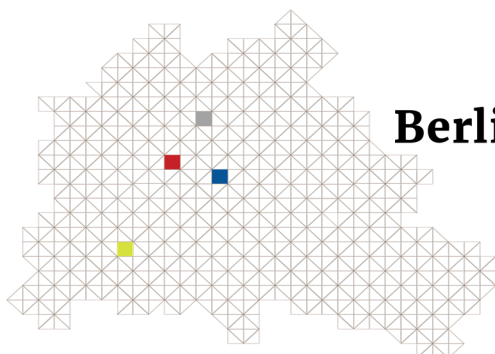




22.-23. July 2025

Max-Delbrück-Communication Center MDC.C (Geb. 83)
Robert-Rössle-Straße 10, 13125 Berlin
Hörsaal "Axon I"

ACEM – Symposium:

Bridging Electron Microscopy in Life Sciences and Material Sciences – Common Challenges and Opportunities

Tuesday, July 22, 2025

09:00 Registration

Preliminary Program

09:45 **Welcome and Introduction**
Matthias Ochs, Charité & Speaker of the ACEM

Session: Volume SEM

Chairs: M. Ochs (CHA), S. Kunz (MDC Buch)

10:00 ***Mechanosensitive nuclear pores***
Martin Beck, MPI Frankfurt

10:45 ***Volume electron microscopy of the neuromuscular junction***
Carsten Dittmayer, Charité

11:05 ***Comprehensive solutions for volume EM data challenges***
Norman Rzepka, Scalable Minds GmbH, Potsdam

11:50 ***Volume electron microscopy to reveal mitochondrial adaptations supporting hypoxia tolerance***
Gary Lewin, MDC Buch

12:10 ***Titel***
N.N. Firma JEOL

12:30 ***Lunch Break***

Session: Artificial Intelligence in Electron Microscopy

Chairs: C. Koch (HU), K. Ludwig (FU)

- 14:30 ***Computational Imaging of Biological and Soft Materials using 4DSTEM***
Colin Ophus, Stanford University, USA
- 15:15 ***AI-assisted processing of 2D and 3D EM image data***
Yannic Kerkhoff, FU Berlin und Zuse-Institut Berlin
- 15:35 ***What we can learn about Corona when we combine EM information***
Andrea Thorn, Universität Hamburg
- 16:20 *Coffee Break (20 Min)*
- 16:40 ***Deep Learning-based Advances in Cryo-Electron Tomography***
Noushin Hajarolasvadi, Zuse-Institut Berlin
- 17:00 ***Titel***
N.N. Firma ZEISS
- Ab 17:20 *Get-Together bei Barbecue*

Ende: 20:30 Uhr

Wednesday, July 23, 2025

Session: Quantitative Phase-sensitive S/TEM-Methods

Chairs: M. Lehmann (TU), C. Diebolder (CHA)

- 09:15 ***Momentum-resolved STEM in Physical and Life Sciences: Versatile phase retrieval or 4-dimensional noise?***
Knut Müller-Caspary, LMU München
- 10:00 ***Titel***
N.N.
- 10:20 ***Titel***
Ilia Zykov, Universität Wien
- 11:05 *Coffee Break (20 Min)*
- 11:25 ***3D Strain Field Reconstruction by Inversion of Dynamical Diffraction***
Laura Niermann, TU Berlin
- 11:45 ***Titel***
N.N. Firma Bruker

12:05 *Lunch Break & Postersession*

Session: In Operando and Time Resolved EM

Chairs: D. Berger (TU), M. Wahl (FU)

14:00 ***Dynamics of active catalysts: insights from multi-scale operando electron microscopy***
Marc-Georg Willinger, TU München

14:45 ***Investigating the Influence of FIB-Preparation Induced Surface Effects in Operando Semiconductor TEM-Lamellae***
Hüseyin Çelik, TU Berlin

15:05 ***Time resolved cryoEM reveals the mechanisms of ubiquitin chain synthesis and recognition***
David Haselbach, IMP Wien

15:50 *Coffee Break (20 Min)*

16:10 ***Time-resolved in situ cryo-EM***
Magdalena Schacherl, Charité

16:30 ***Titel***
N.N. Firma ThermoFisher Scientific

16:50 **Closing Remarks**
Matthias Ochs, Charité

Ende 17 Uhr