

Precision measurements unraveling gravitational waves and dark matter.

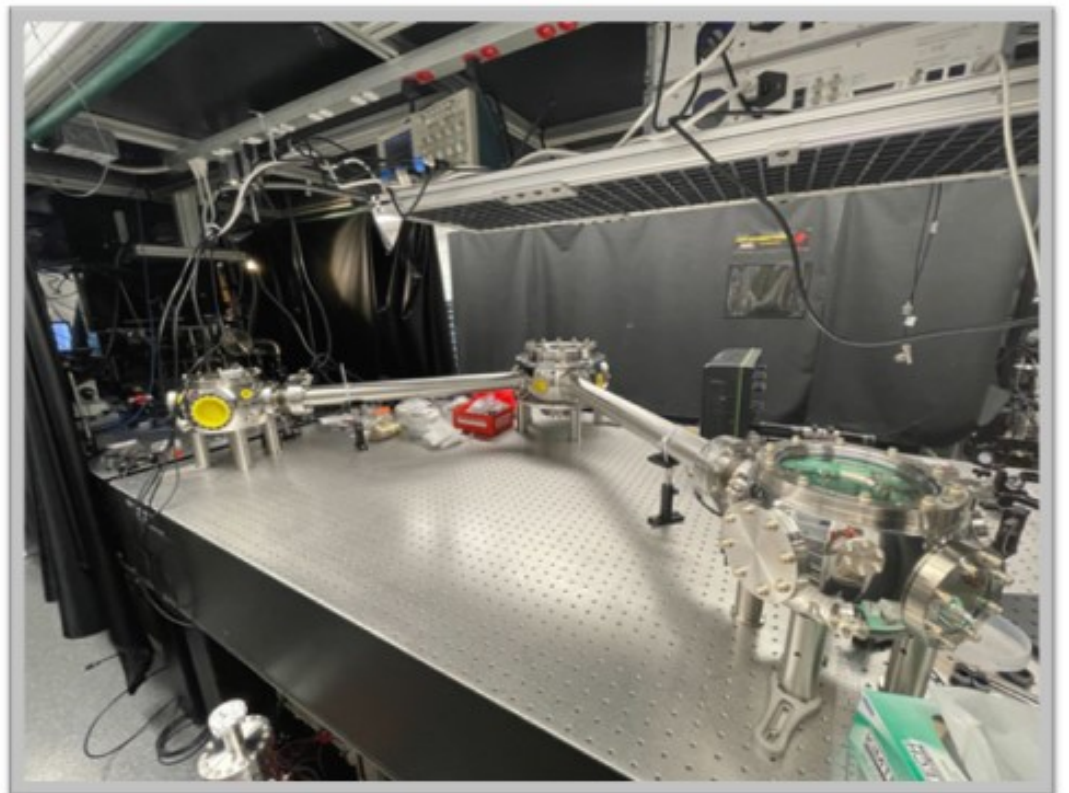
Tuesday, 18 June, 2024
Auditorium & Webcast 16:00 h

Nancy Aggarwal (UC Davis)

This is a HYBRID colloquium!

Meeting ID: 996 1652 8733
 Meeting Password: 733220

Gravitational waves (GWs) at frequencies higher than the LIGO band can bring us completely new information about the universe. In this talk I will talk about a new network of tabletop detectors to look for radio frequency gravitational waves (GWs) using optically levitated sensors. I will also summarize projects looking for dark matter signals in GW-detectors in multiple frequency bands.



In the second part of the talk, I will describe an experiment searching for the QCD axion in the μeV - meV mass range mediating new spin-dependent forces in the laboratory - a precision measurement experiment that requires isolating a force equivalent to a magnetic field of 10^{-20} T between golf-ball sized, moving objects, placed 50 microns away from each other.