

# Colloquium Notice

## Mishkat Bhattacharya

Rochester Institute of Technology

### *Optical Tweezer Phonon Laser*

---

In this talk I will describe our recent theoretical work on optomechanics with levitated nanoparticles. I will address cooling and regenerative center-of-mass motion (phonon lasing) theory in relation to the experiments in the group of our collaborator A. N. Vamivakas at the University of Rochester.

[1] S. Sharma, A. Kani and M. Bhattacharya, Phys. Rev. A 105, 043505 (2022)

[2] R. M. Pettit, W. Ge, P. Kumar, D. R. L.-Martin, J. T. Schulz, L. P. Neukirch, M. Bhattacharya and A. N. Vamivakas, Nature Photonics 13, 372 (2019)

---

Monday

**October 2, 2023**

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326

This talk is accessible via [Zoom](#) or use

**meeting ID 829 2687 2594** and **passcode 866995** to join