




**Prof. Ashwin Nayak**  
University of Waterloo, Canada.

 **Date & Time:**  
16<sup>th</sup> October, 2025 @ 5:30 PM IST

 **Venue:**  
Classroom-4, TCG CREST

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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:

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

For more details, please visit the website: <http://www.tcgcrest.org/iyq2025>

For any queries, feel free to contact us through the email: [iyq.2025@tcgcrest.org](mailto:iyq.2025@tcgcrest.org)