



# Super-Resolution Microscopy

EMBL COURSE



**We have moved our website to [embl.org/events](https://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 The content below is no longer being updated.**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

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### Day 1 - Monday 8 July 2019

Time	Speaker	Location
09:00 - 09:15	<b>Welcome</b>	Courtyard A+B

Time	Speaker	Location
09:15 - 10:15	<b>Overview of current super-resolution microscopy techniques</b> Marko Lampe, EMBL Heidelberg	Courtyard A+B
10:15 - 11:15	<b>Introduction to Course Microscopes (Leica STED 3X)</b> Ulf Schwarz, Leica Microsystems	Courtyard A+B
11:15-11:30	<b>Coffee break</b>	Foyer Courtyard
11:30 - 12:30	<b>Introduction to Course Microscopes (Leica SR GSD)</b> Leica Microsystems	Courtyard A+B
12:30 - 13:30	<b>Canteen Lunch</b>	Canteen
13:30 - 15:30	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
15:30 - 15:45	<b>Coffee break</b>	Foyer Courtyard
15:45 - 16:45	<b>Dissecting the structure and assembly of nuclear pores and mitotic chromosomes by super-resolution microscopy</b> Jan Ellenberg, EMBL Heidelberg	Courtyard A+B
16:45 - 18:45	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
18:45 - 19:00	Wrap-up session	Courtyard A+B
19:00 - 20:00	<b>Canteen Dinner</b>	Canteen
20:00	Shuttle bus to ISG Hotel	

## Day 2 - Tuesday 9 July 2019

Time	Speaker	Location
09:00 - 11:00	Flash talks by participants	Courtyard A+B
11:00 - 11:15	<b>Coffee break</b>	Foyer Courtyard
11:15 - 12:15	<b>Imaging cellular ultrastructures using Expansion microscopy (U-ExM)</b> Davide Gambarotto, University of Geneva	Courtyard A+B
12:15 - 13:15	<b>Canteen Lunch</b>	Canteen
13:15 - 14:15	<b>Deconvolution for STED microscopy</b> Jürgen Reymann and Kai Walter, Leica Microsystems	Courtyard A+B
14:15 - 16:15	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
16:15 - 16:30	<b>Coffee break</b>	Foyer Courtyard
16:30 - 18:30	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
18:30 - 18:45	Wrap-up session	Courtyard A+B
18:45 - 20:00	<b>Canteen Dinner</b>	Canteen
20:00	Shuttle bus to ISG Hotel	

## Day 3 - Wednesday 10 July 2019

Time	Speaker	Location
09:00 - 10:00	<b>Probes for live cell imaging, a lively field</b> Luc Reymond, EPFL Lausanne	Courtyard A+B
10:00 - 11:00	<b>Protein counting at the nano-scale with single-molecule super-resolution imaging</b> Mike Heilemann, Goethe University Frankfurt	Courtyard A+B
11:00 - 11:15	<b>Coffee break</b>	Foyer Courtyard

Time	Speaker	Location
11:15 - 12:15	<b>Imaging the Glomerular Filtration Barrier using Light Microscopy</b> David Unnersjö Jess, KTH Royal Institute of Technology	Courtyard A+B
12:15 - 12:25	<b>Group picture</b>	
12:25 - 13:25	<b>Canteen Lunch</b>	Canteen
13:25 - 15:25	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
15:25 - 15:40	<b>Coffee break</b>	Foyer Courtyard
15:40 - 16:40	<b>Laser-scanning microscopy with single-photon detector array</b> Giuseppe Vicidomini, IIT Central Research Lab Genova	Courtyard A+B
16:40 - 18:40	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
18:40 - 19:40	<b>Canteen Dinner (together with EES19-06 Symposium)</b>	Canteen
19:40 - 20:00	Wrap-up session	Courtyard A+B
20:00	Shuttle bus to ISG Hotel	

## Day 4 - Thursday 11 July 2019

Time	Speaker	Location
08:30 - 09:30	<b>Contextual super resolution imaging - fine structure preservation for light- and electron microscopy</b> Jana Döhner, University of Zurich	Courtyard A+B
09:30 - 10:30	<b>Information in localisation microscopy</b> Susan Cox, King's College London	Courtyard A+B
10:30 - 10:45	<b>Coffee break</b>	Foyer Courtyard

