PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement

facilitated by the Institute of Smart Structures and Systems

Module PMRF-ISSS059

Basics of Quantum Computing
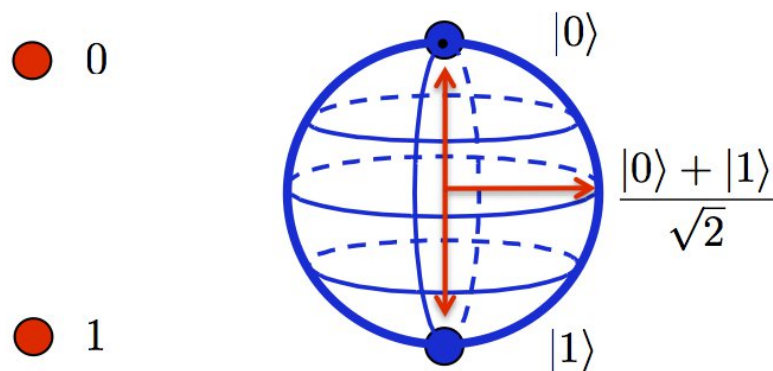
Name of the PMRF student

Nikhil Kodali

Required background of the students taught

Students from any discipline are welcome. Understanding of Linear algebra and vector spaces would be helpful. No prior knowledge of quantum mechanics needed.

Classical Bit   **Qubit**

Details of the content of the module

Quantum computing holds tremendous promise for reshaping various sectors like finance, healthcare, AI, and automotive in the coming years. This program offers a foundational overview of quantum computing, delving into the fundamental concepts that blend quantum mechanics, linear algebra, and computing.

The following topics will be covered:
- Classical vs Quantum computing
- Mathematical Foundations of Quantum Computing
- Postulates of Quantum mechanics
- Qubits and Qubit gates
- Entanglement
- Quantum Algorithms

Schedule of the module

Start Date : 8 April, 2024 (Tentative)

End Date : 27 April, 2024 (Tentative)

Total number of sessions: 18

Lectures will be uploaded Mon-Sat 6:30 PM

Meeting link : Will be shared later

Link

Contact email ID: isss.forum@gmail.com

Registration link:
https://forms.gle/ADdZBPfH8DoFcpWCA