# IQSE AMO QO Seminar Series

## Thursday, December 1st, 11:30 am ZOOM & IQSE seminar room (MPHY 578)

Pizza will be served for IQSE members at 11:00 am. The talk will start around 11:30 am


# Dr. Philip Stamp

(University of British Columbia)


## Correlated Worldline Theory of Quantum Gravity: Optomechanical Explorations

**EVENT DETAILS:** The Correlated Worldline (CWL) theory of quantum gravity is a low-energy theory (ie., for energies well below the Planck energy) in which quantum mechanics breaks down for sufficiently massive objects because of gravitational correlations between paths in a path integral. It has been shown to be a consistent theory, and so the next step is to test it in experiments. In this talk I explain the basic structure and physical assumptions involved in CWL and then discuss the experimental implications for several optomechanical systems, focusing on a suggested pulsed optomechanics experiment, and on "2-path" experiments.

**ZOOM information:**

https://tamu.zoom.us/j/98156251523?pwd=QVdSdGxtL1UyY0g1L083SU5QR0QrUT09

Meeting ID: 981 5625 1523
Passcode: 297578

One tap mobile
+13462487799,,98156251523# US (Houston)
+16694449171,,98156251523# US

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