

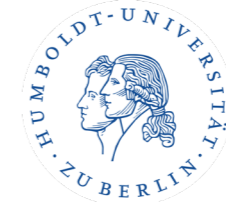


**Berlin University  
Alliance**

**ThermoFisher  
SCIENTIFIC**

**nANOSOFT**  
CRYOGENIC ELECTRON MICROSCOPY INNOVATION

Freie Universität Berlin



Technische Universität Berlin

CHARITÉ  
UNIVERSITÄTSKLINIKUM BERLIN

BioSupraMol  
Core Facility

SupraFAB

DFG

# Electron Microscopy

Summer School | October 07.-08. 2024

## Monday October 07, 2024

**9:00 Registration Foyer, Arnimallee 22, Freie Universität Berlin**

Mathias Dimde, Melanie Wellmann

9:30-9:40 Christian Freund Speaker Core Facility BioSupraMol

*Welcome and opening remarks*

**1st session: Materials science (Chair: Matthias Ochs)**

09:40-10:15 Dirk Berger (TU Berlin, ZELMI)

*Advanced Element Analysis in Electron Microscopy*

10:15-10:50 Michael Lehmann (TU Berlin)

*Advanced S/TEM-Methods – Utilizing the Wave Nature of the Electron*

**10:50-11:10 Coffee break**

**2nd session: Materials science (Chair: Matthias Ochs)**

11:10-11:45 Christoph Koch (HU Berlin)

*Fast electrons observe atoms in motion*

11:45-12:20 Thomas Lunkenbein (Fritz Haber Institut Berlin)

*The role of electron microscopy in heterogeneous catalysis research*

**12:20-14:40 Lunch buffet and poster-session**

**3rd session: Structural Biology/Molecular EM (Chair: Thomas Stach)**

14:40-15:15 Tarek Hilal, (FU Berlin)

*Single particle cryoEM of biological assemblies and beyond*

15:15-15:50 Petra Wendler (Universität Potsdam)

*Exploiting the full potential of cryo EM maps or can we visualise electrons by single particle cryo-EM?*

**15:50-16:30 Coffee break and poster-session**

**4th session: Structural Biology/Molecular EM (Chair: Thomas Stach)**

16:30-17:05 Christian Spahn, Charité Berlin

*tba*

17:05-17:40 Stefan Raunser (MPI Dortmund)

*Unlocking the secrets of heart muscle structure*

**From 18:00 BBQ sponsored by ThermoFisher and Nanosoft**

## Tuesday October 08, 2024

**5th session: Ultra-Structure/Cellular EM (Chair: Tarek Hilal and Christoph Diebolder)**

9:00-9:35 Christoph Diebolder (Charité Berlin)

*Introduction to in situ Structural Biology*

9:35-10:10 Arjen Jakobi (TU Delft)

*tba*

**10:10-10:50 coffee break**

10:50-11:25 Christel Genoud (EPFL, Lausanne)

*Targeted volume EM in room temperature and cryo-EM : examples from a facility*

11:25-12:00 Nico Sommerdijk (Radboud University Nijmegen)

*3D Correlative Live and Cryogenic imaging of Biological Tissues combining Raman, Light and Electron Microscopy*

**12:00-13:00 Lunch**

13:00-13:35 Salah Al Masri, Franziska Liebe, Anne-Sophie Fisch (FUB)

*Visualising subcellular structures and organelles in three-dimensional cell cultures*

13:35-14:10 Thomas Stach (HU Berlin)

*Plants, Parasites, and Appendicularians - recent research at the Laboratory for Comparative Electron Microscopy*

14:10-14:45 Alexandra Kerbl (Universität Heidelberg)

*Reconstructing organisms section by section - Modular serial section scanning electron microscopy-workflow for whole-organism connectomics projects*

**14:45-15:20 Coffee break**

**6th session: Ultra Structure/Cellular EM (Chair: Michael Lehmann)**

15:20-15:55 Matthias Ochs (Charité Berlin)

*Using electron microscopes to look into the lung*

15:55-16:30 Kai Ludwig (FU Berlin)

*Supramolecular Assemblies for Pathogen Inhibition*

16:30-17:05 Jan Giesebrecht (Thermo Fisher Scientific Berlin)

*Amira - Advanced 3D image processing and segmentation*

17:05-17:20 Petra Knaus Vice President (VP4) FU Berlin - *Closing Remarks*

**From 17:30 Lab Tour FZEM/SupraFAB**