

A Faculty Development Program

on

Quantum Computing & Communication

Aug 05 - Aug 09, 2024

under the aegis of



Electronics & ICT Academy
IIT Roorkee

Supported by

Ministry of Electronics & Information
Technology
Government of India



Experts from Academia/Industry

Principal Investigator

Prof. Sanjeev Manhas
E&ICT Academy IIT Roorkee



Online Mode: GIET University,
Gunupur-765022, Odisha, India

Why this course ?

The program aimed at providing faculties with a comprehensive understanding of various aspects related to quantum computing & Communication and its applications in algorithm design, and programming. This FDP typically brings together experts, researchers, industry professionals, and policymakers to discuss the latest advancements, challenges, and opportunities in the field of quantum computing and communication.

Objectives of the course

- Understanding quantum mechanics, principles, and communication protocols.
- Understanding mathematical foundations like linear algebra, probability, & complex numbers.
- Practical experience with QPL like Qiskit, Quipper, or Q#.
- Training faculty on quantum simulators and cloud computing access.
- Exploring quantum technologies in cryptography, optimization, machine learning, and material science.

Course Features

- 40 Hours of Lectures & hands-on
- Lectures from Expert Speakers, Hands-on from industry/Academia experts
- Expert talks from the industry/Academia
- Access to learning material and video lectures
- Certificate by E&ICT Academy IIT Roorkee

Focus Areas

- Basic concepts of quantum mechanics.
- Quantum circuits and computation models.
- Complex Quantum Concepts.
- Quantum Key Distribution.
- Use of quantum simulators.
- Quantum programming languages (Qiskit, Q#, etc.)
- Latest Developments in Quantum Computing and Communication

Prerequisites

- No experience is required, but fundamental knowledge of Quantum Computing & Communication would be helpful

Registration Link

<https://forms.gle/GoJ3sprwK471L46ZA>

Registration Fee

Fees: ₹ 750/participant, non-refundable
(Applicable for all)

Note: Refund will be done in case of course cancellation only,
with in 20 working days

How to make payment

<https://eict.iitr.ac.in/instruction-for-payment/>

Conference Code: EICTIITR-FDP-24-07

Course Coordinator

- Prof. Sanjeev Manhas, ECE Department IIT Roorkee
- Dr. Raghvendra Kumar, CSE Department GIET University

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