

# HEPL SEMINAR

## WHO

**Nancy Aggarwall,  
Massachusetts Institute of Technology**

“Quantum Measurements at LIGO”

## WHAT

The precision of gravitational wave measurements by the Advanced LIGO interferometers is limited by the quantization of light. The current generation of detectors will use squeezed light to reduce this quantum noise. I will discuss a new method for generating squeezed states of light that uses optomechanical interaction between light and mirror oscillators. I will discuss optomechanical squeezing broadly and describe experimental efforts to generate optomechanically squeezed states optimized for gravitational wave detection.

*Light refreshments served at 3:45pm*

*Presentation begins at 4:00pm*

*OPEN TO ALL*

## WHEN

**February 7, 2018  
4-5pm**

## WHERE

**Physics &  
Astrophysics  
Building  
Kistler  
Conference  
Room 102/103  
452 Lomita Mall  
Stanford, CA 94305**