



UNIVERSITY OF CENTRAL FLORIDA

COLLOQUIUM

Quantum Communication Advantage in Distributed Computing

Speaker: Dr. Gopal Pandurangan

Affiliation: University of Houston

Abstract

This talk posits a new quantum framework for designing and analyzing communication-efficient distributed quantum algorithms. Using this framework, we present distributed quantum algorithms for several fundamental problems in distributed computing. Our quantum algorithms are significantly more message-efficient than their classical counterparts and break the classical lower bounds.

Joint work with Fabien Dufoulon (University of Bordeaux) and Frédéric Magniez (Université Paris Cité, CNRS, IRIF).

Speaker Bio



Gopal Pandurangan is a Moores Professor of Computer Science at the University of Houston, USA. His research interests include the theory and algorithms for distributed computing, networks, quantum computing, machine learning, and big data, and he has over 150 refereed publications. He is a winner of the Dijkstra Prize in Distributed Computing, a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), a recipient of the University of Houston Research Excellence Award, and a winner of the ACM PODC 2025 Best Paper Award.

Event Details

- **Date:** Monday, September 21, 2026
- **Time:** 11:00 AM – 12:00 PM
- **Location:** MSB 318

School of Data, Mathematical, and Statistical Sciences