NUS National University of Singapore | Department of Biological Sciences
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SEMINAR

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Hosted by Assoc Prof Liou Yih-Cherng

Structural biology in the era of single particle cryo-EM

By **Yifan Cheng**
Howard Hughes Medical Institute/
University of California San Francisco

Since the technological breakthrough in single particle cryo-EM, the landscape of structural biology has been changed forever. Nowadays, structure determination of very challenging target is no longer infeasible. In this seminar, I will give a brief historical perspective of the technological development of single particle cryo-EM, its impact to structural biology and the current technological status. I will give several examples from my own laboratory to illustrate our next frontlines in structural biology.

About the Speaker

Dr. Yifan Cheng is currently an Investigator of Howard Hughes Medical Institute and a Professor at Department of Biochemistry and Biophysics, University of California San Francisco (UCSF). He received his Ph.D. degree in 1991 from Institute of Physics, Chinese Academy of Sciences (CAS). From 1991 to 1996, he continued his research in solid state physics and electron microscopy as a postdoctoral fellow at University of Oslo (NTNF Fellow) and Max-Planck-Institute of Metal Research (Alexander von Humboldt Fellow). In 1996, he changed his research direction to structural biology, and received further training in cryo-electron microscopy (cryo-EM) from Professors Kenneth Taylor at Florida State University and Yoshinori Fujiyoshi at Kyoto University. In 1999, he joined the laboratory of Thomas Walz to setup a cryo-EM operation at Harvard Medical School. He joined the faculty of University of California San Francisco in 2006 and has stayed there ever since. He has been an HHMI Investigator since 2015. He is the recipient of the Christian B. Anfinsen Award from The Protein Society (2018), elected members of the American Academy of Arts and Science (2019) and National Academy of Sciences (2020).