



Department of Physics and Astronomy
FALL 2019 Colloquium Series

“LIGO, the Era of Gravitational Wave Astronomy, and the Science that Makes it Possible”

Dr. Riccardo Bassiri

Stanford University

The detections of gravitational waves from coalescing black holes and neutron stars by the Advanced LIGO and Advanced Virgo detectors has launched the new era of gravitational wave astronomy. To accomplish the first detections of gravitational waves, LIGO and an international collaboration of over 1000 scientists worked to develop the most sensitive scientific measurement instrument ever built, capable of measuring displacements of 1000 times smaller than the width of a proton (10^{-18} m). Increasing the sensitivity of the detectors several times would increase the number of gravitational waves and the types of events observed. Therefore, an international research effort is currently underway to increase the sensitivity of future generations of gravitational wave detectors.

In this colloquium, we will discuss the first detections of gravitational waves, and the key technologies and breakthroughs that made it possible. Looking to the future, we will examine some of the current research efforts on developing the technology that will enable gravitational wave detections to the edge of the observable Universe.

Thursday, October 17, 2019

4:00 - 5:20PM

MENDOCINO HALL 1015

Open & Free to all students, faculty and public