

SCHOOL ON MICROSCOPIC CHARACTERIZATION TECHNIQUES (TEM/SEM/AFM); SMCT 2024		
December 9-12, 2024		
Inter-University Accelerator Centre, New Delhi		
Programme Schedule		
MONDAY: 09.12.2024		
TECHNICAL SESSION - 1		
Time	Speaker	Title
08:30-09:30		Registration
09:30-10:00	Inaugural session	Lamp Lighting Welcome address, Dr. D. Kabiraj Opening Remarks, Prof. A. C. Pandey Director, IUAC Vote of thanks, Dr. Indra Sulania
10:00-10:45	Dr. Indra Sulania IUAC, New Delhi	Overview of Microscopy School and Experimental Facilities at IUAC, New Delhi
10:45-11:45	Dr. Raghavendra Tewari BARC, Mumbai	Modern Transmission Electron Microscope: A Complete Characterization Laboratory (Part-1)
HIGH TEA: 11:45-12:15		
12:15-13:15	Dr. Balaji I. Birajdar JNU, Delhi	Basics of Electron Microscopy (Instrumentation)
LUNCH: 13.15-14:00		
TECHNICAL SESSION - 2		
14:00-15:00	Dr. Raghavendra Tewari, BARC Mumbai	Modern Transmission Electron Microscope: A Complete Characterization Laboratory (Part-2)
TEA: 15:00-15:30		
15:30-16:30	Dr. Pankaj Poddar, NCL Pune	Scanning probe microscopy- The tour de force
16:30-17:15	Dr. Gregor Hlawacek, HZDR Germany	Operation and application of LMAIS and GFIS ion sources in FIBs (Part-1)
Break		
17:30-18:00	Dr. Gregor Hlawacek, HZDR Germany	Operation and application of LMAIS and GFIS ion sources in FIBs (Part-2)
DINNER: 19:30		
TUESDAY: 10.12.2024		
TECHNICAL SESSION - 3		
09:30-10:30	Dr. Balaji I Birajdar JNU, Delhi	Scanning Electron Microscopy (SEM)
TEA: 10:30-11:100		
11:00-12:00	Dr. Yongkai Zhou, Director Regional Sales, Tescan	Recent advancement in SEM focussing on FIB and AI based analysis
12:00-13:00	Dr. Ahin Roy IIT Kharagpur	Analytical Electron Microscopy: STEM, EDS, and EELS
LUNCH: 13:00 - 14:00		

TECHNICAL SESSION - 4		
14:00-15:00	Dr. Subhash Yadav AIIMS New Delhi	Advancement of Transmission Electron Microscopy for Biological Specimen Imaging: Room temperature to cryo-electron tomography
15:00-16:00	Dr. Pankaj Poddar NCL Pune	Scanning probe microscopy: Applications in studying ferroelectrics, magnetic materials, and biological objects
TEA: 16:00-16:15		
16:15-18:00	Dr. Subhash Yadav AIIMS New Delhi	Sample preparation of biological specimen from room temperature to cryo-electron tomography
SNACKS: 18:00 - 18:30		
18:30-19:30	Prof. Manidipa Banerjee KSBS, IIT Delhi	Application of cryoEM towards heterogeneous and dynamic biological systems
DIRECTOR'S DINNER: 19:30		
WEDNESDAY: 11-12-2024		
TECHNICAL SESSION - 5		
09:30-10:30	Dr. Chanchal Ghosh IGCAR Kalpakkam	Crystallographic Analysis & Image Simulation in TEM
TEA: 10:30 - 11:00		
11:00-12:00	Dr. Ahin Roy IIT Kharagpur	Aberration Corrected Transmission Electron Microscopy
12:00-13:00	Dr. Chanchal Ghosh IGCAR Kalpakkam	Aberration-corrected STEM and Differential Phase Contrast (DPC) imaging in STEM
LUNCH: 13:00 - 14:00		
TECHNICAL SESSION - 6		
14:00-15:00	Venkata Dalta Raju Gatan-Ametek	EFTEM and EELS data acquisition and analysis
TEA: 15:00 - 15:30		
15:30-18:00	Venkata Dalta Raju, Gatan-Ametek Ambuj Mishra, IUAC	EFTEM/ EELS Demo
DINNER: 19:30		
THURSDAY: 12-12-2024		
TECHNICAL SESSION - 7		
9:30-10:30	Dr. Chanchal Ghosh IGCAR & Ambuj Mishra, IUAC.	SEM/ TEM image analysis & simulation Demo
TEA: 10:30 - 11:00		
11:00-12:00	Dr. Vishwanath Balakrishnan, IIT Mandi	In situ Transmission Electron Microscopy
12:00-13:00	Dr. Saif A. Khan, Mr. Monu & Mr. Mandeep, IUAC Delhi	Demonstration and hands-on training with SEM facility at IUAC/ Facility Visit

LUNCH: 13:00 - 14:00

TECHNICAL SESSION - 8

14:00-15:00	Dr. Debdulal Kabiraj IUAC New Delhi	Radiation damage in electron microscopy
TEA: 15:00 - 15:30		
15:30-17:30	Dr. Saif A. Khan, Mr. Monu & Mr. Mandeep, IUAC Delhi	Demonstration and hands-on training with SEM facility at IUAC/ Facility Visit
SNACKS: 17:30		
17:30-18:00	Concluding & Feedback Session and Certificate Distribution	
DINNER: 19:30		