

Tentative Program of the Workshop & Conference

2 nd workshop on “Electron Tomography of Biological Specimens” (17 th to 20 th April 2023)			
Morning Session (9.0 am to 2.0 pm)		Evening Session (2.0 pm onwards)	
Day 1: April 17th, 2023 (Monday)			
9.0-10 am	Registration	2.0-3.0 pm	Hands-on 1: Growing cells on the grid for cryo Tomography Dr. Ravi Prakash, Shikha Chaudhary, and Saniya Yasmin, AIIMS, New Delhi
10-11 am	Inauguration		
11-11.30 am	High Tea		
11.30-12.0 pm	Lecture 1: Key Note: (Title Awaited) Prof TP Singh, Department of Biophysics, AIIMS, New Delhi.	3.0-3.45 pm	Lecture 3: Biomedical application of Cryo ET (Final Title Awaited) Dr. Dilip Kumar, Ashoka University
		3.45-4.0	Tea Break
12.00-1.0 pm	Lecture 2: Introductory room temperature to Cryo-Electron Tomography (Final Title Awaited) Dr. Partha Pratim Datta, IISER Kolkata	4.0-6.0 pm	Hands-on 2: Demonstration of cryo GRID transfer and sample insertion Shikha Chaudhary, Dr. Ravi Prakash, AIIMS New Delhi, and Thermo-fisher Scientific
1.0-2.0 pm	Lunch Break		
Day 2, April 18th, 2023 (Tuesday)			
9.0-10.0 am	Lecture 4: High-Pressure Freezing Dr. Vineet Chaudhary, AIIMS, New Delhi	2.0-3.00 pm	Hands-On 4: Plunge freezing of cells and macromolecule Dr. Ravi Prakash, Shikha Chaudhary, AIIMS, New Delhi
10.0 -12.0 am	Hands-on 3: Demonstration of experimental procedure for high-pressure freezing Dr. Ramanujam Srinivasan, NISER Bhubaneswar, Dr. Vineet Chaudhary, AIIMS, New Delhi, and Leica	3.00 -4.15 pm	Hands-on 5: Practical aspects of FIB-SEM for preparation of lamella and 3D volume imaging (Zeiss or Thermo)
	Tea Break During the Hands On	4.15-4.30	Tea Break
12.0-1.0 pm	Lecture 5: 3D advanced characterization of bio-materials using electron microscopy. Dr. Partha Ghosal, DMRL Hyderabad	4.30-5.15 pm	Lecture 6: Prospects of high-resolution visual proteomics in cellular structural biology Dr. Saikat Chakraborty, MPI Biochem, Germany
1.0.0-2.0 pm	Lunch Break	5.15-6.30 pm	Hands-on 6: Practical aspects of FIB-SEM and SBFI SEM for 3D volume imaging (Zeiss and Thermo)
Day 3, April 19th, 2023 (Wednesday)			
9.0-9.45 am	Lecture 7: CryoET for In situ Structural Biology (Final Title Awaited) Dr. Digvijay Singh, University of California San Diego, USA	2.0-2.30 pm	Reaching the IIT Campus From AIIMS New Delhi
9.45-11.15 am	Hands-on 7: Data collection for tomography on Talos S Shikha Chaudhary and Dr. Ravi Prakash, AIIMS New Delhi, and Thermo Fisher Scientific	2.30-3.0pm	Hands-on 8: Demonstration of Grid Clipping Prof Manidipa Banerjee, IIT Delhi

11.15-11.30	Tea Break	3.0-4.0pm	Hands-on 9: Screening of the Grids, Atlas, and medium montage Prof Manidipa Banerjee , IIT Delhi
11.30- 12.15 pm	Lecture 8: Grid-freezing machine accessories for cryo-tomography users Dr. Tofayel Ahmed , SINP, Kolkata		
12.15-1.0 pm	Lecture 9: Subtomogram averaging: Bringing signal out of noise Dr. Debnath Ghosal , University of Melbourne Australia	4.0-6.0pm	Hands-on 10: Tilt Series data collection Prof Manidipa Banerjee , IIT Delhi Return to AIIMS New Delhi
		6.0- 6.30	
		7.0- 9.0 pm	Hands-on 11: Tomogram generation by Imod Dr. Tofayel Ahmed , SINP, Kolkata)
1.0-2.0 pm	Lunch Break		Dinner as per the convenience

Day 4, April 20, 2022 (Thursday)

