



Room 113C: Monday, February 12

12:30 PM – 2:00 PM

Leica Microsystems

New TauSTED Tools for Gentle Live Cell Imaging at Remarkable Nanoscale

The ultimate goal of scientific research is to understand the workings of nature. Given the complex interplay of biomolecules, molecular machines, and higher order cellular structures, confocal imaging has emerged as the fundamental tool due to its optical sectioning, sensitivity, and temporal and spatial resolution capabilities.

Imaging intricate cellular structures at nanoscale resolution while characterizing the dynamics of multiple biomolecules in the context of live specimens is an emerging method shedding light on biological processes.

In this talk, we will present how new STELLARIS STED innovations enable gentle live cell imaging at nanoscale resolution. We will show how advances on our TauSTED approach to optical nanoscopy deliver cutting-edge resolution and image quality at low light dose, key to accessing fast nanoscale dynamics of cellular processes. We will also show how fluorescence lifetime information can be used to multiplex different markers while maintaining nanoscale resolution. Finally, we will show how our STED FCS approach can measure diffusion of fluorophores at high concentration.

Speakers

Giulia Ossato, Senior Product Manager, Leica Microsystems

Haridas Pudavar, Product Performance Manager, Leica Microsystems

M. Julia Roberti, Senior Product Manager, Leica Microsystems