

Webinar

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FREE WEBINAR

Imaging Biology at High Spatiotemporal Resolution

Join us for a Webinar on Wednesday, October 29, 2014

Presenter Hari Shroff will discuss our efforts to develop high resolution optical methods that are better suited for the study of live, dynamic, and 3D biological samples than conventional imaging tools. Structured illumination microscopy (SIM) doubles the spatial resolution of a light microscope, and requires lower light intensities and acquisition times than other super-resolution techniques, but has been mostly applied to the study of single cells. He will present alternative SIM implementations that permits resolution doubling in live volumes greater than 10x thicker than possible with conventional SIM, as well as a hardware modification that enables effectively 'instant' SIM imaging at rates 10-100x faster than other SIM implementations.

The second half of the talk will focus on the development of inverted selective plane illumination microscopy (iSPIM), and subsequent application to the noninvasive study of neurodevelopment in nematode embryos. Next, he will discuss progress that quadruples the axial resolution of iSPIM by utilizing a second specimen view, thus enabling imaging with isotropic spatial resolution (dual-view iSPIM, or diSPIM). Shroff will conclude by introducing a protocol for a do-it-yourself diSPIM.

Dr. Hari Shroff received a B.S.E. in bioengineering from the University of Washington in 2001, and under the supervision of Dr. Jan Liphardt, completed his Ph.D. in biophysics at the University of California at Berkeley in 2006. He spent the next three years performing postdoctoral research under the mentorship of Eric Betzig at the Howard Hughes Medical Institute's Janelia Farm Research Campus where his research focused on development of photactivated localization microscopy (PALM), an optical super-resolution technique. Since 2009, Dr. Shroff heads NIBIB's Section on High Resolution Optical Imaging laboratory, where he and his staff develop new imaging tools for application in biological and clinical research.

MARK YOUR CALENDAR

Date: Wednesday, October 29, 2014

Time: 1pm EST

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Required: Windows® 8, 7, Vista, XP or 2003 Server

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Required: Mac OS® X 10.6 or newer

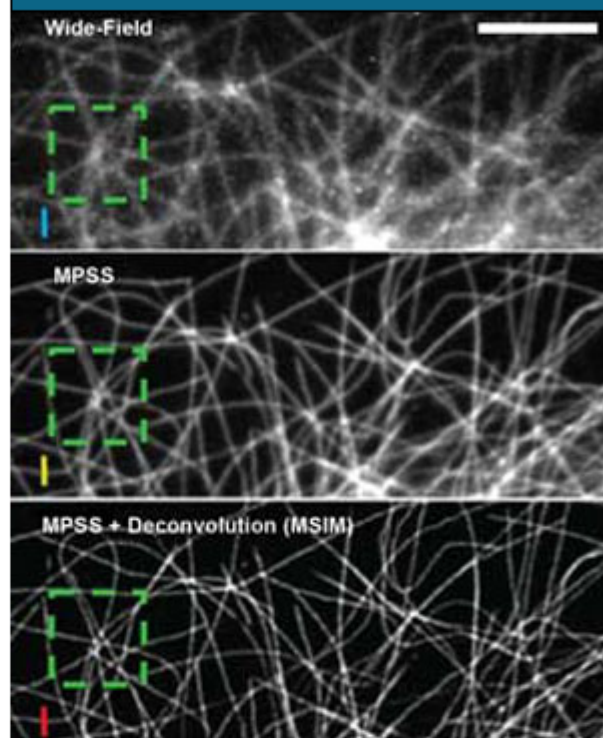
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