SESSION LECTURE

No. 50

Cellular Imaging

Room: 309A

Co-Chairs: Pingyong Xu  **Michael Lin** 

Day3 October 29th (Monday) 8:30 – 12:20		
Time	**Speaker**	**Title**
8:30-9:00	**Michael Lin** *Stanford University, USA*	The need for speed: Imaging neuronal activity with genetically encoded voltage indicators
9:00-9:30	**Minmin Luo** *National Institute of Biological Sciences, China*	Immunosignal Amplification and Single-cell Labeling
9:30-10:00	**Jean-Baptiste Sibarita** *University of Bordeaux, France*	Deciphering molecular organization and dynamics at the nanoscale using quantitative single-molecule localization microscopy
10:00-10:20	**Tea Break**	
10:20-10:50	**Liangyi Chen** *Peking University, China*	High spatiotemporal resolution fluorescence imaging of biological samples in vivo
10:50-11:20	**Pingyong Xu** *Institute of Biophysics, Chinese Academy of Sciences, China*	Photo-convertible fluorescent proteins for super-resolution imaging
11:20-11:50	**Yulong Li** *Peking University, China*	Spying on dopamine modulation by constructing new geneticallyencoded sensors
11:50-12:20	**Jodi M. Nunnari** *University of California at Davis, USA*	Mitochondrial Behavior

Pingyong Xu

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Dr. Pingyong Xu is a professor at the Institute of Biophysics, CAS. His studies focus on combing spectroscopy, biophysical microscopy techniques, and protein design and engineering for the development of novel optical imaging tools, especially photocontrollable fluorescent proteins and functional chemical dyes. In addition, his research uses the probes and developed SR techniques to study important biological processes.

Minmin Lou

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Dr. Luo is a professor of Tsinghua University school of life science and investigator of National Institute for Biological Science, Beijing (NIBS). His research mainly focus on elucidating how neural circuit processes reward and punishment signals, particularly focus on the functions and mechanisms of the brain 5-HT neurons in the dorsal raphe and the neural pathway from the medial habenula to the interpeduncular nucleus. He is now serving as director of The Chinese Institute for Brain Research, Beijing (CIBR), which aims at building a vibrant interdisciplinary research program that integrates basic neuroscience, biotechnology development, computational science, and clinical studies to creatively answer fundamental questions about brain and behavior, and to transform discoveries into products and clinical solutions.

Liangyi Chen

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Dr. Liangyi Chen is a professor and principal investigator in Institute of Molecular Medicine, Peking University. His current research interests are focused on development of novel high spatiotemporal fluorescence imaging techniques for in vivo studies. His lab also use these new technologies to study blood glucose regulation and the pathological process underlying diabetes progression, using both Zebrafish and mouse models. As the corresponding author, Dr. Liangyi Chen has published papers in peer-reviewed journals such as Nature Biotechnology, Nature Methods, Cell Res., Proc Natl Acad Sci U S A., Biophys J., Diabetes and Diabetologia, etc. He has been served as a senior faculty member in the `Neuronal Signaling Mechanisms Section in Faculty of 1000 Biology since 2012. He has been invited to give talks in international conferences hosted by academic societies such as OSA, SPIE and Biophysical Society, etc.

Michael Lin

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Professor Lin's lab applies biochemical knowledge and engineering principles to the development of protein-based tools for molecular imaging, optogenetic studies, and gene therapy. Topics of investigation include fluorescent protein structures and biophysics, fluorescentprotein-based biosensors, spatiotemporal analysis of protein translation pathways, chemical control of protein translation, and light-responsive proteins.

Jean-Baptiste Sibarita

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Dr. JB Sibarita is heading the CNRS R&D team “Quantitative Imaging of the Cell” at the Interdisciplinary Institute for Neuroscience in Bordeaux. His work is focused on quantitative live cell imaging with a strong emphasis on super-resolution microscopy to decipher protein organization and dynamics in well-controlled cellular environments.

Yulong Li

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Dr. Yulong Li is a professor at School of Life Sciences, IDG/McG Institute for Brain Research, Peking University. His research centers on "synapse", the fundamental unit for the communication between brain cells, called neurons. His lab carries two layers of research: first, developing cutting edge research tools, namely advanced imaging probes, to untangle the complexity of nervous system in space and in time; second, capitalizing on the advancement of research toolkits, studying the regulation of synaptic transmission, focusing on the modulation of presynaptic transmitter release in health and in disease conditions.

Jodi M. Nunnari

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Dr. Jodi Nunnari is a professor at University of California, Davis. Her laboratory is interested in the cellular mechanisms underlying mitochondrial behavior. They are using system-based approaches to address how mitochondrial behavior is physiologically regulated within cells and organisms to shed light onto how mitochondrial dysfunction contributes to human disease.