RAMAIAH
Institute of Technology

**Dept. of Electronics and Telecommunication Engineering**

**in association with IQAC**

**M S Ramaiah Institute of Technology**

**(Autonomous Institution, Affiliated to VTU - Belgaum)**
**Vidhya Soudha, M S R I T Post, Bengaluru 560054**

Organizes One Week Faculty Development Program on

# GNSS Technology and Indian Research Perspective

Funded by

AICTE
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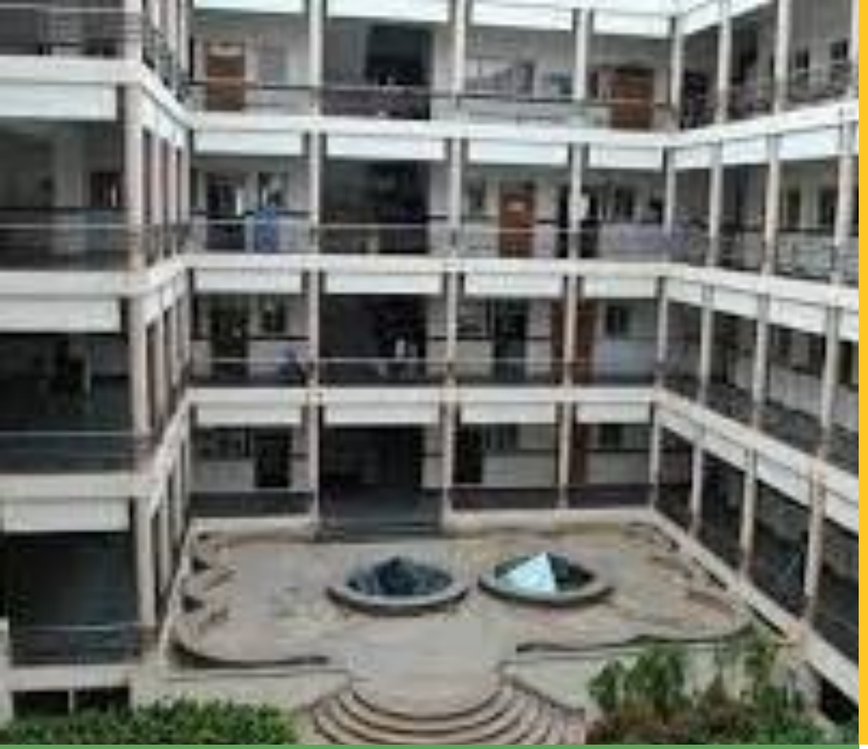
AICTE TRAINING & LEARNING ACADEMY
ATAL

11th to 16th
December 2023



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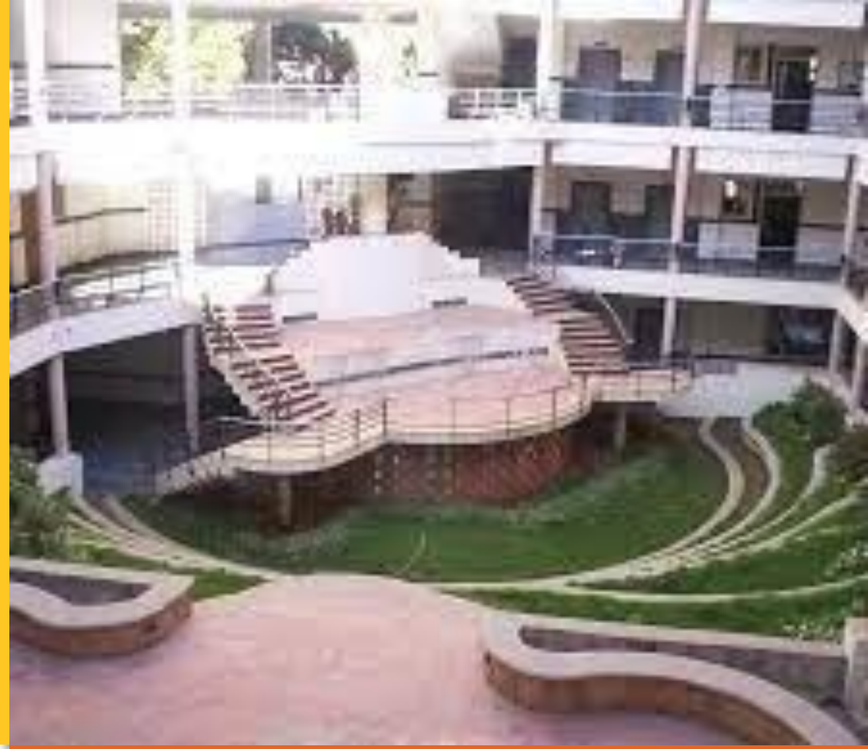

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# M S Ramaiah Institute of Technology

Dr. M. S. Ramaiah a philanthropist, founded ‘Gokula Education Foundation’ in 1962 with an objective of serving the society. M S Ramaiah Institute of Technology (MSRIT) was established under the aegis of this foundation in the same year, creating a landmark in technical education in India. MSRIT offers 17 UG programs and 15 PG programs. All these programs are approved by AICTE. All eligible UG and PG programs are accredited by National Board of Accreditation (NBA). The institute is accredited with ‘A+’ grade by NAAC in March 2021 for 5 years. University Grants Commission (UGC) & Visvesvaraya Technological University (VTU) have conferred Autonomous Status to MSRIT for both UG and PG Programs since 2007. To promote research culture, the institute has established Centre of Excellence for Imaging Technologies, Centre for Advanced Materials Technology, Centre for Antennas and Radio Frequency systems (CARFS), Center for Cyber Physical Systems & Schneider Centre of Excellence. M S Ramaiah Institute of Technology has obtained “Scimago Institutions Rankings” All India Rank All India Rank 107 & world ranking 600 for the year 2022.. As per the National Institutional Ranking Framework (NIRF), MoE, Government of India, M S Ramaiah Institute of Technology has achieved 78th rank among 1314 top Engineering Institutions of India for the year 2023

