

Friday, November 18th
4:10 – 5:00 PM
Barnard Hall 103

For Whom the Bell Tolls

Dr. Nicolas Yunes
University of Illinois Urbana-Champaign

Abstract:

The observation of gravitational waves emitted in the collision of black holes and neutron stars have allowed us to pierce into the eXtreme gravity regime, where gravity is simultaneously unfathomably large and wildly dynamical. These waves encode a trove of information about physics that is prime for the taking, including secrets about the fundamental theory of gravity at play in such eXtreme environments. In this talk, I will focus on gravitational waves emitted in the very last stages of the coalescence: the ringdown phase. I will explain how to model these waves in Einstein's theory of general relativity and in theories that go beyond Einstein's, and how to use observations of the ringdown to detect or constrain deviations from general relativity.

Host: Neil Cornish

** Refreshments served in the Barnard second floor atrium at 3:30 p.m. **