



**DEPARTMENT OF PHYSICS AND PHYSICAL
OCEANOGRAPHY COLLOQUIUM**

“Magnetic and plasmon-resonant nanoparticles for
biomedical optical coherence imaging contrast”

Dr. Amy Oldenburg
University of North Carolina, Chapel Hill

Optical coherence tomography (OCT) is an emerging 3D biomedical imaging modality primarily used in ophthalmology, cardiology, and gastroenterology. Analogous to ultrasound, it depth-resolves reflected light to produce images with microscale resolution and mesoscale penetration depth. OCT does not always contrast pathologies of diagnostic relevance to clinicians. Probes which specifically bind to disease biomarkers to provide "molecular imaging" would greatly enhance OCT. However, the usual array of fluorescent probes emit incoherent light which is not sensed by OCT. In this talk, I will detail the development of nanoparticle probes specifically for coherence imaging, and associated novel imaging techniques, to enable molecular OCT imaging.

Friday, October 9, 2009
2:00 PM
DeLoach Hall, Room 212

Refreshments will be served at 1:45 PM

