QUANTITATIVE & SYSTEMS BIOLOGY SEMINAR:
Watching the Inner Life of Cells

Bo Huang
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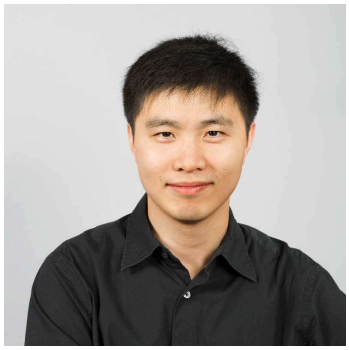
University of California, San Francisco

Date:
11/5/2021

Time:
2:30 PM-3:45 PM

Location:
Please contact snsgradstaff@ucmerced.edu for the Zoom information.

About The Speaker:

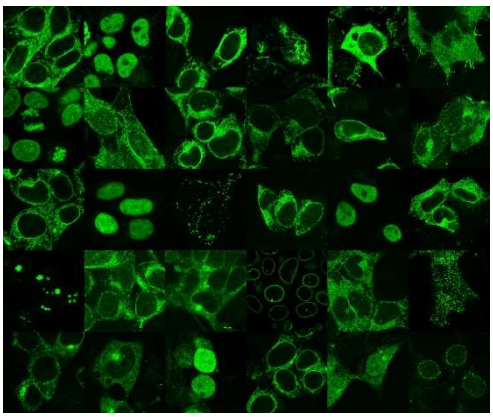


Dr. Bo Huang is a Professor of Pharmaceutical Chemistry and of Biochemistry and Biophysics (joint) at University of California, San Francisco, and a Chan Zuckerberg Biohub Investigator. He received his B.S. degree in Chemistry from Peking University, China, in 2001 and Ph. D. degree in Chemistry at Stanford University in 2006. After finishing postdoc work at Harvard University in 2009, he joined UCSF as an Assistant Professor. He was promoted to Associate Professor in 2014 and Professor in 2017.

Dr. Huang's research work encompasses the areas of optical microscopy, bioengineering, biophysics and cell biology. He has pioneered the development and application of super-resolution microscopy, as well as the use CRISPR/Cas9 system for visualization of genomic elements. Dr. Huang has received many awards, including the GE Healthcare and Science Prize for Young Life Scientists, Searle Scholarship, Packard Fellowship for Science and Engineering, the NIH Director's New Innovator Award, the American Society for Cell Biology Young Life Scientist Award, and UCSF Byers Award for Basic Science.

Abstract:

Cellular processes are orchestrated by a large number of biomolecules in a spatially and temporally coordinated manner within a tiny volume. To uncover the underlying organizational principles and their functional relevance, we take microscopy visualization as the primary approach to systematically map their spatial localization, temporal dynamics and activity profiles. By combining small tags engineered from split fluorescence proteins and CRISPR/Cas9-mediated gene editing, we have enabled large-scale tagging of endogenous proteins in human cell lines for both microscopy visualization and biochemical analysis. Further characterization of their live cell dynamics using epi-illumination light-sheet microscopy reveals intriguing phase condensation and decondensation behavior of many proteins during the cell cycle.



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