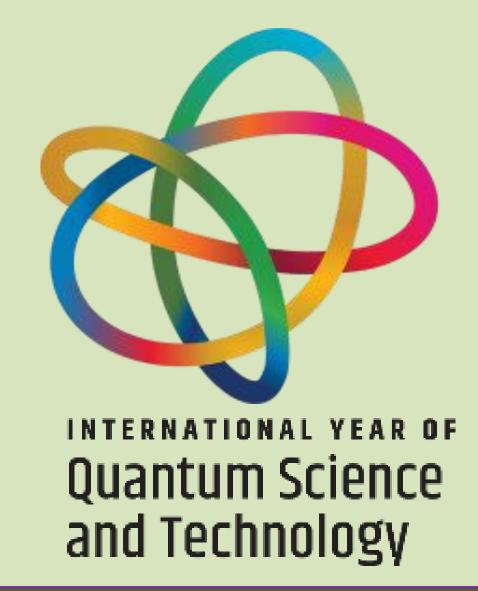


QVERE International Year of Quantum Science and Technology (IYQ)-2025, at TCG CREST (Kolkata, India)



CQuERE, TCG CREST Celebrating "World Quantum Day"

Speaker: Prof. Bimalendu Deb

Indian Association for the Cultivation of Science, Kolkata, India



Title: Quantum Computing in an Ion-Atom Hybrid Platform

Abstract:

We propose an ion-atom hybrid system for quantum computing. We demonstrate a two-qubit control phase-gate operation with 97% fidelity between two distant (more than 20-micron separation) neutral atom qubits by leveraging the ionmediated interaction between the qubits. We discuss possible routes to scaling up the system and the possibility of multi-qubit gate operations.

Date & Time

14th April 2025 @ 3:30 PM IST

Venue

Classroom-4, TCG CREST

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Organized by:

CQuERE (Centre for Quantum Engineering, Research and Education), TCG CREST, Kolkata, INDIA