Super Resolution Imaging Developers Symposium 2019

Diamond Light Source

Thursday 27th and Friday 28th June 2019

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9:30-10:00 Registration

10:00 Opening remarks – Ian Dobbie

Session 1 - New hardware I

- 10:10 Thomas Huser (Bielefeld University, Germany)

 "Rapid live cell imaging by cost-effective super-resolution structured illumination microscopy"
- 10:30 Sara Abrahamson (University of Santa Cruz, USA) "Deep learning in 3D-SIM for faster and gentler live imaging"
- 10:50 Jacopo Antonello (Oxford University, UK) "Two-colour adaptive STED microscopy"
- 11:10 Carlas Smith (Delft University, The Netherlands)
- 11:30 Ruth Sims (Institute de la Vision, Paris, France)
 "Sub-diffraction localization of point sources in the 4D light field"
- 11.50 Techno Bites Linkam Scientific

12:00-13:30 Lunch

12:00-13:30 Facility tours I&II

Session 2 - Correlative imaging

- 13:30 Maria Harkiolaki (Diamond Light Source, UK) "Correlative cryo-imaging for the life sciences at beamline B24"
- 13:50 Paul Verkade (University of Bristol, UK) "CLEM, 1 + 1 can be 3"
- 14:10 Dave Clarke (CLF, RAL, UK)
 - "Cryo-super resolution microscopy using solid immersion lenses"
- 14:30 Rainer Kaufmann (Hamburg University, Germany) "Challenges in super-resolution cryo-CLEM"
- 14:50 Johannes Stein (Max Planck Institute of Biochemistry, Munich, Germany) *"Flat-top TIRF illumination boosts DNA-PAINT imaging and quantification"*
- 15:10 Techno Bites Zeiss

15:20-15:50 Coffee/tea break

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Session 3 - Hardware II

15:50	Peter Dedecker (University of Leuven, Belgium)
	"Multicolor localization microscopy using discrete PSF engineering"

16:10 Nick Hall (University of Oxford, UK)

"DeepSIM: Adaptive optics enhancing deep super-resolution imaging in difficult samples"

16:30 Kseniya Karabchevskaya (University of Oxford, UK)

"Applying Structured Illumination Microscopy for live cell mechanics"

16:50 Mark Leake (University of York)

"Towards unpicking DNA-protein interactions at better than the optical resolution limit"

17:10 Techno Bites - Teledyne Photometrics

17:30-18:00 Facility tours III

18:00 Drinks & Dinner at Diamond house atrium

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Session 4 - Facilities

- 09:30 Cvic Innocent (Center for Life Science Boston, USA)

 "Innovative microscopy to evolve core facilities and core scientists"
- 09:50 Nick Barry (LMB Cambridge, UK)
 "Super-resolution microscopy at the LMB"
- 10:10 Debora Olivier (Ecole Polytechnique Palaiseau, France)
 "Increasing reproducibility in super-resolution microscopy a (french) facility perspective"
- 10:30 Ian Dobbie (Micron, Oxford)
- 10:50 Christoffer Lagerholm (WIMM Oxford, UK)
 "Supporting advanced imaging applications at the Wolfson Imaging Centre"

11:10-11:40 Coffee/tea break

Session 5 - Software

- 11:40 Marcel Muller (University of Leuven, Belgium)

 "The fairSIM project: Software and instrumentation for structured illumination microscopy"
- 12:00 Mick Phillips (University of Oxford, UK) "Controlling complex microscopes with python"
- 12:20 Ugis Sarkans (BioImage Archive, EBI, UK) "Bioimage data ecosystem"
- 12:40 Francis Wong (IDR, Dundee)

 "The Image Data Resource: Integrating, Mining & Publishing Imaging Data at Scale"

13:00-14:00 Lunch

14:00-16:00 Discussion

16:00-16:10 Closing remarks

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