



**AICTE Training and Learning Academy (ATAL)
Sponsored**

**One Week Faculty Development Program
on
Advances in Acoustics, Speech and Signal Processing**

**Date: 8 – 13 January 2024
Venue: Sowparnika Seminar Hall**

Coordinators

Dr. Shivaprakasha K.S.
Professor, Dept. of Electronics & Communication Engineering

Dr. Narendra K.C.
Assistant Professor, Dept. of Electronics & Communication Engineering

Organised by:



**Off Campus Centre of Nitte (DU)
Nitte, Karkala Taluk, Udupi District, Karnataka 574110
Ph: +91 8258-281 263/ 281 248 Web: www.nmamit.nitte.edu.in**

About the Institute

Nitte Mahalinga Adyanthaya Memorial Institute of Technology (NMAMIT), Nitte established in 1986 and approved by the All India Council for Technical Education, New Delhi, is a constituent college of Nitte (Deemed to be University), Mangaluru. Nitte (DU) has been accredited with 'A+' Grade by NAAC; awarded Category 'A' status by MHRD GoI; ranked 65th in NIRF 2023 and is in the 401-450 band in the QS Asia University Rankings 2022 and 201-300 band in the Times Higher Education (THE) Impact Rankings 2022.

NMAMIT is ranked in the rank band 101-150 during National Institutional Ranking Framework (NIRF) 2023 by MoE, GoI among the engineering colleges in India. The eligible undergraduate programs are accredited by the National Board of Accreditation (NBA), New Delhi under TIER-I category. NMAMIT has active collaborations with several international universities and organizations for faculty and student exchanges, research, internships and placements.

The sanctioned annual intake of students is 1440 for BTech and 319 for PG programs of MTech and MCA. NMAMIT has over 5000 students studying in the campus.

NMAMIT is located in a vibrant, serene and green campus at Nitte spread over 140 acres and is nestled in the Western Ghats of Southern India on the way to the Kudremukh ranges. The nearest airport is Mangaluru International Airport (45 km). The nearest railway stations are Udupi (40 km) and Mangaluru (50 km). Nitte is 19 km from NH-66 connecting Kochi (Kerala) and Panvel (Mumbai) and 7 km on NH-169 connecting Mangaluru and Solapur (Maharashtra).

About the Department of Electronics & Communication Engineering: It was started in 1986 with an intake of 40 students. Today the department has an intake of 180 students with a faculty strength of 45. The Department offers an undergraduate program, B.Tech in Electronics & Communication Engineering and a PG program, M. Tech in VLSI Design & Embedded Systems. The Department is a recognized research center under Nitte (Deemed to be University).

ATAL Academy:

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 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 & 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.

Objectives of the FDP:

- To acquire familiarity with the mathematical methods in signal processing
- To obtain a formal introduction to the methods and frameworks present for signal processing
- To get acquainted with softwares and libraries for development of speech technology

Outcomes of the FDP:

Upon the successful completion of this program, the participants will be able to:

- Comprehend various mathematical tools and methods for signal processing
- Critically review the concepts that are reported in literature
- Use the mathematical tools such as Hidden Markov Models, Deep Learning network for simple speech processing applications
- Create small applications for isolated digit recognition and perform simple signal analysis on speech samples

Resource Persons:

- Prof. Yegnanarayana B, INSA honorary scientist and Emeritus Professor, IIT Hyderabad
- Prof R Vittal Rao, Consultant, Former Professor, Dept of Mathematics, CEDT, IISc, Bengaluru
- Dr. Prasanta Kumar Ghosh, Associate Prof, Dept of Electrical Engineering, IISc, Bengaluru
- Dr. Shashidhar Koolagudi, Associate Professor, Dept of CSE, NITK, Surathkal
- Dr. Meera S. S. Associate Prof, Dept of Speech Pathology and Audiology, NIMHANS, Bengaluru
- Dr. Muralishankar R, Professor, Dept of ECE, CMR University, Bengaluru
- Dr. R Kumaraswamy, Professor, Dept of ECE, Siddaganga Institute of Technology, Tumakuru
- Dr. Sanjeev G, Engineering Director, MMRIFC, Bengaluru

How To Apply?

- Online apply at ATAL portal at <https://atalacademy.aicte-india.org/>
- No Registration Fee
- Mode of Delivery OFFLINE
- Requirements to get E-Certificate Minimum 80% attendance is required for the whole course. Minimum 60% marks should be obtained in the Final test to be conducted at the end of FDP

Eligibility Criteria

The faculty members of the AICTE approved institutions, research scholars, PG Scholars, and participants from Government or industries can attend.

Program Coordinator:

Dr. K. S. Shivaprakasha, Professor, Dept. of E&C Engg.

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Program Co-Coordinator

Dr. Narendra K. C, Assistant Professor, Dept. of E&C Engg.

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**Program Schedule
08-01-2024 to 13-01-2024**

	9.15 – 11.30 Session I	11.30- 11.45	11.45-12.30 Session II	12.30- 1.15	1.15-3.30 Session III	3.30- 3.45	3.45-4.45 Session IV
Day 1 08 Jan 24	Inaugural Session Prof. Yegnanarayana B. IIIT, Hyderabad (9.45 – 10.45 AM)	TEA BREAK	Prof. Yegnanarayana B. IIIT, Hyderabad (11.15 – 1.30 PM) An overview of Speech Signal Processing	LUNCH BREAK	Batch Formation and Article Discussion (2.30 – 3.30 PM)	TEA BREAK	Hands-on Session
Day 2 09 Jan 24	Dr. Sanjeev MMRF, Bengaluru Underwater Acoustics		Article Discussion		Prof. R. Vittal Rao IISc, Bengaluru Mathematical fundamentals for Speech Signal Processing		Hands-on Session
Day 3 10 Jan 24	Prof. R. Vittal Rao IISc, Bengaluru Mathematical fundamentals for Speech Signal Processing		Article Discussion		Dr. R. Muralishankar CMR University, Bengaluru Developing Speech Signal Representations		Hands-on Session
Day 4 11 Jan 24	Dr. R. Kumaraswamy SIT, Tumakuru Multi-speaker Speech Processing	Article Discussion	Article Discussion	Dr. Shashidhar Koolagudi NITK, Surathkal Emotion Recognition in speech	Hands-on Session		
Day 5 12 Jan 24	Visit to Nitte Institute of Speech and Hearing, Mangaluru Dr. Prasanta Kumar Ghosh IISc, Bengaluru Automatic Speech Recognition-1	Visit to Nitte Institute of Speech and Hearing, Mangaluru	Reflection Journal + Feedback	Dr. Meera S. S. NIMHANS, Bengaluru Application of Speech Recognition Models in Speech Pathology Dr. Prasanta Kumar Ghosh IISc, Bengaluru Automatic Speech Recognition-2	Hands-on Session	MCQ + Valedictory	

- Note:**
- Participants should Register in ATAL Portal
 - Accommodation will be provided on payment basis on request
 - T.A will be reimbursed to the participants as per ATAL Guidelines
 - Min/Max. No. of Participants: 30/50 Nos.



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OF TECHNOLOGY**

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