Coherent Anti-Stokes Raman Spectroscopy and Holography

Zhiwen Liu, Associate Professor
Electrical Engineering Department
Pennsylvania State University, University Park

Abstract: I will present our recent work on coherent anti-Stokes Raman scattering (CARS) spectroscopy and CARS holography. Multiplex CARS by using supercontinuum will be discussed. Methods to suppress the nonresonant four wave mixing background will be reviewed. I will discuss holographic CARS imaging, which combines the unique capabilities of both CARS and holography and can allow for chemically selective three-dimensional imaging without scanning. Both inline and off-axis digital CARS holography will be covered.

Friday, October 29, 2010
1:30 p.m.
Bryan Hall, Room 305
(With light refreshments)

Host: Dr. Lan Yang

Short Bio: Dr. Zhiwen Liu is an associate professor of Electrical Engineering at the Pennsylvania State University, University Park. He received his Ph. D. degree in Electrical Engineering from the California Institute of Technology in 2002. After staying at Caltech for a year as a postdoctoral researcher, he joined the Penn State University in 2003. His current research at Penn State is focused on ultrafast and nonlinear optics. He received the Walker von Brimer Award at Caltech in 2001 and won the CAREER award from the National Science Foundation in 2006.