

Cryo-Electron Tomography: Bridging Scales in Biology



Christiane RIEDEL (ENS Lyon), Florian FAESSLER (IGBMC, Illkirch), Irina GUTSCHE (IBS, Grenoble) & Emmanuelle QUEMIN (I2BC, Gif-sur-Yvette)

The atelier will provide an overview of cryo-electron tomography with its theoretical principles, workflows, current limitations, and potential to offer structural insights in situ. All these aspects will be showcased in combination with recent results by internationally renowned experts in the field.



Deadline: **February 14, 2025**

PHASE I THEORETICAL



May
19 - 21 2025



Bordeaux

SAMPLE PREPARATION AND DATA ACQUISITION FOR CRYO ELECTRON TOMOGRAPHY

Bettina ZENS (ISTA, AUT), Wim HAGEN (Thermo Fisher Scientific, NLD) & Günter RESCH (Nexperion, AUT)

CORRELATING LIGHT MICROSCOPY & CRYO-ELECTRON TOMOGRAPHY

Pierre MONTAVILLE (Synchrotron Soleil, FRA) & Rainer KAUFMANN (CSSB, DEU)

DATA PRE-PROCESSING, TOMOGRAM RECONSTRUCTION

Beata TURANOVA (MPI of Biophysics, DEU) & Florian FAESSLER (IGBMC, FRA)

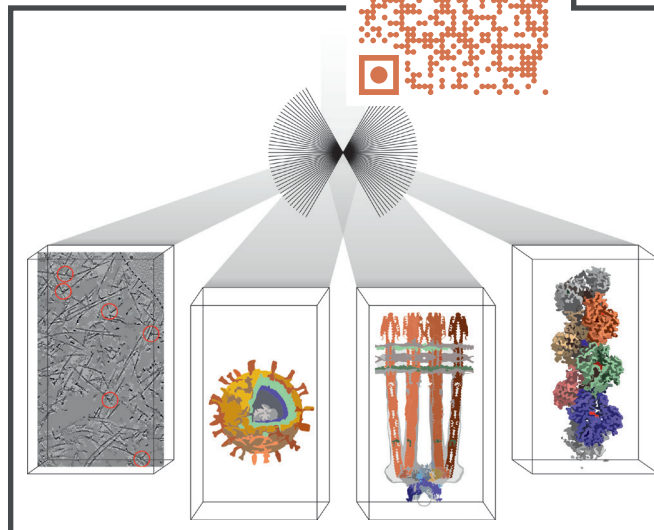
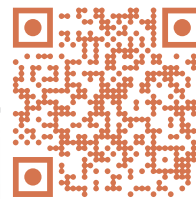
ANALYSIS STRATEGIES FOR CRYO-ELECTRON TOMOGRAPHY DATA SETS

Lindsay BAKER (Kavli Institute for Nanoscience Discovery, GBR), Vojta PRAŽÁK (CSSB, DEU), Daniel CASTANO-DIEZ (Instituto BIOFISIKA CSIC, ESP), Dimitry TEGUNOV (Genentech, USA) & Florian SCHUR (ISTA, AUT)

RECENT RESEARCH HIGHLIGHTS AND INTEGRATIVE APPROACHES

Petr CHLANDA (BioQuant, DEU), Tzvyia Zev BEN MORDEHAI (Utrecht University, NLD), Juliette FEDRY (MRC LMB, GBR) & Slavica JONIC (IMPMC, FRA)

Inserm
Workshop **283**



PHASE II PRACTICAL



June
30 - 02 July 2025



Lyon

Participants of Phase II will be introduced to practical aspects of the central cryo-electron tomography workflow with an emphasis on steps that are not specimen specific and could be carried out by researchers themselves after making use of a national center to acquire data.

In more concrete terms, they will participate in tilt-series acquisition on (insert microscope name) electron microscope, reconstruct tomograms using different approaches and employ subtomogram averaging for determining an initial structure of a macromolecular complex.

SELECTION: 10 trainees will be selected for each city among Phase I participants.

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