

**From atoms to tissues.
Electron microscopy within the Göttingen
"Multiscale Bioimaging" Cluster of Excellence**

Thursday, September 23rd 2021, 9 am - 5 pm

ZOOM link: <https://bit.ly/3eJcjOt>

09:00 **Welcome** by *Rubén Fernández-Busnadiego, Patrick Cramer, Metin Tolan, Wolfgang Brück*

Session 1: From atoms to molecules

Chair: Rubén Fernández-Busnadiego

09:15 *Claus Ropers (University of Goettingen, Max Planck Institute for Biophysical Chemistry)*
"The Göttingen Ultrafast Transmission Electron Microscope"

09:45 *Holger Stark (Max Planck Institute for Biophysical Chemistry)*
"Atomic resolution structure determination by cryo-EM: Where are the limits?"

10:15 Coffee Break

10:30 *Patrick Cramer (Max Planck Institute for Biophysical Chemistry)*
"Cryo-EM reveals how genes are controlled"

11:00 *Eri Sakata (University Medical Center Goettingen)*
"Structural dynamics of the 26S proteasome"

11:30 *Hauke Hillen (University Medical Center Goettingen, Max Planck Institute for Biophysical Chemistry)*
"From pathogens to symbionts: Cryo-EM of viral and mitochondrial gene expression machineries"

12:00 Lunch Break

Session 2: From molecules to tissues

Chair: Hauke Hillen

13:00 *Rubén Fernández-Busnadiego (University Medical Center Goettingen)*
"Unravelling the structure of toxic protein aggregates in situ"

13:30 *Carolyn Wichmann (University Medical Center Goettingen)*
"Ribbon synapses at work"

14:00 *Wiebke Möbius (Max Planck Institute of Experimental Medicine)*
"What we can learn from cellular volume imaging by focussed ion beam-scanning EM (FIB-SEM)"

14:30 Coffee Break

14:45 *Ben Cooper (Max Planck Institute of Experimental Medicine)*
"Freeze-frame shots of synapses in action: Correlating presynaptic ultrastructure and function at the nanoscale"

Guest speaker

Chair: Rubén Fernández-Busnadiego

15:15 *Jürgen Plitzko (Max Planck Institute of Biochemistry, Martinsried)*
"Advances in cryo-electron tomography for in situ structural biology of cells and tissues"

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