**6-Day Online ATAL AICTE Sponsored**

Faculty Development Program

(Application Number:1786685133) on

**23rd -28th November 2026**

## Registration Form

1.Name:..... Gender:……..
2.Designation:……. ……
3.Organization:……. ……
4.Teaching Exp:…… Industry Exp:…..……
5.Highest qualification:…….
6.Specialization:……..
7.Areas of interest:……
8.Address:……
9.Mobile:……..…….
10. E-mail:……..

## Declaration

The information furnished above is true to the best of my knowledge. I agree to abide by the rules and regulations governing the FDP.

Place:

Date: Signature of the Applicant

## Sponsorship

Mr./Ms./Dr.....is an employee of our institution and is hereby sponsored for attending the above FDP.

Place:

Date: Signature of the Principal

Note: Please send the scanned copy of the filled and duly signed registration form to the email: ecfdps@mace.ac.in

## Registration Details

Participants can register online through the link given below:

*Link:* https://atalacademy.aicte.gov.in/

## Organizing Committee


**Chief Patron:**
Dr. Winny Varghese
Secretary, Mar Athanasius College Association

**Patron:**
Dr. Bos Mathew Jos, Principal
Mar Athanasius College of Engineering

**Chairman:**
Dr.Aji Joy, HOD
Department of ECE
Mar Athanasius College of Engineering

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**6-DAYS ATAL**

**Online FDP on**

# Artificial Intelligence and Generative AI for Next-Generation Communication and Signal Processing Applications

**23rd – 28th November 2026**

**Organized by**

**Department of Electronics and Communication Engineering**

**Mar Athanasius College of Engineering**
**Kothamangalam, Kerala - 686666**
**(A Govt. Aided Autonomous Institution Estd. in 1961, Approved by AICTE, Accredited by NBA, NAAC-A+ Grade)**
**Visit us: www.mace.ac.in**
**E-mail:principal@mace.ac.in, office@mace.ac.in**

## About College

Mar Athanasius College of Engineering is a pioneer institution in engineering education in central Kerala in 1961. Managed by Mar Athanasius College Association, aided by the Government of Kerala, the college was first in Asia under Christian Management. It was also the first engineering college to get A+ NAAC Accreditation in Kerala. Currently the college is affiliated to APJ Abdul Kalam Technological University. MACE, as it is popularly known, has grown by leaps and bounds since. It now has six full-fledged departments. Apart from teaching MACE is engaged in wide spectrum of activities covering Research and Development, Industrial Consultancy, Continuing Education and Faculty Development.

## About the Department

The Department of Electronics and Communication Engineering has been an integral part of Mar Athanasius College of Engineering for over 30 years. The NBA accredited Department conducts some of the most sought-after programs in the state offering quality training curriculum. The ECE Department offers B Tech program with an intake of 120 students and M Tech in VLSI and Embedded systems with an intake of 24 students. The Department ensures that the students get exposure to latest advancements and trends in engineering through seminars, workshops and industrial training.

## About Program

This program is tailored for academicians, researchers, and prospective faculty who are keen to enhance their knowledge and expertise of Artificial Intelligence in the area of Signal Processing and Communication.

The FDP will begin with an exploration of AI-driven communication networks and 6G technologies, focusing on how AI and machine learning can enhance network performance, resource allocation, latency, reliability, and intelligent decision-making. Topics such as latency-optimal cell-free massive MIMO, AI techniques for 6G and beyond, and intelligent Layer-2 scheduling and performance monitoring will expose participants to advanced approaches for building next-generation telecom networks. The program will also address emerging developments in signal processing and wireless communication. Participants will gain insights into OTFS modulation, its fundamental principles, signal design, and opportunities for AI integration. The sessions on quaternion signal processing and multi-channel representations will introduce advanced mathematical and computational approaches for processing complex and multidimensional signals. The role of Generative AI in modern signal processing applications will further highlight emerging possibilities for intelligent signal analysis and processing. The program is designed to provide faculty members with an in-depth understanding of emerging technologies at the intersection of Artificial Intelligence, 6G communication networks, signal processing, cybersecurity, edge computing, and intelligent telecom systems. The program aims to bridge the gap between rapidly evolving technological developments and their effective integration into teaching, research, and real-world applications.

**There is no Registration Fee for the Participants**

## Topics to be Covered:

- AI Driven Networks.
- AI Techniques for enhancing the performance of 6G and Beyond Communication Networks.
- Latency-Optimal Cell-free Massive MIMO 6G Cellular Network.
- Intelligent System Architecture Translating Complex Telecom Technologies into Impactful Products.
- Intelligence in Layer 2 scheduler and performance monitoring architecture in Telecom Networks.
- AI-Powered Sound Analytics.
- Understanding OTFS Modulation: Fundamentals, Signal Design, and AI Integration
- AI for Cybersecurity
- AI at the Edge: Unlocking FPGA-Based Machine Learning Acceleration
- CNN and vision transformer for image analysis or signal processing
- Beyond Real Numbers: Quaternion Signal Processing & Multi-Channel Representations
- Generative AI for Modern Signal Processing Application
- Application of AI in Image Processing
- A new Multidisciplinary AI pedagogy and its implications to signal processing applications.

## Targeted Audience

Faculty members, research scholars & PG students of the AICTE approved institutions and Industry Personnel.

