

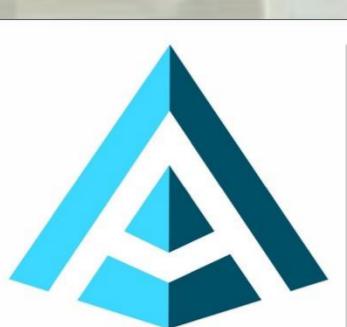


# National Conference of EMSI – North Zone

## Electron Microscopy in Biological & Material Sciences

(EMBM 2026)

8th-9th May 2026



Anusandhan  
National  
Research  
Foundation



विज्ञान एवं प्रौद्योगिकी विभाग  
DEPARTMENT OF  
SCIENCE & TECHNOLOGY



The National Conference of EMSI – North Zone on “Electron Microscopy in Biological and Material Sciences” will provide a vibrant platform for interdisciplinary exchange among biological, medical and material science communities. The conference will be held at AIIMS, New Delhi, on 08–09 May 2026, preceded by many pre-conference workshops (06–07 May 2026).

The conference will feature covering recent advances and emerging trends in electron microscopy on biological and material Science.

- Expert lectures (Plenary/key Notes),
- Parallel scientific sessions,
- Poster/Oral presentations

### Session themes

#### Biological Science

- Electron microscopy in biomedical field
- Cryo-Electron Microscopy/Tomography
- EM in Cellular and Tissue Ultrastructural Imaging
- Electron Microscopy in Health and Disease
- Nanobiology and Nanomedicine
- Super resolution Microscopy in biological imaging
- .....
- .....

#### Material Science

- Atomic-Scale and High-Resolution Imaging
- Spectroscopy and Chemical Mapping (EDS/EELS)
- Nanomaterials and Functional Materials
- Energy, Electronic and Quantum Materials
- Metallurgy, and Manufacturing
- Polymers, Soft Matter, and Biomaterials
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Following pre-conference workshop (Hands On) offering advanced training in TEM, SEM, Sample preparation, and microscopy techniques,

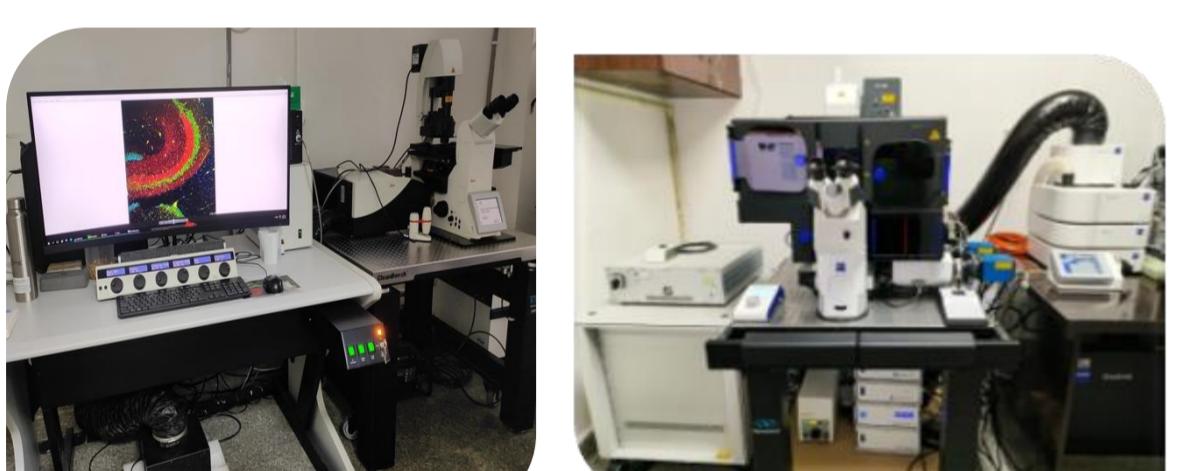
#### Environmental Scanning Electron Microscopy (E-SEM) [6-7<sup>th</sup> May 2026]

This hands-on session will introduce participants to environmental and cryogenic SEM techniques for imaging hydrated, soft, and beam-sensitive samples. Participants will gain practical experience in sample preparation, cryo-fixation, low-vacuum imaging, charge mitigation, and contrast optimization, enabling high-resolution surface and morphological analysis under near-native conditions.



