



University
of Victoria

PHYSICS AND ASTRONOMY COLLOQUIUM (Online)

Dr. Tom Hartman
Cornell University

“Black Holes and Quantum Information”

Abstract

“Black holes provide a window into quantum gravity through their thermodynamic properties. Recently, it has been discovered that solutions of General Relativity with higher topology --- spacetime holes and tubes --- provide additional clues about the quantum theory, and play an essential role in the black hole information puzzle. In this colloquium, I will describe the interplay between topology, entanglement, and quantum gravity, and how this is used to study statistical properties of black holes. Recent calculations point toward the conclusion that quantum gravity is maximally random, subject to basic physical consistency conditions such as locality and unitarity.”

Wednesday, January 31st, 2024

3:30 p.m. PST

Zoom link available on Uvic Event Calendar