

# *Chez Pierre*

Presents ...

**Tuesday, October 29, 2024**

**12pm noon- 1:00 pm**

**Duboc Room – 4-331**



## **Special Chez Pierre Seminar**

**Meng Cheng, Yale University**

**“Anomalous insights into quantum phases in open systems”.**

Symmetry is a fundamental principle for organizing physical phenomena. In quantum many-body physics, recent advances have highlighted the importance of quantum anomalies of global symmetries, which impose powerful “kinematic” constraints on quantum phases. In this talk, I will discuss how “strong” anomalies provide powerful tools for constraining and understanding topological phases of matter in open quantum systems. I will argue that anomaly of 1-form symmetry gives a (partial) classification of mixed-state topological orders in 2D, and present an example of thermally stable quantum topological order in 3D.