



Super-Resolution Microscopy

EMBL COURSE



We have moved our website to embl.org/events. The content below is no longer being updated.

EMBL Courses and Conferences during the Coronavirus pandemic

With the onsite programme paused, many of our events are now being offered in virtual formats.

Registration is open as usual for many events, with back-up plans in place to move further courses and conferences online as necessary. Registration fees for any events affected by the COVID-19 disruption are fully refundable.

More information for participants of events at EMBL Heidelberg can be found [here](#).

Programme

Got something to say? Tweet it with [#EMBLmicroscopy](#)

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Day 1 - Monday 9 July 2018

Time

Location

09:00 - 09:15

Welcome

Courtyard A+B

Time		Location
09:15 - 10:15	Overview of current super-resolution microscopy techniques Marko Lampe, EMBL Heidelberg	Courtyard A+B
10:15 - 10:30	Coffee break	Foyer Courtyard
10:30 - 11:30	Introduction to Course Microscopes (Leica STED 3X) Ulf Schwarz, Leica Microsystems	Courtyard A+B
11:30 - 12:30	Introduction to Course Microscopes (Leica SR GSD) Oliver Schlicker, Leica Microsystems	Courtyard A+B
12:30 - 13:30	Canteen Lunch	Canteen
13:30 - 14:00	A quantitative map of Condensins on human mitotic chromatids Nike Walther	Courtyard A+B
14:00 - 16:30	Introduction to the SR GSD microscope and Single colour 2D SMLM using GSDIM / dSTORM (Group 1+2) Part One Introduction to the STED microscope and Single colour 2D STED (Group 3+4) Part One	Microscopy rooms 116 A+B ALMF 509D + 516B
16:30 - 17:00	Coffee break	Foyer Courtyard
17:00 - 19:30	Introduction to the SR GSD microscope and Single colour 2D SMLM using GSDIM / dSTORM (Group 3+4) Part One Introduction to the STED microscope and Single colour 2D STED (Group 1+2) Part One	Microscopy rooms 116 A+B ALMF 509D + 516B
19:30 - 20:30	Canteen Dinner	Canteen
20:30	Shuttle bus to ISG Hotel	

Day 2 - Tuesday 10 July 2018

Time		Location
09:00 - 09:45	Flash talks by participants	Courtyard A+B
09:45 - 10:00	Coffee break	Foyer Courtyard

Time

10:00 - 10:45	Flash talks by participants	Courtyard A+B
10:45 - 11:00	Coffee break	Foyer Courtyard
11:00 - 12:00	Zooming into Golgi biology with super-resolution imaging Francesca Bottanelli, Yale School of Medicine	Courtyard A+B
12:00 - 13:00	Canteen Lunch	Canteen
13:00 - 14:00	DNA spatial organization by OxEA based Multicolor super resolution Microscopy Leila Nahidiazar, Hubrecht Institute	Courtyard A+B
14:00 - 15:15	Thunderstorm Tutorial	Computer Training Lab
15:15 - 15:30	Coffee break	Foyer Courtyard
15:30 - 17:30	Multicolor 3D GSDIM / dSTORM (Group 1) PALM imaging (Group 2) Multicolour 3D STED (Group 3) Live Cell STED (Group 4)	Microscopy rooms 116 A+B ALMF 509D + 516B
17:30 - 17:45	Coffee break	Foyer Courtyard
17:45 - 19:45	Multicolor 3D GSDIM/dSTORM (Group 2) PALM imaging (Group 1) Multicolour 3D STED (Group 4) Live Cell STED (Group 3)	Microscopy rooms 116 A+B ALMF 509D + 516B
19:50	Shuttle bus to ISG Hotel	
20:00	Dinner and Worldcup Semi-Final at ISG Hotel	

Day 3 - Wednesday 11 July 2018

Time

09:00 - 09:30	Contextual super resolution imaging - fine structure preservation for light- and electron microscopy Jana Döhner, University of Zurich	Courtyard A+B
09:30 - 09:45	Coffee break	Foyer Courtyard
09:45 - 11:15	3D-SMLM, 4pi and adaptive optics Jörg Bewersdorf, Yale University School of Medicine	Courtyard A+B

Time

11:15 - 11:30	Coffee break	Foyer Courtyard
11:30 - 12:30	Protein counting at the nano-scale with single-molecule super-resolution imaging Mike Heilemann, Johann Wolfgang Goethe-University Frankfurt	Courtyard A+B
12:30 - 13:20	Canteen Lunch	Canteen
13:20 - 13:30	Group picture	Foyer Courtyard
13:30 - 14:30	Putting things into context: Super-resolution shadow imaging of brain structure Valentin Nägerl, University of Bordeaux, France	Courtyard A+B
14:30 - 16:30	Multicolour 3D GSDIM / dSTORM (Group 3) PALM imaging (Group 4) Multicolour 3D STED (Group 1) Live Cell STED (Group 2)	Microscopy rooms 116 A+B ALMF 509D + 516B
16:30 - 17:30	Information in localisation microscopy Susan Cox, King's College London	Courtyard A+B
17:30 - 17:45	Coffee break	Foyer Courtyard
17:45 - 19:45	Multicolour 3D GSDIM / dSTORM (Group 4) PALM imaging (Group 3) Multicolour 3D STED (Group 2) Live Cell STED (Group 1)	Microscopy rooms 116 A+B ALMF 509D + 516B
19:50	Shuttle bus to ISG Hotel	
20:00	Dinner and Worldcup Semi-Final at ISG Hotel	

