

# ISGC 2026: CRYO-EM & ASCEM WORKSHOP

Location: 1<sup>st</sup> Conference Room, 3F, Building for Humanities and Social Sciences

## PROGRAM

### 2026/03/16 (M)

09:00 – 09:10	Opening remarks <i>Dr. Shang-Te Danny Hsu / Research Fellow &amp; Deputy Director, Institute of Biological Chemistry, AS</i>
09:10 – 10:00	Introduction of cryo-EM applications in biological systems <i>Dr. Piotr Draczkowski / Bioinformatician &amp; Research Engineer, SciLifeLab &amp; Medical Uni. of Lublin</i>
10:00 – 10:30	From sample conditions accessible high-resolution results <i>Dr. Yuan-Chih Chang / Research Specialist, Institute of Biological Chemistry, AS</i>
<b>10:30 – 11:00</b>	<b>Coffee Break</b>
11:00 – 11:30	General Cryo-EM data processing workflow and how DICOS can help <i>Dr. Chun-Hsiung Wang / Staff Scientist, Academia Sinica Cryo-EM Facility</i>
11:30 – 12:10*	CryoSPARC tutorial Part 1 - CTF, particle picking, 2D classification (based on apoferritin) <i>Dr. Chun-Hsiung Wang / Staff Scientist, Academia Sinica Cryo-EM Facility</i>
<b>12:10 – 14:00</b>	<b>Lunch Break at 4F, Building for Humanities and Social Sciences</b>
14:00 – 14:40*	CryoSPARC tutorial Part 2 - 3D reconstruction (Heterogeneous & Homogeneous refine, NU-refinement) <i>Dr. Chun-Hsiung Wang / Staff Scientist, Academia Sinica Cryo-EM Facility</i>
14:40 – 15:30	Introduction of helical reconstruction <i>Mr. Chih-Hsuan Lee / Institute of Biomedical Sciences, AS</i>
<b>15:30 – 16:00</b>	<b>Coffee Break</b>
16:00 – 17:00*	CryoSPARC tutorial Part 3 - Model building and visualization by Chimera <i>Dr. Chun-Hsiung Wang / Staff Scientist, Academia Sinica Cryo-EM Facility</i>
17:00 – 17:30	Open Discussion and/or Consultation

#### \* Notes for CryoSPARC tutorial Part 1-3 participants:

1. The lectures will cover data processing hands-on, it is recommended to bring your own laptop for practice.
2. Please obtain the CryoSPARC license at least one week before the workshop date for practicing on-site. (CryoSPARC license request link: <https://guide.cryosparc.com/setup-configuration-and-management/how-to-download-install-and-configure/obtaining-a-license-id>).

### 2026/03/17 (T)

<b>12:30 – 14:00</b>	<b>Lunch Break at 4F, Building for Humanities and Social Sciences</b>
14:00 – 15:30	CryoEM data processing 1.1 - Resolving conformational variability with emphasis on symmetric systems <i>Dr. Piotr Draczkowski / Bioinformatician &amp; Research Engineer, SciLifeLab &amp; Medical Uni. of Lublin</i>
<b>15:30 – 16:00</b>	<b>Coffee Break</b>
16:00 – 17:30	CryoEM data processing 1.2 - Resolving conformational variability with emphasis on symmetric systems <i>Dr. Piotr Draczkowski / Bioinformatician &amp; Research Engineer, SciLifeLab &amp; Medical Uni. of Lublin</i>

### 2026/03/18 (W)

<b>12:30 – 14:00</b>	<b>Lunch Break at 4F, Building for Humanities and Social Sciences</b>
14:00 – 15:30	CryoEM data processing 2.1 - Map enhancement, validation, and AI tools <i>Dr. Piotr Draczkowski / Bioinformatician &amp; Research Engineer, SciLifeLab &amp; Medical Uni. of Lublin</i>
<b>15:30 – 16:00</b>	<b>Coffee Break</b>
16:00 – 17:30	CryoEM data processing 2.2 - Map enhancement, validation, and AI tools <i>Dr. Piotr Draczkowski / Bioinformatician &amp; Research Engineer, SciLifeLab &amp; Medical Uni. of Lublin</i>