



Title: Converging Technologies Session IV: Emerging Applications of Photonics

Date/Time: Wednesday, July 30, 10:30 AM – 12:00 PM

Location: Renaissance Austin Hotel

Description: This session will provide an overview of photonics as an enabling technology, followed by hardware demonstrations, and a discussion of the emerging applications of photonics, including:

- LED Lighting and Displays
- Laser Etching and Materials Processing for Manufacturing
- Photonics in MEMS and Nanotechnology
- Lasers and Fiber-optics in Medical Diagnostics and Therapeutics
- Lasers and Optics in Defense and Homeland Security
- Photonics for Environmental Monitoring

Presenters:



Daniel M. Hull is a Registered Professional Electrical Engineer and a pioneer in the field of lasers. He has thirteen years of experience in the development of high-power lasers and laser applications in defense, aerospace, and telecommunications. For over thirty years, Dan has been a leader in educational reform, directing initiatives to improve the teaching of science, mathematics, and emerging technologies in secondary and postsecondary institutions through the design of innovative curricula, development of lab-based instructional materials, and faculty professional development. He is the author of six books, over eighty papers, and thirty instructional modules in

laser/electro-optics. Dan served as the President and CEO of CORD from 1979 to 2006. During that period, he was the founder of the National Coalition of Advanced Technology Centers and the National Tech Prep Network. In 2006, he formed OP-TEC, the NSF/ATE National Center of Excellence in Optics and Photonics Education. He is currently the Director of OP-TEC.



Dr. Feng Zhou, Ph.D., is a professor and coordinator of the Electro-Optics Program at Indiana University of Pennsylvania (IUP) in Indiana, Pennsylvania. Feng currently serves as the OP-TEC Project Director for IUP. After receiving his Ph.D. in Optics in 1989, he has held academic positions at Strathclyde University, Glasgow University, and Imperial College in the UK, and Nanyang Technological University in Singapore for ten years. Prior to joining IUP, Feng worked as a research scientist, technical director and VP with high-tech companies in the U.S., focusing on industrial applications of lasers and telecommunications. At IUP, Feng is continuously developing

partnerships between high schools and the EO industry to help promote the training and development of the workforce entering technical careers.