# ATAL Online 6 Day Faculty Development Programmes 2026-27 Schedule

**FDP Thrust Area: Engineering and Management**
**FDP Title: Artificial Intelligence and Generative AI for Next-Generation Communication and Signal Processing Applications**
**Start Date: 23 November 2026** **End Date: 28 November 2026**

| Day 1<br>23 November 2026<br>Monday | Day 2<br>24 November 2026<br>Tuesday | Day 3<br>25 November 2026<br>Wednesday | Day 4<br>26 November 2026<br>Thursday | Day 5<br>27 November 2026<br>Friday | Day 6<br>28 November 2026<br>Saturday |
|---|---|---|---|---|---|
| 6:00PM to 6:30PM<br><br>**Inaugural Session**<br><br>Dr. Unnikrishnan<br>Director (Retd.)<br>Outstanding Scientist (Retd.)<br>NPOL<br>KOCHI (DRDO) | 6:00PM to 7:30PM<br><br>**Session 3**<br><br>Topic: AI Techniques for enhancing the performance of 6G and Beyond Communication Networks<br>Dr. HARIGOVINDAN V P<br>Professor<br>Electronics & Communication Engineering<br>National Institute of Technology Puducherry<br>Years of Exp: 16 | 6:00PM to 7:30PM<br><br>**Session 5**<br>Topic: Understanding OTFS Modulation: Fundamentals, Signal Design, and AI Integration<br>Dr Muneer Parayangat<br>Assistant Professor<br>Department of Electrical Engineering,<br>College of Engineering,<br>King Khalid University,<br>Abha,<br>Kingdom of Saudi Arabia<br>Years of Exp: 11 | 6:00PM to 7:30PM<br><br>**Session 7**<br><br>Topic: Intelligent System Architecture Translating Complex Telecom Technologies into Impactful Products.<br>Mr. Vinay R. Neergund<br>Principal System Architect<br>L5, Nokia Networks,<br>Manyata tech park, Outer Ring Road<br>Nagavara<br>Bengluru – 560045<br>Years of Exp: 20 | 6:00PM to 7:30PM<br><br>**Session 9**<br><br>Topic: Drug Use Prevention and Early Intervention in Higher Educational Institutions<br>Mr. Babu T Chacko<br>Assistant Professor<br>Viswajyothi College of Engineering,<br>Vazhakulam,<br>Kerala<br>Years of Exp: 18 | 2:00PM to 3:30PM<br><br>**Session 11**<br><br>Topic: A new Multidisciplinary AI pedagogy and its implications to signal processing applications<br><br>Prof. Sai Sundarakrishna<br>Chief AI Scientist, Artizent<br>Years of Exp: 24 |
| 6:30PM to 8:00PM<br><br>**Session 1**<br>Topic: Next-Gen Telecom: Driving Innovation in 6G and Beyond via AI, IoT, All-Optical Networks, Quantum, and Simulation<br>Mr. Tom Thomas<br>CTO<br>KTS InfoTech & KTS Innovation Labs<br>Kadankavil Buildings<br>Mundankal PO<br>Pala \| Kottaym \| Kerala<br>686574<br>Years of Exp: 21 | 7:30PM to 9:00PM<br><br>**Session 4**<br><br>Topic: Cooling the future: Diamond based thermal solutions for electronic devices.<br><br>Mr. Rohith Soman<br>Research Engineer<br>Stanford University<br>USA<br>Years of Exp: 11 | 7:30PM to 9:00PM<br><br>**Session 6**<br><br>Topic: Intelligence in Layer 2 scheduler and performance monitoring architecture in Telecom Networks<br>Mr. Sreevivek G N<br>Principal System Specification Engineer<br>L5, Nokia Networks,<br>Manyata tech park, Outer Ring Road,<br>Nagavara<br>Bengluru – 560045<br>Years of Exp: 15 | 7:30PM to 9:00PM<br><br>**Session 8**<br><br>Topic: Beyond Real Numbers: Quaternion Signal Processing & Multi-Channel Representations<br>Dr. Sooraj K Ambat<br>Group Director (AI/ML) & Scientist F<br>Naval Physical & Oceanographic Laboratory (NPOL)<br>DRDO<br>Years of Exp: 23 | 7:30PM to 9:00PM<br><br>**Session 10**<br><br>Topic: Application of AI in Image Processing<br>Dr. A Lakshmi<br>Scientist F<br>Centre for AI & Robotics<br>DRDO<br>Bengaluru<br>Years of Exp: 20 | 3:30PM to 5:00PM<br><br>**Session 12**<br><br>Topic: Integrating 6G & AI<br><br>Mr. Nommy Paul<br>Director, Amentum<br>Amentum International Business Services<br>1st Floor, No. 92/1, 101/1 and 95/2, Hub 4, Karle Town Center, Nagavara Special Economic Zone, Bengaluru, Karnataka, 560045<br>Years of Exp: 23 |

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| 8:00PM to 9:30PM<br><br>**Session 2**<br><br>Topic: Latency-Optimal Cell-free Massive MIMO 6G Cellular Network<br>Dr. Jobin Francis<br>Associate Professor<br>Electrical Engineering<br>IIT, Palaghat<br>Years of Exp: 12 | | | | | 5:00PM to 7:30PM<br><br>**Session 13**<br><br>Topic: AI for Cybersecurity<br>Dr Arun Sankar M S<br>Assistant Lecturer<br>South East Technological University<br>Carlow, Ireland<br>Years of Exp: 15 |
| | | | | | 6:30PM to 7:30PM<br>**Online test & feedback** |
| | | | | | 7:30PM to 8:00PM<br>**Valedictory Session** |