

## eBIC *in situ* Cryo-ET Workshop 2025

08<sup>th</sup> – 12<sup>th</sup> September 2025

In-person / hybrid event

Organisers: Christos Savva (eBIC), Emma Buzzard (eBIC), Jason Van Rooyen (eBICi) & Anna Rackley (eBIC)

### Day 1: Monday

09:00–09:15	Arrival at <b>RAL reception (R75)</b> for delegates and external visitors
09:15–09:30	<b>Welcome Coffee (G53/54)</b>
09:30–10:00	* Introductions and welcome – <b>Martin Walsh (DLS) (G53/54)</b>
10:00–11:00	<b>Lecture 1: An Overview of <i>In Situ</i> Structural Biology with cryoET – Zhen Hou (Strubi) (G53/54)</b>
11:00–12:00	<b>Lecture 2: Sample Vitrification and Screening for Cryo-ET – Casper Berger (RFI) (G53/54)</b>
12:00–13:00	<b>Lunch break (Diamond Atrium)</b>
13:00–13:30	<b>Demonstration 1: Vitrifying Cells on grids – Patrick Philips (eBIC/Crick) (pre-recorded)</b>
13:30–13:45	* Health & Safety Talk – <b>Christos Savva (eBIC) (G53/54)</b>
14:00–15:20	* <b>Practical Session 1a: Sample Preparation for CryoET</b> <b>Group 1 – Emma Buzzard &amp; Parijat Majumder (eBIC I14 G27)</b> <b>Group 2 – Eilís Bragginton &amp; Liam Mead (synchrotron, B24)</b>
15:20–15:40	<b>Coffee break (eBIC i14 corridor)</b>
15:40–17:00	* <b>Practical Session 1b: Sample Preparation for CryoET</b> <b>Group 1 – Eilís Bragginton &amp; Liam Mead (synchrotron, B24)</b> <b>Group 2 – Emma Buzzard &amp; Parijat Majumder (eBIC I14 G27)</b>
17:00–17:05	<b>Group Photo (Diamond Atrium)</b>
17:05 –	<b>Free Evening</b>

### Day 2: Tuesday

09:00–09:20	<b>Arrival &amp; Morning Coffee (G53/54)</b>
09:20–09:30	* Orientation & day overview – <b>Christos Savva (eBIC) (G53/54)</b>
09:30–12:00	<b>Demonstration 2: Cryo-ET Screening &amp; Data Collection – David Farmer (eBIC) (G53/54)</b>
12:00–13:00	<b>Lunch break (Diamond Atrium)</b>
13:00–15:00	* <b>Practical Session 2: Cryo-ET Screening &amp; Data Collection</b> <b>Group 1 – Vinod Vogirala (eBIC I14 Control Room)</b> <b>Group 2 – Hazel Aitkenhead (eBIC I14 Control Room)</b>
15:00–15:15	<b>Coffee break (eBIC i14 corridor)</b>
15:15–17:00	* <b>Practical Session 2: Cryo-ET Screening &amp; Data Collection</b> <b>Group 1 – Vinod Vogirala (eBIC I14 Control Room)</b> <b>Group 2 – Hazel Aitkenhead (eBIC I14 Control Room)</b>
17:00–	<b>Free Evening</b>

## Day 3: Wednesday

09:00–09:20	<b>Arrival &amp; Morning Coffee (G53/54)</b>
09:20–09:30	* Orientation & day overview – <b>Christos Savva (eBIC) (G53/54)</b>
09:30–10:30	<b>Lecture 3: Correlative workflows at eBIC – Parijat Majumder (eBIC) (G53/54)</b>
10:30–11:30	<b>Lecture 4: Lamella milling for tomography – James Gilchrist (eBIC) (G53/54)</b>
11:30–12:00	<b>Lecture 5: In situ Soft x-ray Tomography– Valentina Loconte (B24) (G53/54)</b>
12:00–13:00	<b>Lunch break (Diamond Atrium)</b>
13:00–15:00	* <b>Practical Session 3: Principles of FIB Set Up &amp; Lamella Preparation</b> <b>Group 1 – Eilis Bragginton (eBIC I14 Aquilos Room)</b> <b>Group 2 – James Gilchrist (eBIC I14 Scios Room)</b>
15:00-15:15	<b>Coffee break (eBIC i14 corridor)</b>
15:15 –17:00	* <b>Practical Session 3: Principles of FIB Set Up &amp; Lamella Preparation</b> <b>Group 1 – Eilis Bragginton (eBIC I14 Aquilos Room)</b> <b>Group 2 – James Gilchrist (eBIC I14 Scios Room)</b>
17:00–	<b>Free Evening</b>

## Day 4: Thursday

09:00–09:20	<b>Arrival &amp; Morning Coffee (G53/54)</b>
09:20–09:30	* Orientation & day overview – <b>Christos Savva (eBIC) (G53/54)</b>
09:30–12:00	* <b>Practical Session 4: Lamella Preparation using Cryo-FIB Milling</b> <b>Group 1 – Eilis Bragginton (eBIC I14 Aquilos Room)</b> <b>Group 2 – James Gilchrist (eBIC I14 Scios Room)</b>
12:00–13:00	<b>Lunch break (Diamond Atrium)</b>
13:00–15:00	* <b>Practical Session 4 continued: Lamella Preparation using Cryo-FIB Milling</b> <b>Group 1 – Eilis Bragginton (eBIC I14 Aquilos Room)</b> <b>Group 2 – James Gilchrist (eBIC I14 Scios Room)</b>
15:00-15:15	<b>Coffee break (eBIC i14 corridor)</b>
15:15-17:00	* <b>Practical Session 4 continued: Lamella Preparation using Cryo-FIB Milling</b> <b>Group 1 – Eilis Bragginton (eBIC I14 Aquilos Room)</b> <b>Group 2 – James Gilchrist (eBIC I14 Scios Room)</b>
19:30 –	<b>Dinner (The Bear Hotel, Wantage)</b>

## Day 5: Friday

09:00–09:20	<b>Arrival &amp; Morning Coffee (G53/54)</b>
09:20–09:30	Orientation & day overview – <b>Christos Savva (eBIC) (G53/54)</b>
09:30–10:30	<b>Lecture 6: Averaging and reconstructing 3D maps in cryo-ET – Pranav Shah (STRUBI, Oxford) (G53/54)</b>
10:30–11:30	<b>Lecture 7: Cryo-ET Data Processing and Sub Tomogram Averaging using RELION 5 – Rangana Warshamanage (CCP-EM) (G53/54)</b>
11:30–12:30	<b>Lunch break (Diamond Atrium)</b>
12:30–15:30	* <b>Practical 5: Cryo-ET Data Processing and Sub Tomogram Averaging using RELION 5 (G53/54)</b>
15:45–16:30	* <b>Delegates Presentations: Delegates learning &amp; feedback talks (G53/54)</b>
16:30–17:15	* <b>Wrap Up Q&amp;A Discussion (G53/54)</b>

## End of Course

Lectures will be held in **Diamond House G53/54** and broadcast to the community via Zoom. Sessions marked with an (\*) indicate sessions for in-person participants only – this includes practical sessions, feedback talks and the wrap-up Q&A. Zoom links will be sent to registered on-line participants on Friday September 5<sup>th</sup>.