

Carl Zeiss Presentations

Mary Dickinson, Biological Imaging Center, Beckman Institute, Caltech.
Quantitative, dynamic laser scanning microscopy: Perspectives on hemodynamic forces.

The talk will show how to use confocal microscopy for quantitative imaging in living mouse embryos, particularly with regard to cell signaling during vascular remodeling. The results of different approaches for increased resolution in time lapse imaging will be discussed.

Tony Wilson, Dept. of Engineering Science, University of Oxford, England
Structured illumination microscopy

The use of structured illumination in widefield microscopy will be discussed and the basic concept explained. It will be shown that it can be introduced very simply into a standard microscope and that it provides the ability to introduce three-dimensional resolution and imaging capabilities into the conventional optical microscope.

Sebastian Tille, Carl Zeiss MicroImaging, Inc.
Counting on Your Image - Advanced Imaging and Quantitative Analysis in Laser Scanning Microscopy

Laser Scanning Microscopy has become an essential tool for scientific research. Latest technology allows for much more than imaging optical sections. We see the advent and implementation of more analysis tools like colocalization, FRAP, FLIP, FRET and FLIM, which help to answer scientific questions about structure and functions within cells, tissue and entire organisms. The talk will give insights into cutting-edge solutions for a wide range of biomedical applications with special focus on quantitative analysis of multi-spectral fluorescence images.

Norbert Schuster, Carl Zeiss MicroImaging, Inc.
Laser microdissection for microscopy applications

Laser Micro beam systems are a tool for non-contact laser micro-dissection and laser micro-manipulation with superior accuracy. The "Force of Light" can be used to catch and move or cut and fuse microscopically small objects. Lasers of high beam quality are interfaced with the microscope and focused through the objective to less than one micron diameter. Utilizing the laser pressure catapulting principle LMPC, small objects can be transported into a capturing device for further evaluation-contamination free.