

## Spectroscopy and Imaging in Medicine: Moving Benchtop Optical Technologies to the Bedside



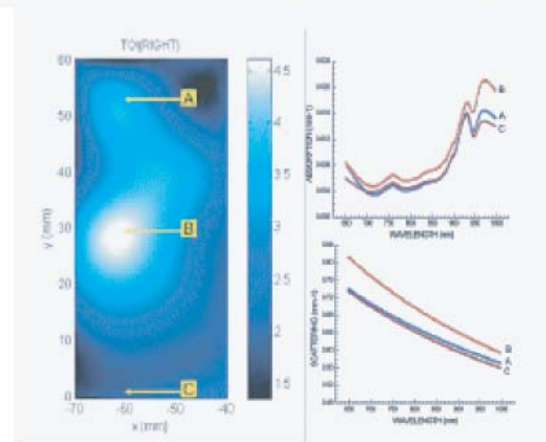
### **Professor Bruce Tromberg**

Biomedical Engineering and Surgery  
Director, Beckman Laser Institute and Medical Clinic  
University of California, Irvine

BA Chemistry, Vanderbilt 1979

PhD, Chemistry, U. of Tennessee 1988

This talk presents principles of tissue optical contrast using examples that highlight sensitivity to cellular metabolism, extracellular matrix composition, and vascular dynamics.



**10:30-11:30 Thursday**  
**May 14, 2009**

Sloan Auditorium, Goergen Building  
Refreshments served

# **Spectroscopy and Imaging in Medicine: Moving Benchtop Optical Technologies to the Bedside**

Bruce Tromberg

Professor, Departments of Biomedical Engineering and Surgery

Director, Beckman Laser Institute and Medical Clinic

University of California, Irvine

## **Abstract**

This talk presents principles of tissue optical contrast using examples that highlight sensitivity to cellular metabolism, extracellular matrix composition, and vascular dynamics. These capabilities will be placed in the context of several emerging clinical applications, including increasing surgical accuracy, imaging tissue function, predicting therapeutic drug efficacy, and detecting early disease.

## **Biography**

Dr. Tromberg is the Director of the Beckman Laser Institute and Medical Clinic at the University of California, Irvine and Professor of Biomedical Engineering and Surgery. He is principal investigator of the Laser Microbeam and Medical Program (LAMMP), a NIH National Biomedical Technology Center and is editor-in-chief of "The Journal of Biomedical Optics". Dr. Tromberg's research interests are in the development and application of optical imaging and spectroscopy methods for non- and minimally-invasive medical imaging.