Joint Online Two Weeks Certificate Program
Quantum Computing
Aug 9 to Aug 20, 2021

E & ICT Academy at PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur

Jointly Organized by:
MNIT Jaipur
PDPM IIITDM Jabalpur
NIT Patna

Objective & Scope

The course imparts in depth knowledge on Quantum Computing.

Speakers (tentative)

- **Industry- Microsoft Inc. – experts from Microsoft Garage- Azure Quantum**

Joint Principal Coordinator

Prof. Kusum Kumari Bharati ,
IIITDM Jabalpur
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Course Contents

- Quantum Measurements Density Matrices; Positive-Operator Valued Measure; Fragility of quantum information: Decoherence

- Quantum Algorithms & Circuits; Deutsch and Deutsch–Jozsa algorithms; Grover's Search Algorithm; Quantum Fourier Transform

- Scalability in quantum computing; NMR Quantum Computing; Spintronics and QED approaches

- Quantum Superposition and Entanglement; Quantum Gates and Circuits; No cloning theorem & Quantum Teleportation; Bell's inequality and its implications

- Shore's Factorization Algorithm; Quantum Error Correction: Fault tolerance; Quantum Cryptography; Implementing Quantum Computing: issues of fidelity

Key Features

- Online / Live lectures sessions by subject experts.
- Comprehensive tutorials and practice notes.
- Online lab and training sessions.
- Follow up sessions and discussion forums on research problems and internships.

Last Date for registration

Aug 6, 2021

Course Fee Details

Academic (student/faculty): 500 INR
Industry People : 1000 INR
Others : 1000 INR
Foreign Participants: 4000 INR

Online payment details:-
Bank Name: INDIAN BANK
A/C No. : 50302042708
IFSC Code: IDIB000M694
Branch: Mehgawan, IIITDM Branch

For more details and application form visit:
https://www.iiitdmj.ac.in/ict.iiitdmj.ac.in/index.html
Contact Email: ritu.bhatnagar@iiitdmj.ac.in