

## Inserm Workshop 283

### Tomographie cryo-électronique : connecter les échelles du vivant Cryo-Electron Tomography: Bridging Scales in Biology

19-21 mai 2025 / **May 19-21, 2025** ■ Bordeaux, France

Lundi 19 mai 2025 ■ **Monday May, 19<sup>th</sup> 2025**

15:30 - 16:00	Reception of participants
16:00 - 16:15	Welcome and presentation by the organizers
<b>SESSION I</b>	<b>SAMPLE PREPARATION AND DATA ACQUISITION FOR CRYO ELECTRON TOMOGRAPHY</b>
16:15 - 17:00	Preparation of cell and tissue specimen for cryo-electron tomography <b>Bettina Zens (ISTA, Klosterneuburg, Austria)</b>
17:00 - 17:30	Coffee break
17:30 - 18:15	Microscope setup and tomogram acquisition strategies <b>Wim Hagen (Thermo Fisher Scientific, Eindhoven, Netherlands)</b>
18:15 - 19:00	Automated Data Acquisition with SerialEM: Tilt Series and Beyond <b>Günter Resch (Nexperion, Vienna, Austria)</b>
19:30	Dinner

Mardi 20 mai 2025 ■ **Tuesday May, 20<sup>th</sup> 2025**

06:30 - 08:30	Breakfast
<b>SESSION II</b>	<b>CORRELATING LIGHT MICROSCOPY AND CRYO-ELECTRON TOMOGRAPHY</b>
08:30 - 09:15	Correlative Light, Electron, soft X-ray imaging techniques (CLEXM): principles and application on a model system <b>Pierre Montaville (Synchrotron Soleil, Gif Sur Yvette, France)</b>
09:15 - 10:00	CLEM and super resolution cryo fluorescence microscopy <b>Rainer Kaufmann (CSSB, Hamburg, Germany)</b>
10:00 - 10:30	Coffee break
<b>SESSION III</b>	<b>DATA PRE-PROCESSING, TOMOGRAM RECONSTRUCTION</b>
10:30 - 11:15	Preprocessing and tomogram reconstruction <b>Beata Turoňová (MPI of Biophysics, Frankfurt, Germany)</b>
11:15 - 12:00	Filtering, denoising and other approaches for improved tomogram visualization <b>Florian Fäßler (IGBMC, Strasbourg, France)</b>
12:00 - 14:00	Lunch

<b>SESSION IV</b>	<b>ANALYSIS STRATEGIES FOR CRYO-ELECTRON TOMOGRAPHY DATA SETS</b>
14:00 - 14:45	Overview of analysis possibilities, application and targeting strategies <b>Lindsay Baker (Kavli Institute for Nanoscience Discovery, Oxford, UK)</b>
14:45 - 15:30	Multiscale analysis through segmentation and subvolume averaging <b>Vojtěch Pražák (CSSB, Hamburg, Germany)</b>
15:30 - 16:00	<b>Coffee Break</b>
16:00 - 16:45	TBD <b>Daniel Castaño Díez (INSTITUTO BIOFISIKA CSIC, Leioa, Spain)</b>
16:45 - 17:30	Cryo-ET at full Warp 2 <b>Dimitry Tegunov (Genentech, San Francisco, USA)</b>
17:30 - 18:15	High-resolution structure determination in situ <b>Florian Schur (ISTA, Klosterneuburg, Austria)</b>
19:30 - 20:15	<b>Cocktail</b>
20:15	<b>Dinner</b>

Mercredi 21 mai 2025 ■ **Wednesday May, 21<sup>st</sup> 2025**

06:30 - 08:30	<b>Breakfast</b>
<b>SESSION V</b>	<b>RECENT RESEARCH HIGHLIGHTS AND INTEGRATIVE APPROACHES</b>
08:30 - 09:15	In situ cryo-electron tomography of influenza A virus replication and assembly <b>Petr Chlanda (BioQuant, Heidelberg, Germany)</b>
09:15 - 10:00	The multi-scale architecture of mammalian sperm tail as revealed by cryo-electron tomography and single particle analysis <b>Tzviya Zeev-Ben-Mordehai (Utrecht University, Utrecht, Netherlands)</b>
10:00 - 10:30	<b>Coffee Break</b>
10:30 - 11:15	CryoET insights into mRNA translation and related processes <b>Juliette Fedry (MRC LMB, Cambridge, UK)</b>
11:15 - 12:00	Biomolecular conformational landscapes by cryo-ET data analysis based on MD simulations <b>Slavica Jonic (IMPMC, Paris, France)</b>
12:00 - 14:00	<b>Lunch</b>
14:00	<b>Departure</b>