

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Imaging Across Scales: Leveraging the Revolution in Resolution (D1)

April 7-10, 2019 • Snowbird Resort • Snowbird, Utah, USA

Scientific Organizers: Bo Huang and Elizabeth R. Wright

Supported by the Directors' Fund

Abstract & Scholarship Deadline: December 11, 2018 / Abstract Deadline: January 8, 2019 / Discounted Registration Deadline: February 5, 2019

SUNDAY, APRIL 7

Arrival and Registration

MONDAY, APRIL 8

Welcome and Keynote Address

Xiaowei Zhuang, Harvard University, USA
A Microscopy View of Chromosome Organization

Microscopy Techniques I

Melanie Ohi, University of Michigan, USA
Single-Particle Cryo-EM

Toshio Ando, Kanazawa University, Japan
High-Speed AFM

Elizabeth Villa, University of California, San Diego, USA
Opening Windows into the Cell: Bringing Structure to Cell Biology using Cryo-Electron Tomography

Short Talk(s) Chosen from Abstracts

Microscopy Techniques II

Joerg Bewersdorf, Yale University, USA
Super-Resolution Microscopy

Edward S. Boyden, Massachusetts Institute of Technology, USA
Expansion Microscopy and Other Tools for Imaging at Scale

Takeshi Imai, Kyushu University, Japan
Imaging Neuronal Circuits with Tissue Clearing

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, APRIL 9

Molecular Probes I

Atsushi Miyawaki†, RIKEN, Japan
Fluorescent Proteins

Ruwanthi N. Gunawardane, Allen Institute for Cell Science, USA
Labeling Endogenous Proteins in iPSCs to Illuminate Stem Cell Organization and Dynamics

Clodagh C. O'Shea, The Salk Institute for Biological Studies, USA
Cracking the Nucleus: Visualizing the Genome at Nucleosome Resolutions and Megabase Scales

Bo Huang, University of California, San Francisco, USA
Imaging the Genome in Living Cells

Short Talk(s) Chosen from Abstracts

Molecular Probes II

Jin Zhang, University of California, San Diego, USA
Illuminating the Biochemical Activity Architecture of the Cell

Xiaokun Shu, University of California, San Francisco, USA
Imaging Protease Activity and Protein Interactions

Speaker to be Announced
Functional Fluorescent Probes

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, APRIL 10

Visualizing Cellular and Molecular Structures

Jan Ellenberg, European Molecular Biology Laboratory, Germany
Analyzing Nuclear Structure by Correlative Live, Super-Resolution and Electron Microscopy

Elizabeth R. Wright, Emory University School of Medicine, USA
Correlative Cryo-EM – Light Microscopy of Virus Entry/fusion

Christian Eggeling, University of Oxford, UK
Super-Resolution Microscopy: Challenges and Potentials in Biomedical Research

Abraham J. Koster, Leiden University Medical Center, Netherlands
Zooming in with Light and Electron Microscopy for Cell Biology

Short Talk(s) Chosen from Abstracts

Visualizing Cellular and Molecular Structures

Speaker to be Announced

Thomas Gregor†, Princeton University, USA
Visualizing Chromatin Loops during Embryo Development

Xin Chen, Johns Hopkins University, USA
Histone Recruitment at DNA Replication Forks

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

THURSDAY, APRIL 11

Departure