

NPTEL Video Lecture Topic List - Created by Linuxpert Systems, Chennai

NPTEL Video Course - Computer Science and Engineering - NOC:Introduction to Quantum Computing: Quantum Algorithms

Subject Co-ordinator - Prof. Prabha Mandayam

Co-ordinating Institute - IBM and IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Quantum Computing Roadmap
- Lecture 2 - Quantum Mission in India
- Lecture 3 - A Brief Introduction to Applications of Quantum
- Lecture 4 - Quantum Computing Basics
- Lecture 5 - Postulates of Quantum Mechanics - Part 1
- Lecture 6 - Postulates of Quantum Mechanics - Part 2
- Lecture 7 - Quantum Measurements
- Lecture 8 - Quantum Gates and Circuits - Part 1
- Lecture 9 - Quantum Gates and Circuits - Part 2
- Lecture 10 - Programming using IBM Quantum Experience and Circuit Composer
- Lecture 11 - Quantum Computing Concepts: Entanglement and Interference - Part 1
- Lecture 12 - Quantum Computing Concepts: Entanglement and Interference - Part 2
- Lecture 13 - Programming using Qiskit - Part 1
- Lecture 14 - Programming using Qiskit - Part 2
- Lecture 15 - Quantum Algorithms: Deutsch Jozsa Algorithm
- Lecture 16 - Quantum Algorithms: Bernstein Vazirani Algorithm
- Lecture 17 - Quantum Algorithms: Grover's Search
- Lecture 18 - Grover's algorithm Programming
- Lecture 19 - NISQ-era quantum algorithms
- Lecture 20 - Variational Quantum Algorithms
- Lecture 21 - Variational Quantum Eigensolver
- Lecture 22 - Quantum Generative Adversarial Networks (QGANs)
- Lecture 23 - Fixing quantum errors with quantum tricks: A brief introduction to QEC - Part 1
- Lecture 24 - Fixing quantum errors with quantum tricks: A brief introduction to QEC - Part 2
- Lecture 25 - Fixing quantum errors with quantum tricks: A brief introduction to QEC - Part 3