

Biophysical Society 69th Annual Meeting

Cryo-EM Subgroup Symposium

Saturday February 15, 2025

Los Angeles, California

Subgroup Chair: Oliver B. Clarke, Columbia University, USA

Program Co-Chairs:

Meghna Gupta, Oregon Health and Science University, USA

Pilar Cossio, Flatiron Institute, USA

Shi Feng, Stanford University, USA

Symposium Time: 8:30 AM -12:30 PM PST

Symposium Room: 515B

Subgroup Business Meeting: 10:20 AM PST

8:30 AM Opening Remarks

8:40 AM Kai Zhang, Yale University, USA

High-Resolution in situ Structures of Mitochondrial Complexes

9:00 AM Bonnie Murphy, Max Planck Institute of Biophysics, Germany

Cryo-EM in Colour: Reconstructed Electron Energy Loss Analysis for Low-Dose Elemental Mapping in Cryopreserved Complexes

9:20 AM Marc Gilles, Princeton University, USA

Reconstructing Conformational States and Inferring Conformational Densities in Cryo-EM

9:40 AM Eliza Nieweglowska, Thermo Fisher Scientific, USA

Novel Cellular & Structural Discoveries Enabled by in situ Cryo-ET

10:00 AM Break

10:20 AM Business Meeting

10:30 AM Flash Talks

- 10:30 AM Lauren Ann Metskas, Purdue University, USA
Development of a novel method for in situ binding affinity measurements using cryo-electron microscopy
- 10:40 AM Hanlin Wang, University of Toronto, Canada
Understanding the RAVE-Mediated Regulation of Yeast VATPase
- 10:50 AM Giulia Palermo, UC Riverside, USA
Refining cryo-EM maps using quantum mechanical density calculations to accurately characterize poorly solved regions in protein-nucleic acid complexes
- 11:00 AM Chen Sun, La Jolla Institute for Immunology, USA
Human endogenous retrovirus HERV-K envelope glycoprotein structures in pre- and post-fusion conformations by cryo-EM
- 11:10 AM Zachary Berendsen, University of Missouri, USA
The Structure and Dynamics of Apolipoprotein B100 from Human Low Density Lipoprotein

11:20 AM Beata Turoňová, Max Planck Institute of Biophysics, Germany

Contextual Analysis for In Situ Cryo Electron Tomography

11:40 AM Wei Lü, Northwestern University, USA

Cryo-EM at Physiological Temperatures Reveals Novel Insights into TRPM4

12:00 Almeida Award Talk: Elizabeth Wright, University of Wisconsin, Madison, USA

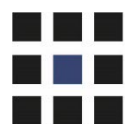
12:25 AM Closing Remarks

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