



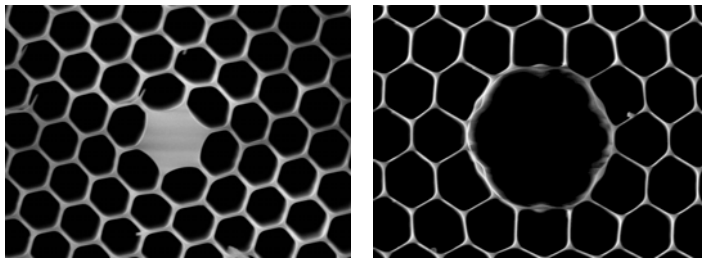
SACRAMENTO STATE

Department of Physics & Astronomy Spring 2007

# *Physics Colloquium Series*

## *"Pushing the limits of glass...fiber-based sources and devices"*

*Fiber optics has been an active area of research since the development and widespread implementation of low loss optical fibers in the 70's and 80's. The subsequent parade of innovation includes development of polarization maintaining fibers, rare-earth ion doping, photonic crystal fibers, photonic bandgap fibers, and polymer and soft-glass fibers. As a result there is currently unprecedented control over the linear and nonlinear optical properties of these waveguides. Advancements are expected to continue in several emerging areas including ultrafast and high power fiber-integrated sources, time and frequency metrology, quantum communication, and the very exciting area of chip-scale photonic integrated circuits. Each of these advancements, combined with the growing suite of fiber-integrated active and passive devices, has opened new opportunities to address scientific problems using nonlinear fiber optics.*



*This talk will survey several recent developments in the field of fiber optics, including the development of microstructure fibers and photonic bandgap fibers, and discuss several applications of these innovations.*

**Dr. Jay Sharping**

*UC Merced*

**Thursday, Feb. 22, 2007  
4:10-5:20 PM MND 1015**

**Open & Free to all Students, Faculty & Public**