



ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) on “AI Techniques for Signal Processing in 5G and 6G Wireless Communications” (3rd August to 13th August 2026)

Organized by
ELECTRONICS & ICT ACADEMY, NIT WARANGAL

In Association with Communication Research Group of Department of ECE
PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY (PVPSIT)
VIJAYAWADA-520007, A.P, INDIA

Sponsored by
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY (MEITY), GoI



Preamble:

"Electronics & ICT Academy–Phase II" was setup at NIT Warangal with financial assistance from MeitY, GoI. This academy's role is to offer Faculty Development Programs in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, advice and support for technical incubation and entrepreneurial activities.

About the FDP:

With the advent of 5G/6G communication systems and the increasing role of Artificial Intelligence (AI) in wireless networks, this Faculty Development Program (FDP) aims to provide faculty members, researchers, and industry professionals with the knowledge and skills required to develop intelligent communication solutions. The program focuses on AI-driven signal processing, machine learning techniques for wireless networks, and deep learning-based physical layer design for next-generation communication systems. The FDP offers insights into AI for communication networks, intelligent resource management, channel estimation, beamforming, network automation, edge intelligence, and 6G technologies, along with hands-on exposure to modern AI tools and frameworks. It serves as a platform to promote research, innovation, and academic–industry collaboration in AI-enabled wireless communications.

Major Course Content:

- Overview of 5G and 6G Communication Systems
- Fundamentals of AI, Machine Learning, and Deep Learning
- AI for Wireless Signal Processing Applications
- Deep Learning for Physical Layer Design
- AI-Based Channel Estimation and Equalization
- Intelligent Beamforming and Massive MIMO
- Machine Learning for Spectrum Sensing and Access
- AI-Driven Resource Allocation and Network Optimization
- Reinforcement Learning for Wireless Networks
- Edge Intelligence and Federated Learning in 6G
- AI for Network Automation and Self-Organizing Networks
- Signal Classification and Modulation Recognition using Deep Learning
- AI-Enabled Security and Privacy in 5G/6G Networks
- Generative AI and Semantic Communications for 6G
- Hands-on Sessions using Python, TensorFlow, and MATLAB
- Emerging Research Trends and Industry Applications in AI-Native 6G Networks

Experts/Speakers:

Academicians and domain experts from IITs/NITs/IIITs are invited to deliver lectures in a program. Speakers from industries are also expected to deliver the practical sessions as part of the course.

Registration Fees:

Participants need to pay the Registration Fee Online using the following details:

Faculty/Research Scholars	Rs. 500/-
Industry Participants	Rs. 2,250/-

Online Transfer Details:

Account Name : Electronics & ICT Academy NITW
Account No. : 62423775910
IFSC : SBIN0020149
Bank & Branch : State Bank of India, NIT(REC), Warangal

How to Apply:

Participants are required to fill out the online registration form by clicking the following link:

<https://forms.gle/ewSUetd8Hx9ejEVJA>

Selection Criteria:

Selection will be made based on first-come-first-serve basis to a Maximum number of 40 participants. Candidates will be issued satisfactory certificates on successful completion of the course.

Important Dates:

Last date of Application	27.07.2026
Selection Notification	28.07.2026
Duration	03.08.2026 to 13.08.2026

About PVPSIT:

Prasad V. Potluri Siddhartha Institute of Technology, established in 1998, is a pioneering private self-financed institution under the aegis of Siddhartha Academy of General & Technical Education, Vijayawada. PVPSIT is an Autonomous College by UGC since 2012 and is permanently affiliated to JNTU Kakinada. The college offers B.Tech. courses in CSE, CSE(AI/ML), CSE(DS), IT, ECE, EEE, ME and CE branches, along with PG courses in ECE, Mechanical Engineering and MBA. The institution was accredited by NAAC in 2013 and later reaccredited with 'A+' Grade in 2019 & 2024. The college is accorded 2(f) and 12(B) status by UGC, received 'A' grade from the State Government, and has been recognized in NIRF, Careers360, India Today and Data Quest rankings.

About ECE Department, PVPSIT:

The Department of Electronics and Communication Engineering, PVPSIT, Vijayawada, is associated with this FDP through the Communication Research Group. The department supports academic and technical activities in Electronics and Communication Engineering and coordinates the programme at PVPSIT as the associated institution.

About NIT Warangal:

National Institute of Technology, Warangal, is the first among 17 RECs set up as a joint venture of the Government of India and the state government. Over the years, the college has established itself as a premier Institute, imparting technical education of a very high standard, leading to B. Tech degrees in various branches of engineering, M. Tech., and Ph. D. Programmes in various specializations. All B.Tech and M.Tech programmes of NIT Warangal are NBA accredited. For more details about NITW, explore www.nitw.ac.in

Course Coordinators:

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