8.0-10.30 am	Hands-on 12: Subtomogram averaging and segmentation using AMIRA (Final Title Awaited) Dr. Digvijay Singh , University of California San Diego, USA	2.0-3.0 pm	Lecture 10: From tomography to single particle: Using tilts to solve structures of macromolecular assemblies Dr. Saikat Chowdhury , CCMB
10.30-12.15 pm	Tea along with the Training Hands-on 13: High-Resolution Subtomogram averaging of isolated macromolecules from cryo-electron tomograms Dr. Vidya Mangla Prasad , MBU, IISC, Bengaluru	3.0-3.45 pm	Lecture 11: Two-dimensional class averages methods (Final Title Awaited) Dr. Appu Singh , IIT-Kanpur
		3.45-4.0 pm	Tea Break
12.15-1.00 pm	Lecture 12: Cryo-EM sample preparation and data collection using a 200 kV microscope Dr. Somnath Dutta (MBU, IISC, Bengaluru)	4.0-6.0 pm	Hands-on 14: Demonstration of CEMOVIS (Cryo-Ultramicrotomy) Shikha Chaudhary AIIMS, and Leica
1.0-2.0 pm	Lunch Break		

International Conference on Molecular and Cellular Electron Tomography (April 21 to 22, 2023)

Day 5, April 21, 2022 (Friday)

9.30-10.30 am	Inauguration	Theme: "Exciting applications of cryo Electron Tomography."	
10.30-11.0	Keynote lecture: Beauty and Benefit of cryo-Electron Microscopy Prof. Peter J Peters Maastricht University, Netherlands	2.0-2.30 pm	Invited talk: (Final Title Awaited) Dr. Gayathri Pananghat , (IISER Pune) (Confirmed)
11-11.30	Tea Break		
Theme: "Recent developments in cryo Electron Tomography."			
11.30-12.0	Invited talk: (Final Title Awaited) Dr. Saikat Chowdhury , CCMB, Hyderabad	3.0-3.30 pm	Invited talk (Final Title Awaited) (Confirmation awaited)
		3.30 -3.45 pm	Oral talk (10mins talk followed by 5mins Q/A) *

12.00-12.30 am	Invited talk: Understanding architecture, assembly, and regulation of bacterial toxin delivery systems by electron cryotomography Dr. Debnath Ghoshal, University of Melbourne, Australia	3.45- 4.00	Oral talk (10mins talk followed by 5mins Q/A) *
		4.0-4.30	Tea Break
		4.30-5.0 pm	Invited talk: Structural and functional characterization of DNA-binding protein with genomic DNA and pore forming toxin with liposomes using cryo-EM Dr. Somnath Dutta, MBU, IISC, Bengaluru
12.30-1.0 pm	Invited talk: Assembling of the bacterial cytokinetic Z-Ring Dr. Ramanujam Srinivasan, NISER Bhubaneswar	5.0 -5.30	Invited Talk: Microtubule quality control inside neurons Dr. Saikat Chakraborty, MPI Biochemistry, Munich Germany.
1.0-1.30 pm	Invited talk: (Final Title Awaited) Dr. Smarajit Polley, Bose Institute Kolkata. (Confirmed)	5.30 – 6.0	Invited Talk: To be decided
1.30-2.0 pm	Lunch Break and Posters	5.45-6.0 pm	Oral talk (10mins talk followed by 5mins Q/A) *
		6.0-8.0pm	Posters Session and Dinner
Day 6, April 22, 2022 (Saturday)			
Theme: “Recent high impact biological results through cryo Electron Tomography.”			
9.0-9.30 am	Invited talk: (Final Title Awaited) Dr. Digvijay Singh, UC San Diego, USA. (Confirmed)	11.30-12.00	Invited talk: (Final Title Awaited) Dr. Ramanathan Natesh, IISER Trivandrum. (Confirmed)
9.30-10 am	Invited talk: Cryo-EM illuminates new biology of orphan receptors Dr. Appu Singh, IIT-Kanpur	12.00-12.30 pm	Invited Talk: Molecular landscape of chloroplast and mitochondrial membranes by cryo-ET Dr. Tofayel Ahmed, SINP, Kolkata.
10.0-10.30 am	Invited Talk (Final Title Awaited) Dr. Partha Pratim Datta, IISER Kolkata.	12.30-1.00 pm	Invited Talk: Structural and functional insights into rotavirus capping machinery and its role in host innate immune response Dr. Dilip Kumar, Ashoka University, NCR, Sonipat, Haryana
10.30-10.45 am	Oral talk (10mins talk followed by 5mins Q/A) *	1.0-1.15	Oral talk (10mins talk followed by 5mins Q/A) *
10.45-11.00	Oral talk (10mins talk followed by 5mins Q/A) *	1.15-1.30	Oral talk (10mins talk followed by 5mins Q/A) *
11.0-11.30	Tea Break		
1.30-2.30	Lunch Break		
2.30 -3.30	Valedictory function		