

Advanced Course on Molecular Microscopy

Location: Staudinger Weg 9, Newton-Raum, 01-122

| D+S = Discussion and Seminar | | | PP = Project Proposals | | | | | | | | | | |
|------------------------------|--|-------|------------------------|---|-------|-------------|---|-------|-------|---|--------------|-----------|--|
| | | | Break | | | Lunch break | | | Break | | | 16:45 end | |
| | 09:15 | 10:00 | 10:45 | 11:00 | 11:45 | 12:30 | 13:30 | 14:15 | 15:00 | 15:15 | 16:00 | | |
| Mo. 22.07.2013 | Intro / Requirements for PP History of microscopcy: Leeuwenhoek to Abbe Lecturer: Cremer | | | Electron microscopy Lecturer: Lieberwirth, MPIP | | | Fourier Optics Lecturer: Birk | | | D+S: Contrast vs. Resolution Lectuer: Birk, Parekh | Lab tour MPI | | |
| Tu. 23.07.2013 | Point-scanning: Laser micro irradiation and confocal laser scanning Lecturer: Birk | | | D+S: technical realisation of CLSM Lecturer: Birk | | | 4Pi and STED microscopy Lecturer: Cremer | | | D+S: pros/cons of scanning Lectuer: Birk, Cremer | Lab tour IMB | | |
| We. 24.07.2013 | Structured Illumination: SMI microscopy and SIM Lecturer: Parekh | | | D+S: pros/cons of structured illumination. Image reconstruction Lecturer: Parekh | | | Spectrally Assigned Localization Microscopy Lecturer: Birk | | | D+S: what are spectral signatures? Lectuer: Birk | Lab tour IMB | | |
| Th. 25.07.2013 | SPIM (Selective Plane Illumination Microscopy) / Light Sheet based microscopy Lecturer: Stelzer | | | D+S / Demonstration Lecturer: Stelzer | | | Nonlinear fluorescence: Mulitphoton, SHG, THG Lecturer: Parekh | | | Details PP Lectuer: Birk, Cremer, Parekh | Lab tour MPI | | |
| Fr. 26.07.2013 | Vibrational microscopy: Raman, IR, Coherent Raman Lecturer: Parekh | | | D+S Vibrational imaging Lecturer: Parekh | | | Excursion: Schott-Mainz 14:00 - 16:00 | | | | | | |
| | | | | | | | Lecturer: All | | | Lectuer: All | | | |
| We. 31.07. | Hand in Project Proposals (2 pages) | | | | | | | | | | | | |
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| Fr. 02.08.2013 | Student project presentation Lecturer: All | | | Student project presentation Lecturer: All | | | Student project presentation | | | | | | |
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PP: Oral presentation with max. of 10 slides. Small groups work together to come up with a hypothetical research project.

PPs should answer at least the following points:

- What do you want to study?
- Why do you want to study this?
- How do you want to study this?