An NSF Integrative Graduate Education and Research Traineeship in

Integrating Nanotechnology with Cell Biology and Neuroscience

INCBN IGERT Seminar

Location:
Room 101, Center for High Technology Materials (CHTM)
1313 Goddard SE
SW corner of UNM’s Science and Technology Park

Monday, 20 April 2009, 2:30 pm

Speaker: Steven J. Koch
Assistant Professor, Dept. of Physics and Astronomy, UNM

Introduction to Biophysical Studies of the Molecular Motor Kinesin

We are beginning collaborative work on a DTRA-funded project to couple theoretical and experimental studies of the biomolecular motor protein kinesin (Susan Atlas, PI). In this talk, I will introduce the biophysical experiments we are planning. Specifically, I will talk about experiments to investigate the effects of changing the properties of water (e.g., osmotic pressure, heavy water) in the two assays shown below. These experiments are an important, but untapped area of research in molecular motors. I will also use single-molecule protein-DNA studies to demonstrate the effects of osmotic pressure on interacting biomolecular surfaces.