BioSupraMol Core Facility

Freie Universität Berlin

Summer School

Advanced Optical Microscopy

Berlin | October 4-5, 2018

International Symposium and Live Technology Presentations

- **International Symposium on Recent Advances and Trends in Optical Microscopy**
- **Microscope Live Demos and Hands-on Sessions**
- **Poster Awards**

Devices available for live demos and hands-on sessions:
Abberior STEDYCON
Leica Light Sheet
Leica SP8 confocal
Olympus Spinning Disc IXplore SpinSR10
Zeiss LSM880 with airy scan
Zeiss Lightsheet Z.1

Program Committee (Freie Universität Berlin):
Helge Ewers (Membrane Biochemistry)
Rainer Haag (Organic and Macromolecular Chemistry)
Robin Hiesinger (Neurobiology)
Stephan Sigrist (Genetics)

Venue:
Freie Universität Berlin
Institute of Chemistry and Biochemistry
Core Facility BioSupraMol | Optical Microscopy Unit
Takustr. 6 | 14195 Berlin

Information and registration at:
www.biosupramol.de

Organization: Katharina Achazi (k.achazi@fu-berlin.de)
Registration: Katharina Tebel (k.tebel@fu-berlin.de)

Thursday October 04, 2018

08:00	Registration (Foyer, Takustr. 6, Freie Universität Berlin)
08:30-08:40	Welcome and opening remarks (Rainer Haag)
1st session: Time-lapse microscopy (chair: Stephan Sigrist)	
08:40-09:15	Caren Norden (MPI of Molecular Cell Biology and Genetics, Dresden), *Making the retina: In vivo imaging of how cells get to the right place at the right time*
09:15-09:50	Robin Hiesinger (Neurobiology, Freie Universität Berlin), *Brain wiring on the fly*
09:50-10:10	*Coffee break*
2nd session: Super resolution microscopy (chair: Helge Ewers)	
10:10-10:45	Alf Honigmann (MPI of Molecular Cell Biology and Genetics, Dresden), *STED microscopy and its combination with FCS*
10:45-11:20	Jan Schmoranzer (Core Facility AMBIO, Charité – Universitätsmedizin Berlin), *Super-resolution (SIM, STORM) in cell and neurobiology*
11:20-11:55	Stephan Sigrist (Genetics, Freie Universität Berlin), *Nanometer scale protein architectures in the control of synapse plasticity and diversity - A tale from the "meso-world"*
11:55-13:10	*Lunch buffet and poster-session*
3rd session: Technology trends in optical microscopy	
13:10-13:45	Andreas Lutter (Carl Zeiss Microscopy GmbH, Jena), *New considerations in confocal imaging*
13:45-14:20	Karl-Heinz Koertje (Leica Microsystems GmbH, Wetzlar), *New developments in multiphoton and FLIM imaging techniques: Leica TCS SP8 DIVE and FALCON*
14:20-14:55	Ines Höfer (Olympus Deutschland GmbH, Hamburg), *Happy cells make happy scientists - Confocal superresolution for Live Cell Samples with the new Olympus Spin SR*
14:55-15:30	Matthias Reuss (Abberior Instruments GmbH, Heidelberg), *STED nanoscopy and beyond: Breaking more barriers*
15:30-15:45	*Coffee break*
15:45-18:45	Live demos (Abberior, Zeiss, Leica, Olympus, 4 x 45 min, in rotation)
19:00	*Speakers dinner*

Friday October 05, 2018

4th session: Single molecule microscopy (chair: Robin Hiesinger)	
08:30-09:05	Marko Lampe (Advanced Light Microscopy Facility, EMBL Heidelberg), *Single molecule localization microscopy: Principles and integration into an imaging core facility*
09:05-09:40	Helge Ewers (Membrane Biochemistry, Freie Universität Berlin), *Expansion STED Microscopy*
09:40-10:30	*Coffee break and poster-session*
10:30-11:05	Stephan Block (Bionanointerfaces, Freie Universität Berlin), *Probing complex interactions using optofluidic approaches*
11:05-11:40	Johannes Hohlbein (Biophysics, Wageningen University, Wageningen, NL), *From monitoring DNA polymerases in vitro to target search of CRISPR-Cas in vivo*
11:40-12:00	Poster awards and closing remarks (Rainer Haag)
13:00-18:00	Hands-on sessions