HYBRID
FACULTY DEVELOPMENT PROGRAMME (FDP)
"Quantum Computing: From Fundamental Concepts to Emerging Opportunities"
(15th June to 20th June 2026)

Organized by

ELECTRONICS & ICT ACADEMY, NIT WARANGAL

In Association with

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ADITYA UNIVERSITY, SURAMPALEM– 533 437

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 Programmes 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:

In line with the growing significance of Quantum Computing and India's **National Quantum Mission (NQM)**, this Faculty Development Program (FDP) aims to equip **faculty members, researchers, and industry professionals** with essential knowledge and practical insights into emerging quantum technologies. The FDP will provide exposure to quantum computing fundamentals, quantum circuits, algorithms, communication, cryptography, simulation tools, and real-world applications. Organized by Electronics & ICT Academy, NIT Warangal, in association with the Department of Electronics and Communication Engineering (ECED), Aditya University, the program focuses on strengthening teaching, research, and innovation in this rapidly evolving field.

This FDP is essential to enhance faculty expertise, support curriculum delivery, promote interdisciplinary research, and enable funded project development in the area of Quantum Computing. The FDP will serve as a platform for academic growth, collaboration, and skill enhancement in quantum technologies.

Major Course Content:

- Introduction to Quantum Computing & Mathematical Foundations
- Qubits, Quantum States, and Bloch Sphere
- Quantum Gates, Circuits, and Simulation
- Quantum Computational Complexity
- Quantum Entanglement and Bell's Theorem
- Quantum Algorithms (Grover's, Shor's, QFT, VQE, QAOA, HHL)
- Quantum Image Processing & Quantum Machine Learning
- Quantum Programming using Qiskit / Cirq (Hands-on)
- Quantum Communication & Cryptography
- Quantum Information Theory
- Quantum Hardware & Photonic Computing
- Quantum Error Correction & Fault Tolerance
- Emerging Applications and Research Opportunities

Experts/Speakers:

- Resource persons will be from IITs, NITs, IIITs and Industries.

Registration Fees:

Registration fees for the FDP, inclusive of GST are:

Faculty/Research Scholars	**Rs.750/-**
Industry Participants	**Rs.2250/-**

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

Name of the Account: Aditya University
Account No : 120028094544
IFSC : CNRB013268
Bank and Branch : Canara Bank, Surampalem

How to Apply:

Participants are required to fill out the online registration form by clicking the following link:
https://forms.gle/nn4AHZrtoP4QsDVB6

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	**11th June 2026**
Selection Notification	**13th June 2026**

About Aditya University, Surampalem:

Aditya University, located at Surampalem, Kakinada District, Andhra Pradesh, is a State Private University established under the Andhra Pradesh Private Universities Act, 2016. Evolving from Aditya Engineering College (2001), the university is committed to academic excellence, innovation, research, and industry-oriented education. With UGC recognition, NAAC A++ accreditation, NIRF: 151 to 200 band, NBA-accredited programs, modern infrastructure, and a strong focus on interdisciplinary learning. Aditya University offers a wide range of Undergraduate, Postgraduate, and Doctoral programs across multiple disciplines. The academic structure is organized into various schools such as the School of Engineering and Technology, School of Business and Management, School of Sciences, and School of Pharmacy. These schools are designed to deliver industry-relevant education supported by practical exposure, research orientation, and skill-based learning.

About ECE Department, Aditya University, Surampalem:

The Department of Electronics and Communication Engineering (ECE), Aditya University, established in 2001, has grown from an initial intake of 60 to 840 students and is supported by experienced faculty and state-of-the-art laboratories in core areas of electronics and communication. The department is NBA Tier-1 accredited and offers Undergraduate (B.Tech), Postgraduate (M.Tech in VLSI Design), and Ph.D. programs, fostering academic excellence and research innovation. It also provides diverse minor specializations in VLSI, Embedded Systems, Signal Processing & Communication Technology, Space Technology, Digital Resilience, and Smart Infrastructure, along with interdisciplinary minor degrees across engineering and emerging domains. The department of ECE also offers Minor degree in "Quantum Technologies". Through initiatives like the IEEE Student Chapter, technical workshops, seminars, SPARK under VEDA, and industry-oriented skill development, the department emphasizes innovation, research, and industry readiness in advanced technologies.

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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Prof. S. Anuradha, Professor, Department of ECE,
NIT Warangal,
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Email: anuradha@nitw.ac.in

Proposed Speakers:

Dr. R. Prabhu	IIT Dharwad
Dr. Anirban Bhattacharjee	NIT Surat
Dr. Varsha Sambhaje	SRM University, AP
Dr. USN Raju	NIT Warangal
Dr. Bhawana Rudra	NIT Suratkal
Dr. Kapil Kumar Soni	NIT Raipur
Dr. Jayakumar Vaithiyashankar	The founder and CEO of Anuthantra Pvt. Ltd. IBM Quantum Educator and an IBM Qiskit Advocate Mentor
Dr. Sanjib Naik	NIT Warangal
Dr. Ashwath Babu	IIIT Dharwad
Dr. Siddharth Das	IIIT Hyderabad
Dr. Suryansh Dongre	NIT AP
Dr. S. Anuradha	NIT Warangal
Dr. Ritajit Mazumder	Research Scientist, IBM Quantum, India Research Lab