

cryo-EM Course

at the Laboratory for BioMolecular Structure (LBMS)

This course will be held as a virtual event.
June 15–18, 2021

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Day 1 - Tuesday 15 June 2021

Time (EDT)	Speaker	Topic
10:00-10:15	Liguo Wang (BNL)	Introduction to LBMS
10:15-11:00	Fred Sigworth (Yale)	Introduction to electron microscopy and structural biology
11:00-12:30	Mark Ebrahim (Rockefeller)	Introduction to electron microscope and image formation process
12:30-13:30		Lunch break
13:30-14:30	Liguo Wang (BNL)	Introduction to negative staining and cryo-electron microscopy
14:30-17:00	Guobin Hu (BNL)	Single-particle sample preparation tutorial and demonstration (negative staining and cryogenic vitrification)

Day 2 - Wednesday 16 June 2021

Time (EDT)	Speaker	Topic
10:00-11:00	Fred Sigworth (Yale)	Single particle reconstruction: theory, application and available software
11:00-12:00	Oliver Clarke (Columbia)	Model building, refinement, and validation.
12:00-13:00		Lunch break
13:00-15:00	Dongyan Tan (SBU)	Single-particle data analysis workflow tutorial and demonstration
15:00-15:10		Coffee break
15:10-17:00	Guobin Hu (BNL)	EPU single particle data collection tutorial and demonstration

Day 3 - Thursday 17 June 2021

Time (EDT)	Speaker	Topic
10:00-11:00	Jun Liu (Yale)	Introduction to Cryo-electron tomography
11:00-13:00	Jianfeng Lin (Yale)	Cryo-ET sample preparation tutorial and demonstration
13:00-14:00		Lunch break
14:00-15:00	Tamir Gonen (UCLA)	MicroED: theory, application and available software
15:00-17:00	Jun Liu (Yale)	Cryo-ET data collection and reconstruction tutorial and demonstration

Day 4 - Friday 18 June 2021

Time (EDT)	Speaker	Topic
10:00-11:00	Raphael Park (Yale)	Tomographic data segmentation tutorial and demonstration.
11:00-13:00	Muyan Chen (BCM)	Subtomography averaging tutorial and demonstration in EMAN2
13:00-14:00	Qun Liu (BNL) Yong Xiong (Yale)	Discussion