ACCREDITED WITH GRADE A+ NAAC

nirf India Ranking 2020

***78TH ALL INDIA NIRF RANK***

***1ST AMONG ALL ENGINEERING COLLEGES AFFILIATED TO VTU, BELGAUM***

# Department of Electronics and Telecommunication Engineering

The Department of Electronics &Telecommunication Engineering (Formerly known as Department of Telecommunication Engineering) was established in 1996 to address the increasing demand for professionals with expertise in communication and networking technology in India. The Department has state of the art laboratories, equipment's, resources and committed faculty having best of the academic and industry recognition. The Department started a M.Tech program in Digital Communication in the year 2004. The Department also started a Research Centre in the year 2012 and Research Scholars carrying out their Research. Department has collaborations with some of the leading industries like Ansys, Rohde & Schwarz, JV Micronics, Nokia, Huawei Technologies, Intel, Samsung, and with leading national and international universities like Bradley University, IIT-M, enabling the department to focus on R&D, and thus providing new avenues for PG/UG students for placement and higher studies. Both UG and PG Programs are accredited by the National Board of Accreditation. There are 5 Funded Research projects (Industry and Government) ongoing in the department involving students to carry out innovative projects. Many professional activities are organized regularly to the students under various professional societies like IEEE Sensor Council, IEEE Communication Society, IEEE Antenna and Propagation Society, IETE Bangalore and IEEE MTTs Society.

# About the Program

This FDP gives an exposure to the working Principle of GNSS Satellite Communication System, math's behind Navigation Technology and familiarity to different standards and formats used. Hands on experience on capturing and analyzing satellite signals and usage of applications using the received signal will be provided as part of this program. The FDP also focusses on giving awareness on challenges and research opportunities in Navigation Systems.

This FDP is useful for faculty of undergraduate and postgraduate programs, industry personnel as well as researchers intending to Initiate their work in the domain.

**Target Participants**

FACULTY, COMPANY EXECUTIVES, RESEARCH SCHOLARS

**Registration**

REGISTRATION FEE: NIL
THROUGH AICTE PORTAL ONLY
HTTPS:// ATALACADEMY. AICTE- INDIA. ORG/ LOGIN

**LIMITED TO 50 PARTICIPANTS ONLY**
**(ON FIRST COME FIRST SERVE BASIS)**

**Contact**

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# Schedule

| | Day1<br>Monday 11/12/23 | Day2<br>Tuesday 12/12/23 | Day3<br>Wednesday 13/12/23 | Day4<br>Thursday 14/12/23 | Day5:<br>Friday 15/12/23 | Day6<br>Saturday 16/12/23 |
|---|---|---|---|---|---|---|
| **9:30-12 pm** | **Keynote Address Telecommunication: NavIC Perspective**<br><br>**Pamela Kumar,**<br>Director General, Telecom Standards Development Society of India | **Mathematics behind Navigation Technology**<br><br>**Shri . Akhileshwar Reddy**<br>Deputy Director, Satnav-POs<br>URSC, ISRO | **Errors and Mitigation Techniques in GNSS**<br><br>**Dr Anindya Bose**<br>Department of Physics<br>The University of Burdwan | **Innovations in NavIC**<br><br>**Shri. Varadarajan Krishnan,**<br>Advisor TIH, IIT Tirupati<br><br>**Drone Technology and Applications**<br><br>**Col Sunder(Retd.)**<br>Drone Developers, Chennai | **Industrial visit to ISRO** | **Time and Stress Management**<br>**Dr Kumudhini Ravindra**<br>Chief Strategy Officer and Co-founder of Inytu Inc,<br>Principal Partner – Strategic Innovation & Research at Innomantra Consulting |
| **12-1pm** | **Article discussion** | **Article discussion** | **Article discussion** | **Article discussion** | | **Reflection Journal** |
| **1-2 pm** | **Lunch** | | | | | |
| **2-4:30pm** | **Introduction to GNSS**<br><br>**Lt. Col Velan, (Retd.)**<br>CEO, Elena Geosystems Pvt. Ltd | **Navigation with Indian Satellite constellation**<br><br>**Shri .Manish Saxena**<br>Director, Satnav-POs<br>URSC, ISRO | **Mathematics behind Tracking and Research Perspective of NavIC**<br><br>**Dr Anindya Bose**<br>Department of Physics<br>The University of Burdwan | **Future trends in GNSS**<br><br>**Dr Rainer Horn,**<br>Managing Partner, GNSS.Asia SpaceTecPartners. Germany. | **Navigation Satellites**<br><br>**Shri Ramarao. G**<br>Head, Navigation Systems Engineering Division, ISRO | MCQ, feedback and Interactions |
| **4:30-5:30pm**<br><br>**Practical sessions/ Labs** | **Working of GNSS** | **NavIC Satellite Signal Capture and Analysis** | **GNSS Errors and Data Format** | **Usage of Handheld Devicefor Survey** | **Usage of NAVIC forTracking** | **Valedictory session** |