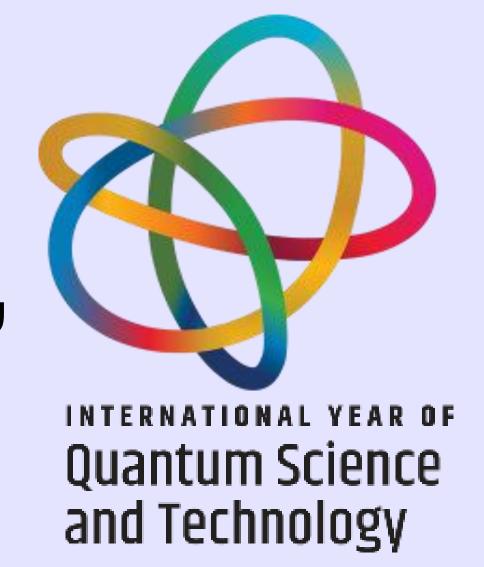
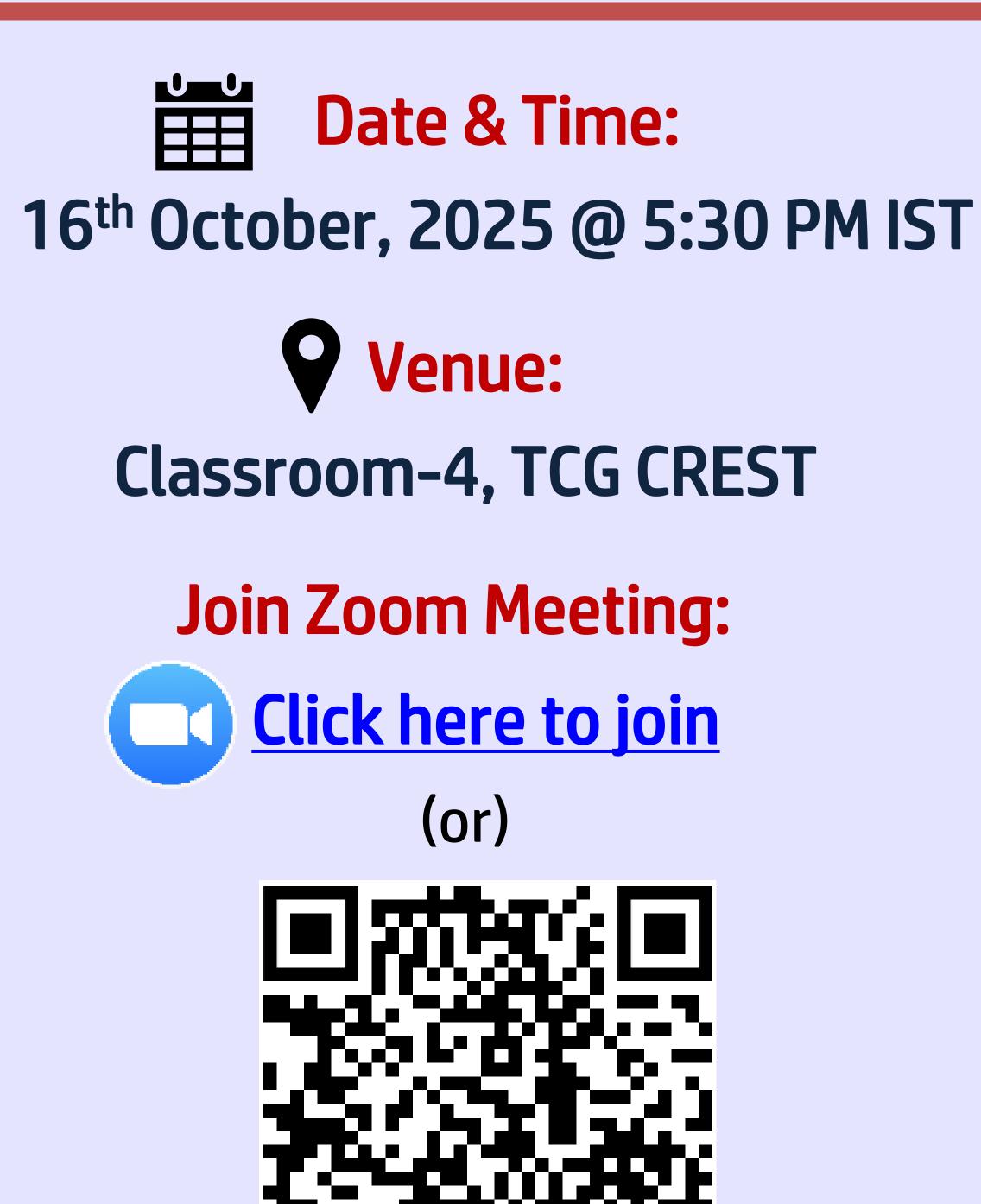


## International Year of Quantum Science and Technology (IYQ)-2025, at TCG CREST (Kolkata, India)





Prof. Ashwin Nayak University of Waterloo, Canada.



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## Title – Learning quantum states

## Abstract

Suppose we are given a sequence of quantum registers initialized to the same quantum state  $\rho$ , and would like to learn the state  $\rho$ . That is, we would like to design an algorithm that produces a classical description of an approximation to the state. How many copies of  $\rho$  do we need to be able to produce a suitable approximation? This talk will be a gentle introduction to the problem and related results.

## Organized by: