

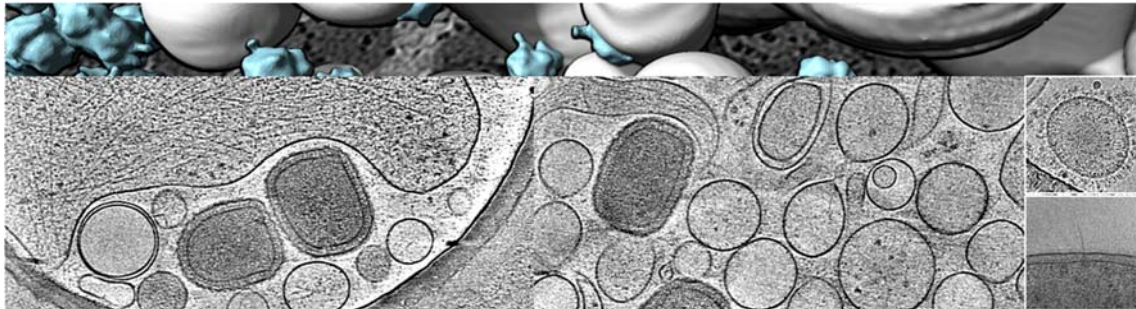
## Online cryoET workshop

### New Advances in CryoEM for Molecular and Cell Biology

Data: 8<sup>th</sup> Sep & 9<sup>th</sup> Sep

Participation is free but registration is required for WebEX access information

Registration link: <https://cvent.me/Om2dyg>



Understanding how cells, tissues and whole organisms work requires visualizing protein, membrane and organelle ultrastructure in their cellular context.

Cryo-electron tomography provides 3D snapshots of proteins or other subcellular structures at work within their functional cellular environments, allowing researchers to investigate how membranes, protein complexes and cellular organelles work together to carry out major processes in a cell. This is because cryo-ET delivers both structural information about individual proteins/membrane/organelle structure as well as their spatial arrangements within the cell in their near-native states, making it a truly unique technique. Cryo-ET has enormous potential for cell biology as it bridges the gap between light/super-resolution microscopy and near-atomic resolution techniques like single-particle analysis cryo-electron microscopy.

In the past two years, **Academia Sinica has established a state-of-the-art cryo-EM facility and proudly provides a world class platform for atomic resolution structures of purified proteins.** Recently, we are establishing our cryo-correlative light (fluorescence) and electron microscopy (CLEM) and cryo-ET for cellular ultrastructures *in situ*. On Sep 8 and 9, **Academia Sinica** and **Thermo Fisher Scientific** invite you to attend an introductory session on cryo electron tomography for cell biologists. On-line demonstration will provide you an overall workflow and practical consideration for your cryo-ET experiments including steps from sample preparation to data processing and presentation.

Currently, we have Profs. Wah Chiu (NAS elected member, S2C2 director), Werner Kühlbrandt (Director of the Max Planck Institute of Biophysic). Peijun Zhang (Director of eBIC) and Yi-Wei Chang (UPenn) to talk about their recent exciting findings. The selected talks will show you cutting-edge researches related to how cells respond to pathogenic infection, virus infection, and organelle architecture in plant cells.



## New Advances in CryoEM for Molecular and Cell Biology

<i>Agenda</i>				
	<i>Time</i>	<i>Topic</i>	<i>Speaker</i>	<i>Affiliation</i>
<i>Day 1 (Sep 8)</i>	09:30-09:40	Opening talk	Prof. Ming-Daw Tsai	Academia Sinica
	09:40-10:30	Cryo-electron tomography of cells in normal and pathological states	Prof. Wah Chiu	Stanford-SLAC Cryo-EM Center
	10:30-10:40	Tea break		
	10:40-11:10	In-cell structures of the rhoptry secretion system in apicomplexan parasites revealed by cryo-ET	Prof. Yi-Wei Chang	University of Pennsylvania
	11:10-11:15	A message from Senior Director of Global Life Sciences SDD Analytical Instruments Group	Marc Peeters	Thermo Fisher Scientific
	11:15-12:00	Cryo-electron tomography of cells in normal and pathological states	Eric Chen	Thermo Fisher Scientific
	12:00-14:00	Lunch break		
	14:00-14:30	Turn on the light: Aquilos 2 with iFLM	Alex Rigort	Thermo Fisher Scientific
	14:30-15:00	CLEM	Alex Rigort	Thermo Fisher Scientific
	15:00-15:15	Tea break		
	15:15-15:45	Live Demo: Sample Vitrification	Fangfang Zhang	Thermo Fisher Scientific
	15:45-16:30	Live Demo: Cryo-FIB milling	Rui Ma	Thermo Fisher Scientific
	16:30-17:00	Q&A	Prof. Meng-Chiao Joseph Ho	Academia Sinica
	17:00-17:30	Visualizing virus infection with electrons	Prof. Peijun Zhang	electron Bio-Imaging Centre



## New Advances in CryoEM for Molecular and Cell Biology

<i>Agenda</i>				
	<i>Time</i>	<i>Topic</i>	<i>Speaker</i>	<i>Affiliation</i>
<i>Day 2 (Sep 9)</i>	14:00-14:05	<i>A message from Director of Worldwide Applications</i>	<i>Erwan Sourty</i>	<i>Thermo Fisher Scientific</i>
	14:05-14:55	<i>Live Demo: Tomography Data Collection</i>	<i>Sheng Liu</i>	<i>Thermo Fisher Scientific</i>
	14:55-15:30	<i>Live Demo: Tomography Data 3D Reconstruction</i>	<i>Shiny Shi &amp; Jinhuan Chen</i>	<i>Thermo Fisher Scientific</i>
	15:30-16:00	<i>Tea break</i>		
	16:00-16:45	<i>Live Demo: Amira</i>	<i>Jaguar Li</i>	<i>Thermo Fisher Scientific</i>
	16:45-17:00	<i>Tea break</i>		
	17:00-17:30	<i>Electron cryo-tomography of energy-converting membrane systems</i>	<i>Prof. Werner Kühlbrandt</i>	<i>Max Planck Institute of Biophysics</i>
	17:30	<i>Q&amp;A and wrap up</i>	<i>Prof. Meng-Chiao Joseph Ho</i>	<i>Academia Sinica</i>