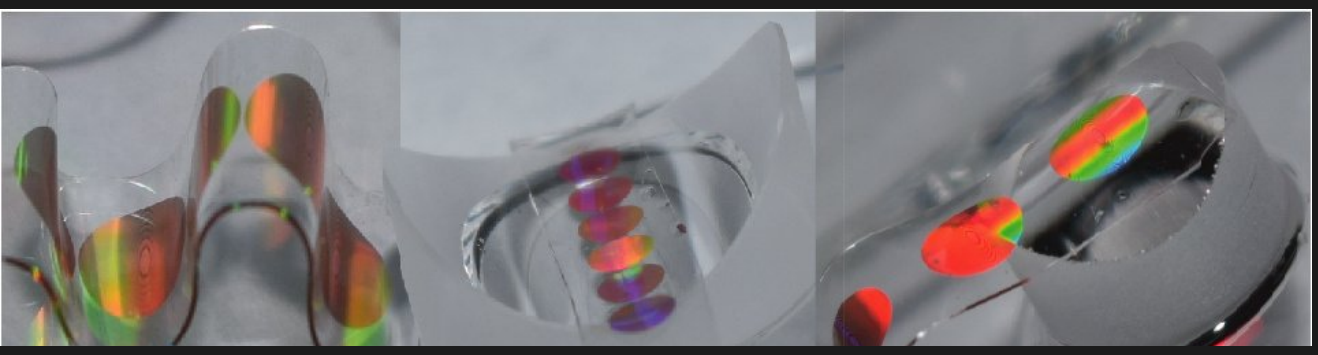

APH/EE 23 - winter term

Demonstration Lectures in Classical and Quantum Photonics

9 units (3-0-6); Prerequisites: Ph 1abc

Tuesday/Thursday, 9:00-10:25am

****All lectures held in brand-new teaching lab, Steele 133**

Instructor: Dr. Andrey Matsko, Jet Propulsion Laboratory

This course covers fundamentals of photonics with emphasis on modern applications in classical and quantum optics. Classical optical phenomena including interference, dispersion, birefringence, diffraction, laser oscillation, and the applications of these phenomena in optical systems employing multiple-beam interferometry, Fourier-transform image processing, holography, electro-optic modulation, optical detection and heterodyning will be covered. Quantum optical phenomena like single photon emission will be discussed. Examples will be selected from optical communications, radar, adaptive optical systems, nano-photonic devices and quantum communications. Prior knowledge of quantum mechanics is not required.