OPTICAL COMPONENT HANDLING TECHNIQUES

WEDNESDAY JULY 23, 2008 **ROOM 1805 NORTH CLASSROOM BUILDING**
9 AM – 1 PM **CU - DENVER**

- $250 per person for CPIA / CAPT Center members
- $300 per person for all others
- Does not include parking, meals (cafeteria & Starbucks nearby)
- Class size limited to 10 students to make sure there is hands on experience for every student. If the class fills, there will be a waiting list.
- If there are not at least 6 people registered by July 15, classes will be cancelled and there will be full refunds made. If an individual may cancel for any reason before 5 pm July 14, 2008. CPIA will pass through the refund processing fee, which will not exceed 5% of the total cost of the class for all cancellations.
- After July 15 there are no refunds available for any reason.

COURSE OUTLINE

This course is designed to introduce lab techniques to handle optical components properly. The lecture part of the class focuses on explaining different types of optical components and the proper ways to handle them in order to avoid damages. Optical component assembly and characterization techniques will also be introduced in the class. There will be hand-on sections between topics such that students can have a chance to practice the techniques mentioned. No prior photonic background is required. This class is suitable for engineers and technical personnel who are required to handle optical components.
Topics to be covered:

- Introduction to optical materials and their properties
- Optical components overviews
- Optical cleaning and handling techniques
- Optical system assembly techniques and characterizations
- Optical surface quality characterizations
- Optical adhesives, optical solvents, and temperature effects
- Optical fiber polishing and coupling

ABOUT THE INSTRUCTOR

Tim Lei is an assistant professor in the Department of Electrical Engineering at the University of Colorado Denver. He is an expert in ultrafast lasers and nonlinear optical spectroscopic techniques. He is currently developing some optical diagnostic equipment to find cancers without biopsies. In the past, he has successfully traced molecular motions on metal surfaces with fast optical pulses and has studied potential inorganic molecules that can be used to generate hydrogen directly from sunlight with optical techniques. He teaches graduate level optics classes, such as optical engineering and bio-optics, regularly in UC-Denver.