



Cryo-Electron Microscopy and 3D Image Processing

EMBO PRACTICAL 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 The content below is no longer being updated.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

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Day 1 - Sunday 2 September 2018

Time	Speaker	Location
13:45 - 14:00	Arrival & Registration	Courtyard Rooms A & B

Time	Speaker	Location
14:00 - 14:15	Welcome & Introduction	Courtyard Rooms A & B
14:15 - 15:00	Three-dimensional EM Carsten Sachse - EMBL Heidelberg, Germany	Courtyard Rooms A & B
15:00 - 16:00	Single particle introduction Bettina Boettcher - University of Würzburg, Germany	Courtyard Rooms A & B
16:00 - 17:00	Coffee break	
17:00 - 18:00	Introduction to cryo-tomography and sub- tomogram averaging Giulia Zanetti - Birkbeck College, UK	Courtyard Rooms A & B
18:00 - 19:00	An overview of cryo-EM Richard Henderson - MRC Laboratory of Molecular Biology, UK	Courtyard Rooms A & B
from 19:30	Barbecue Dinner	ISG Hotel

Day 2 - Monday 3 September 2018

Time	Speaker	Location
09:00 - 10:00	The electron microscope Juergen Plitzko - Max Planck Institute for Biochemistry, Germany	Courtyard Rooms A & B
10:00 - 11:00	Approaches to sample preparation Lori Passmore - MRC Laboratory of Molecular Biology, UK	Courtyard Rooms A & B
11:00 - 12:00	Heterogeneity Slavica Jonic - CNRS and Sorbonne Université, France	Courtyard Rooms A & B
12:00 - 12:15	Group photo	
12:15 - 14:00	Lunch break	EMBL Canteen
14:00 - 15:00	4D cryo-EM Michael Schatz - Image Science, Germany	Courtyard Rooms A & B

Time	Speaker	Location
	Reproducibility approaches to heterogeneity	
15:00 - 16:00	Pawel A. Penczek - The University of Texas, USA	Courtyard Rooms A & B
16:00 - 17:00	Coffee break	
	Focussed classification/refinement	
17:00 - 18:00	Sjors Scheres - MRC Laboratory of Molecular Biology, UK	Courtyard Rooms A & B
18:00 - 19:00	Dinner	EMBL Canteen
19:00 - 21:00	Student talks	Rooftop Lounge

Day 3 - Tuesday 4 September 2018

Time	Speaker	Location
	Maximum likelihood	
09:00 - 10:00	Nikolaus Grigorieff - HHMI-Janelia Research Campus, USA	Courtyard Rooms A & B
	High-resolution tomography	
10:00 - 11:00	John Briggs - MRC Laboratory of Molecular Biology, UK	Courtyard Rooms A & B
11:00 - 12:00	Panel discussion	Courtyard Rooms A & B
12:00 - 13:00	Lunch break	EMBL Canteen
	Main practical	
13:00 - 18:00		Flex Labs, Computer Training Lab & Courtyard Rooms
18:00 - 19:00	Dinner	EMBL Canteen
19:00 - 21:00	Student talks	Rooftop Lounge

Day 4 - Wednesday 5 September 2018

Time	Speaker	Location
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Time	Speaker	Location
09:00 - 10:00	Automated microscopy Wim Hagen - EMBL Heidelberg, Germany	Courtyard Rooms A & B
10:00 - 11:00	Phase plate theory Radostin Danev - Max Planck Institute for Biochemistry, Germany	Courtyard Rooms A & B
11:00 - 12:00	Panel discussion	Courtyard Rooms A & B
12:00 - 13:00	Lunch break	EMBL Canteen
13:00 - 18:00	Main practical	Flex Labs, Computer Training Lab & Courtyard Rooms
18:00 - 19:00	Dinner	EMBL Canteen
19:00 - 21:00	Student talks	Rooftop Lounge

Day 5 - Thursday 6 September 2018

Time	Speaker	Location
09:00 - 10:00	Phase plate applications Sara Sandin - Nanyang Technological University Singapore, Singapore	Courtyard Rooms A & B
10:00 - 11:00	Online microscopy Henning Stahlberg - University of Basel, Switzerland	Courtyard Rooms A & B
11:00 - 12:00	Heterogeneity and structural disorder Ali Punjani - University of Toronto, Canada	Courtyard Rooms A & B
12:00 - 13:00	Lunch break	EMBL Canteen
13:00 - 18:00	Main practical	Flex Labs, Computer Training Lab & Courtyard Rooms
18:00 - 19:00	Pizza Dinner	Rooftop Lounge

Time	Speaker	Location
19:00 - 19:20	Sponsor presentation: JEOL Eberhard Baier - JEOL, Germany	Rooftop Lounge
19:20 - 21:00	Pannel discussion	Rooftop Lounge

Day 6 - Friday 7 September 2018

Time	Speaker	Location
09:00 - 10:00	EMBL Cryo-EM platform tour Carsten Sachse - EMBL Heidelberg, Germany	Courtyard Rooms A & B
10:00 - 11:00	Atomic model fitting Maya Topf - Birkbeck College, UK	Courtyard Rooms A & B
11:00 - 12:00	Atomic coordinate refinement for high-resolution EM maps Arjen Jakobi - Kavli Institute for Nanoscience Delft, The Netherlands	Courtyard Rooms A & B
12:00 - 13:00	Lunch break	EMBL Canteen
13:00 - 15:00	Student group presentations	Courtyard Rooms A & B
15:00 - 19:00	Break	
from 19:00	Course Dinner	Restaurant Schnookeloch

Day 7 - Saturday 8 September 2018

Time	Speaker	Location
10:00 - 11:00	Integrative Modeling of Macromolecular Assemblies Jan Kosinski - EMBL Hamburg, Germany	Courtyard Rooms A & B
11:00 - 12:00	2nd practical	Flex Labs, Computer Training Lab & Courtyard Rooms
12:00 - 13:00	Lunch break	EMBL Canteen

Time	Speaker	Location
13:00 - 18:00	2nd practical	Flex Labs, Computer Training Lab & Courtyard Rooms
18:30 - 19:30	Flammkuchen Dinner	ISG Hotel
19:30 - 21:30	Student talks	ISG Hotel

Day 8 - Sunday 9 September 2018

Time	Speaker	Location
09:00 - 09:25	Sponsor presentation: Making cryo-tomography more widely applicable for cell biology Alexander Rigort - FEI / Thermo Fisher, Germany	Courtyard Rooms A & B
09:25 - 09:45	Sponsor presentation: Gatan Andreas Kastemüller - Gatan, Germany	Courtyard Rooms A & B
09:45 - 12:00	2nd practical	Flex Labs, Computer Training Lab & Courtyard Rooms
12:00 - 13:00	Lunch break	EMBL Canteen
13:00 - 18:00	2nd practical	Flex Labs, Computer Training Lab & Courtyard Rooms
18:00 - 19:00	Dinner	EMBL Canteen
19:00 - 21:00	Panel discussion	Rooftop Lounge

Day 9 - Monday 10 September 2018

Time	Speaker	Location
09:00 - 10:30	Site Specific Cryo-FIB Preparation Aimed at <i>in situ</i> Cryo-Electron Tomography Julia Mahamid - EMBL Heidelberg, Germany	Courtyard Rooms A & B

Time	Speaker	Location
10:30 - 11:30	Final discussion	Courtyard Rooms A & B
11:30 - 12:00	Packed lunch and departure	Courtyard Rooms A & B