Course for Ph.D. students

Cryo-electron Microscopy of Biological Macromolecules

(4 ECTS)

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University of Cambridge (UK)
Course Language: English



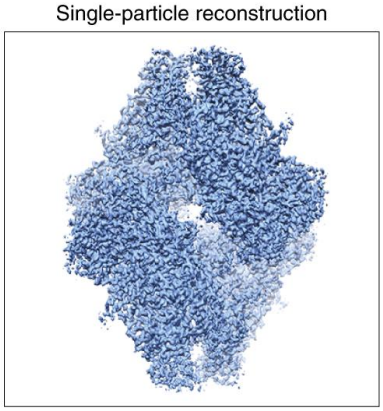
The course will take place according to the following agenda:

12/5/2025 – room C, Plesso di Farmacia (14:30 - 17:30)
13/5/2025 – Multimedia Lab 1 (14:30 - 17:30)
14/5/2025 – Multimedia Lab 1 (14:30 - 17:30)
15/5/2025 – Multimedia Lab 1 (14:30 - 17:30)
19/5/2025 – Multimedia Lab 1 (14:30 - 17:30)
20/5/2025 – Multimedia Lab 1 (14:30 - 17:30)
21/5/2025 – Multimedia Lab 1 (14:30 - 17:30)
22/5/2025 – Multimedia Lab 1 (14:30 - 17:30)

On May 7, 2025, a preliminary and mandatory session (14:30 - 16:30) will be held in room E (Plesso Aule delle Scienze) to prepare students for the activities proposed in the course.

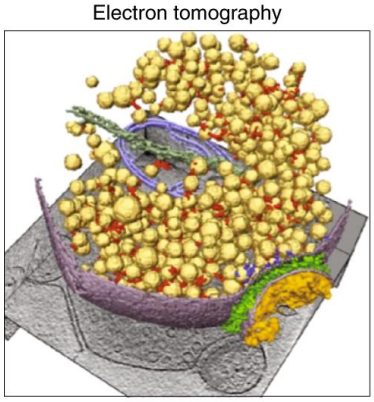
This course provides an in-depth introduction to cryo-electron microscopy (cryo-EM), a key method for studying macromolecular structures at high resolution. Participants will learn about the entire workflow, from imaging principles to 3D reconstruction, with a focus on emerging applications such as cryo-electron tomography and AI-assisted model building. Case studies and group discussions will encourage a hands-on understanding of cryo-EM's impact in molecular biology.

Single-particle reconstruction



Isolated single particles

Electron tomography



Whole cells and organelles

The course is organized by the Ph.D. Course in Drug Sciences and it is open to all the Ph.D. students of the University of Parma.

To attend the course please fill the form:
https://bit.ly/cryoem4phd

Enrolment is open until 05/05/2025

For further information:

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