



University  
of Victoria

# PHYSICS AND ASTRONOMY COLLOQUIUM (Online)

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University of Colorado

**“Ergodicity Breaking In Quantum Dynamics”**

## Abstract

“I will discuss three distinct ways in which an isolated many body quantum system can robustly fail to go to equilibrium under its own dynamics. These are (1) many body localization (2) fractonic symmetries and (3) higher form symmetries. I will explain how each of these routes to ‘ergodicity breaking’ works, their strengths and limitations, and some of the exotic physics that can be thereby enabled. I will conclude by discussing the outlook for many body quantum dynamics.”

Wednesday, October 11<sup>th</sup>, 2023

3:30 p.m. PST

Zoom link available on Uvic Event Calendar