#### Confocal and Super-Resolution Microscopy [6-7<sup>th</sup> May 2026]

This module will provide hands-on training in confocal laser scanning microscopy and advanced super-resolution techniques. Participants will learn optical sectioning, fluorophore selection, image acquisition strategies, resolution enhancement, and quantitative image analysis, with applications in biological and biomedical research.



#### Biological Atomic Force Microscopy (AFM) [7<sup>th</sup> May 2026]

The AFM session will offer practical exposure to topographical, mechanical, and functional imaging at the nanoscale. Participants will be trained in probe selection, scanning modes, force spectroscopy, surface characterization, and data interpretation, with examples from both biological and material systems.



#### Transmission Electron Microscopy (EDS/STEM/HAADF) [6-7<sup>th</sup> May 2026]

The Two-days Transmission Electron Microscopy (TEM) session focuses on advanced imaging and analytical techniques, including EDS and STEM-HAADF. Participants will learn the fundamentals of TEM operation, sample-electron interactions, and contrast mechanisms, followed by practical training in elemental analysis using EDS and high-resolution, Z-contrast imaging with STEM-HAADF. The session emphasizes data acquisition, interpretation, and best practices for obtaining high-quality structural and compositional information at the nanoscale.

Participants for	Student/PhD/PDF/RA (EMSI Member/ Non-Member*)	Faculty and Scientist (EMSI Member/Non-Member)	Industries (EMSI Member/Non-Member)
National Conference	2500/4000 + GST (18%)	5000/6500 + GST	7500/9000 + GST
<b>Pre-conference Hands-on Workshop</b>			
Environmental/Cryo SEM (6-7 <sup>th</sup> May)	2500/4000 + GST	4000/5500 + GST	5000/6500 + GST
Confocal and Super resolution microscopy (6-7 <sup>th</sup> May)	2500/4000 + GST	4000/5500 + GST	5000/6500 + GST
Atomic Force Microscopy (7 <sup>th</sup> May)	1500 + GST	2500 + GST	4000 + GST
TEM (EDS/STEM HAADF) (6-7 <sup>th</sup> May)	2500/4000 + GST	4000/5500 + GST	5000/6500 + GST

\*The additional 1500+GST (18%) is fee for EMSI Life Membership

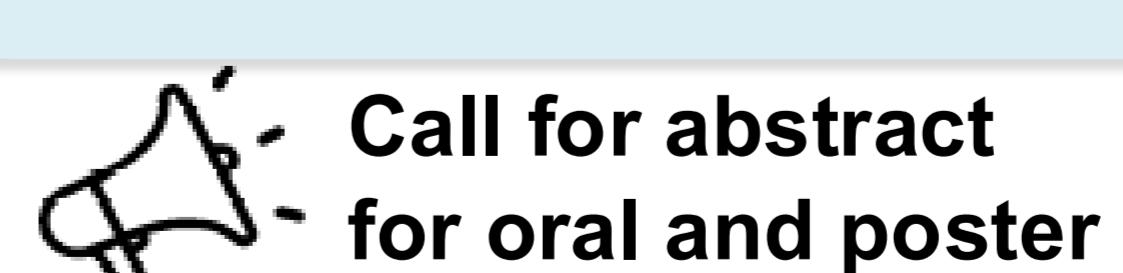
#### Course Conveners



Dr. Subhash Chandra Yadav  
Convener



Dr. Prabhakar Singh  
Secretary



Call for abstract  
for oral and poster



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<https://www.embm.saifaiims.com>

Last date: 31<sup>st</sup> March 2026



8<sup>th</sup> – 9<sup>th</sup> May 2025



ELECTRON MICROSCOPY FACILITY  
DEPARTMENT OF ANATOMY (-1) BASEMENT  
CONVERGENCE BLOCK AIIMS, NEW DELHI

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