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## Joint Quantum Sciences Seminar

**Wednesday, March 21, 4:00 pm**  
**Jefferson 250**

**Prof. Markus Aspelmeyer**  
*Universitat Wien*

**“Quantum optomechanics with levitated solids:  
sensing, simulation and the gravity-quantum interface”**

I will discuss our current experiments to achieve quantum optical control over motional states of levitated solids. This includes dielectric nanospheres coupled to Fabry-Perot cavities and nanophotonic structures, as well as micron-sized superconductors and magnets that will eventually be coupled to superconducting circuits. I will provide an overview of the status and challenges, and of the perspectives for such experiments for sensing, simulation and for novel tests of the interface between quantum physics and gravity.

**Student Presentation by *Richard Lee Liu* will begin at 4:00 PM**  
**Guest Presentation will begin at 4:30 PM**  
**Refreshments will be provided**