc Prof, ECE *Srivalli*  
Co-Coordinator Ms N Krishna Jyothi Asst Prof, ECE *NKJyothi*  
HOD: Dr K Ragini, Professor, HOD ECE *K. Ragini*