

## **CBIMMS Invited Seminar**

### ***Light-Torqued Nanomotors***

**Keith Bonin, Ph.D.**

Department of Physics, Wake Forest University  
Winston-Salem, NC 27109

**Monday, December 16, 2002**

**1:00 PM**

**203 Teer Building**

#### **ABSTRACT**

Light torques that use polarization are a novel and important way to control nanoparticles, to produce nanomotors, and to measure fundamental properties of individual nanoparticles. They are a potentially powerful tool for investigating rheological nanoenvironments and biomolecular motors. Here we study light torques applied to glass nanorods in a single-beam optical trap. Light-torque operated nanomotors move at speeds that depend on the torque magnitude, the viscosity of the surrounding medium, and the rotation rate of the electric field vector of the linearly polarized trapping light. We will also discuss the surprising observation of nanorocker behavior.

**Monday, December 16, 2002**

**1:00 PM**

**203 Teer Building**