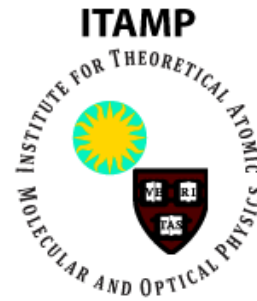




HARVARD Quantum Optics Center



Joint Quantum Sciences Seminar

Wednesday | Mar. 20 | 4:00 pm
Jefferson 250

Martin Plenio

Alexander von Humboldt Professor, Theoretical Physics,
University of Ulm

"Controlling Resonances for Quantum Sensing and Quantum Biology"

In this talk I will discuss the two seemingly different concepts of sensing with nanodiamonds and the electron and vibrational quantum dynamics in biological systems. I will show that both rely on the careful matching of resonances, known as the Hartmann-Hahn resonance condition in NMR and the phonon antennae in biological systems. I will discuss how in both cases optimization either technological or evolutionary may lead to considerable improvements of performance and discuss the potential relevance of these ideas in quantum biology.

Student Presentation by Jacob Sanders, Graduate Student,
Aspuru-Guzik Lab
"Compressed Sensing for Molecular Spectroscopy"

Student Presentation will begin at 4:00 PM
Guest Presentation will begin at 4:30 PM
Refreshments will be provided