Dr. Peter Kner
Associate Professor, School of Electrical and Computer Engineering
University of Georgia

“Superresolution Fluorescence Microscopy”

Wednesday, Nov. 29, 2017 | 11:00 AM | 201 PS

STORM imaging of the synaptonemal complex
Kner Lab, College of Engineering, UGA
Collaboration with Maria Viveiros and Rabindranath de La Fuente, UGA Vet School

Widefield image
STORM image
STORM image

Chromosomal Spread SYCP3-647 in mouse spermatocytes
SYCP3-488 and H3T11-647

Dr. Kner came to UGA from UCSF, where he built the first structured illumination microscope fast enough to image living cells, working with Mats Gustafson, a leader in the field of high-res microscopy.

Superresolution fluorescence microscopy is rapidly becoming an essential tool in the biological sciences allowing imaging biological structures at length scales below 250nm. Currently, superresolution microscopy has been applied successfully on single cells achieving resolutions of 100nm down to 20nm over a few microns of depth. Dr. Kner’s lab works on applying superresolution fluorescence microscopy to biological problems, and they are interested in extending superresolution microscopy to thicker samples. Dr. Kner will discuss his lab’s recent work on both superresolution microscopy techniques and light-sheet microscopy.