Day 4 - Thursday 12 July 2018

Time

09:00 - 10:00	Towards structural cell biology with single molecule localization microscopy Jonas Ries, EMBL Heidelberg	Courtyard A+B
10:00 - 11:00	Sample Preparation for Super-Resolution Microscopy Marko Lampe, EMBL Heidelberg	Courtyard A+B
11:00 - 11:15	Coffee break	Foyer Courtyard

Time

11:15 - 11:45	Imaging the Glomerular Filtration Barrier using Stimulated Emission Depletion Microscopy David Unnersjö Jess, KTH Royal Institute of Technology	Courtyard A+B
11:45 - 12:45	Canteen Lunch	Canteen
12:45 - 15:00	Analysis of SMLM data (Group 1+2) SMLM with PAINT (Group 3+4)	Computer Training Lab / Microscopy rooms 116 A ALMF 509D
15:00 - 15:15	Coffee break	Foyer Courtyard
15:15 - 17:30	Analysis of SMLM data (Group 3+4) SMLM with PAINT (Group 1+2)	Computer Training Lab / Microscopy rooms 116 A ALMF 509D
17:30	Shuttle to downtown Heidelberg via ISG Hotel for city tour at 18:15 and course dinner at 19:45	

Day 5 - Friday 13 July 2018

Time

Location

09:00 - 10:00	Introduction to superresolution deconvolution Hans van der Voort	Courtyard A+B
10:00 - 10:15	Coffee break	Foyer Courtyard
10:15 - 11:15	Super-resolution STED-FCS measurements of molecular dynamics and challenges from biomedical research Christian Eggeling, University of Oxford	Courtyard A+B
11:15 - 11:30	Coffee break	Foyer Courtyard
11:30 - 12:30	In vivo STED microscopy Katrin Willig, MPI of Experimental Medicine	Courtyard A+B
12:30 - 13:30	Canteen Lunch	Canteen

Time		Location
13:30 - 14:30	Dissecting the structure and assembly of nuclear pores and mitotic chromosomes by super-resolution microscopy Jan Ellenberg, EMBL Heidelberg	Courtyard A+B
14:30 - 15:30	Biocompatible probes for STED imaging of cellular structures Grazvydas Lukinavicius, Max Planck Institute for Biophysical Chemistry	Courtyard A+B
15:30 - 16:00	Coffee break	Foyer Courtyard
16:00 - 16:30	STED-FCS introduction to practical	Courtyard A+B
16:30 - 18:00	STED-FCS (Group 1) Live cell STED II (Group 2) Deconvolution (Group 3+4)	Mic rooms 116 A+B ALMF 516B / Computer Training Lab
18:00 - 18:30	Coffee break	Foyer Courtyard
18:30 - 20:00	STED-FCS (Group 2) Live cell STED II (Group 1) Deconvolution (Group 3+4)	Mic rooms 116 B ALMF 516B / Computer Training Lab
20:00 - 21:00	Canteen Dinner	Canteen
21:00	Shuttle bus to ISG Hotel	

Day 6 - Saturday 14 July 2018

Time		
09:00 - 10:30	STED-FCS (Group 3) Live cell STED II (Group 4) Deconvolution (Group 1+2)	Microscopy rooms 116 B ALMF 516B / Computer Training Lab
10:30 - 10:45	Coffee break	Foyer Courtyard
10:45-12:15	STED-FCS (Group 4) Live cell STED II (Group 3) Deconvolution (Group 1+2)	Microscopy rooms 116 B ALMF 516B / Computer Training Lab

Time

12:15 - 13:15	Canteen Lunch	Canteen
13:15 - 14:00	STED-FCS-data analysis	Courtyard A+B
14:00 - 14:30	Planning of Super-Resolution Microscopy projects and troubleshooting for sample preparation	Courtyard A+B
14:30 - 14:45	Coffee break	Foyer Courtyard
14:45 - 17:45	Imaging of advanced samples for STED and GSDIM with practical tasks for the groups	Microscopy rooms 116 A+B ALMF 516B / ALMF 509D Computer Training Lab
17:45 - 18:15	Feedback and wrap-up	Courtyard A+B
18:20	Shuttle bus to train station and ISG Hotel	