Time	Speaker	Location
10:45 - 11:45	<b>Superresolution STED spectroscopy - prospects for biophysical research</b> Christian Eggeling, University of Oxford	Courtyard A+B
11:45 - 12:45	<b>Canteen Lunch</b>	Canteen
12:45 - 13:45	<b>In vivo STED microscopy</b> Katrin Willig, MPI of Experimental Medicine	Courtyard A+B
13:45 - 14:45	<b>Investigating the mechanisms of polarized sorting with stimulated emission depletion (STED) nanoscopy</b> Francesca Bottanelli, FU Berlin	Courtyard A+B
14:45 - 15:00	<b>Coffee break</b>	Foyer Courtyard
15:00 - 17:00	Analysis of SMLM data (Group 1+2) Live cell STED II (Group 3) STED-FCS (Group 4)	Computer Training Lab Microscopy rooms 116 A ALMF 509D
17:05	<b>Shuttle bus to Heidelberg castle and course dinner in downtown Heidelberg</b>	

## Day 5 - Friday 12 July 2019

Time	Speaker	Location
09:00 - 10:00	<b>STED imaging of centrosome proteins: From sample prep to image analysis</b> Rifka Vlijm, Max Planck Institute for Medical Research	Courtyard A+B
10:00 - 10:15	<b>Coffee break</b>	Foyer Courtyard
10:15 - 11:15	SMLM Image Processing with SMAP Ulf Matti / Yiming Li, EMBL Heidelberg	Courtyard A+B
11:15 - 11:45	Sample Preparation Sebastian Schnorrenberg / Marko Lampe, EMBL Heidelberg	Courtyard A+B
11:45 - 12:45	<b>Canteen Lunch</b>	Canteen

Time	Speaker	Location
12:45 - 14:45	Analysis of SMLM data II (Group 1+2) Live cell STED II (Group 4) STED-FCS (Group 3)	Computer Training Lab Microscopy rooms 116 A ALMF 509D
14:45 - 15:00	<b>Coffee break</b>	Foyer Courtyard
15:00 - 17:00	Analysis of SMLM data (Group 3+4) Live cell STED II (Group 1) STED-FCS (Group 2)	Microscopy rooms 116 B ALMF 516B Computer Training Lab
17:00 - 17:15	<b>Coffee break</b>	Foyer Courtyard
17:15 - 19:15	Analysis of SMLM data (Group 3+4) Live cell STED II (Group 2) STED-FCS (Group 1)	Microscopy rooms 116 B ALMF 516B Computer Training Lab
19:20	Shuttle bus to ISG Hotel	
19:30 - 20:30	<b>Dinner at ISG Hotel</b>	ISG Hotel

## Day 6 - Saturday 13 July 2019

Time	Speaker	Location
08:30 - 10:00	PAINT I (Group 1) PAINT II (Group 2) STED-FLIM (Group 3) STED Advanced Imaging (Group 4)	Microscopy rooms 116 B ALMF 516B / ALMF 509D Computer Training Lab
10:00 - 11:30	PAINT I (Group 4) PAINT II (Group 1) STED-FLIM (Group 2) STED Advanced Imaging (Group 3)	Microscopy rooms 116 B ALMF 516B / ALMF 509D Computer Training Lab
11:30 - 12:30	<b>Canteen Lunch (together with EES19-06 Symposium)</b>	Canteen

Time	Speaker	Location
12:30 - 13:30	Sample Preparation – Hands on Sebastian Schnorrenberg / Marko Lampe, EMBL Heidelberg	Courtyard A+B
13:30 - 15:00	PAINT I (Group 3) PAINT II (Group 4) STED-FLIM (Group 1) STED Advanced Imaging (Group 2)	Microscopy rooms 116 B ALMF 516B / ALMF 509D Computer Training Lab
15:00 - 15:15	<b>Coffee break</b>	Foyer Courtyard
15:15 - 16:45	PAINT I (Group 2) PAINT II (Group 3) STED-FLIM (Group 4) STED Advanced Imaging (Group 1)	Microscopy rooms 116 B ALMF 516B / ALMF 509D Computer Training Lab
16:45 - 17:15	Feedback and wrap-up	Courtyard A+B
17:20	<b>Shuttle bus to ISG Hotel and main train station</b>	