FiB SEM Program

April 8 - 9, 2026

Kossiakoff Center
Johns Hopkins Applied Physics Laboratory
11100 Johns Hopkins Road
Laurel, MD

REGISTER TODAY

https://ccem.mcmaster.ca/events/18th-annual-fib-sem-meeting/

Visit https://fibsem.net for more information.

FiB SEM

FULL MEETING OVERVIEW

Wednesday, April 8, 2026

8:30 AM	Check-in and Breakfast
9:30 AM	Welcome and Housekeeping
9:40 AM	Plenary
10:20 AM	Material Sciences & Semiconductors
11:00 AM	Break
11:30 AM	Material Sciences & Semiconductors
12:30 PM	Lunch
1:30 PM	Material Sciences, Semiconductors & Poster Session
3:00 PM	Poster Session & Break
3:30 PM	Biology
4:35 PM	Happy Hour @ K-Center

Thursday, April 9, 2026

8:30 AM	Check-in and Breakfast
9:30 AM	Welcome and Housekeeping
9:40 AM	Material Sciences & Semiconductors
10:50 AM	Break
11:20 AM	Material Sciences & Instrumentation
12:20 PM	Lunch
1:30 PM	Automation, AI & Instrumentation
2:50 PM	Break
3:20 PM	Cryo
4:20 PM	Wrap-up

Wednesday, April 8, 2026

Time (UTC-4)	Presenter	Title
8:30 AM		Check-in and Breakfast
9:30 AM		Welcome and Housekeeping
9:40 AM	Sina Shahbazmohamadi, Uconn/Tescan	(**Plenary**) High throughput Sample Preparation in Microscopy 4.0: Intelligent, Automated and Connected Solutions (Abstract)
10:20 AM	José-Manuel Tapia-Cáceres, ASU	A Co-Mounted Lamellae Mounting Strategy for Integrated SPM and STEM Correlative Metrology in Gate-All-Around Devices (Abstract)
10:40 AM	Jemima Gonsalves, IBM	Integrating conventional and contemporary sample preparation methods for the analysis of deeply buried regions of interest in 3D stacked microelectronic devices (Abstract)
11:00 AM		Break
11:30 AM	Paul Jacob, RIT	In-situ Observation of Channel Formation in MOSFETs using Electron Beam Induced Current Technique (Abstract)
11:50 PM	Will Osborn, NIST	(**Invited**) Advancing Metrology for Leading-Edge Node Semiconductor Devices with Atypical FIB Workflows (Abstract)
12:20 PM		Group Photo
12:30 PM		Lunch
1:30 PM	Andy Herzing, NIST	Three-dimensional Imaging of Multiple Gate All Around Transistors via Plan-view Electron Tomography (Abstract)
1:50 PM	Patrick Callahan, NRL	EBSD at Lower Accelerating Voltages for Phase Detection in Martensitic Steels (Abstract)
2:10 PM	Poster Presenters	Lightning Talks
2:20 PM		Poster Session
3:00 PM		Poster Session Continued with Coffee

Wednesday, April 8, 2026
Continued

Time	Presenter	Title
3:30 PM	Kedar Narayan, NIH	Towards (truly) quantitative volume EM (Abstract)
3:50 PM	Matthew Maier, Pitt	Preparation of Archival Human Brain Tissue for Nanoscale Volumetric FIB-SEM (Abstract)
4:10 PM	Jenesis Kozel, Pitt	3D Characterization of Myelin Ultrastructure in Postmortem Human Tissue via Focused Ion Beam Scanning Electron Microscopy (FIBSEM) (Abstract)
4:30 PM		Wrap-up
4:35 PM		Happy Hour @ K-Center

Thursday, April 9, 2026

Time	Presenter	Title
8:30 AM		Check-in and Breakfast
9:30 AM		Welcome and Housekeeping
9:40 AM	Henri Lezec, NIST	(**Invited**) Plasma-source FIB fabrication of metasurfaces on trapped-ion quantum computer chips (Abstract)
10:10 AM	Ewelina Gacka, HZDR	(**On-line**) Advanced Focused Ion Beam System for Quantum Technology Applications (Abstract)
10:30 AM	Alex Johnson, NenoVision	(**On-line**) Site-Selective Xe Plasma FIB Device Deprocessing with In-Situ Conductive AFM Characterization of NAND Memory Structures (Abstract)
10:50 AM		Break
11:20 AM	Sharang Sharang, Tescan	Enhanced S/TEM Specimen Preparation FIB and EXLO (Abstract)
11:40 AM	Peter Gnauck, Raith	High-Resolution Magnetic-Sector SIMS for Advanced Semiconductor and Materials Science Applications (Abstract)
12:00 PM	Satyam Ladva, Quantum Design	Bringing AFM Into the FIB-SEM: Enabling Correlative Nanoscale Analysis with AFSEMnano (Abstract)
12:20 PM		Lunch
1:30 PM	Rick Passey, TFS	The Path to the Autonomous Lab: Scaling FIB-SEM Workflows from Scripting to Full Autonomy (Abstract)
1:50 PM	Andras Vladar, NIST	AI-driven Scanning Electron Microscopy (Abstract)
2:10 PM	David Kleindiek, Kleindiek	Automating Nanoprobing and Lift-Out Workflows Using Robust Deep Learning Models (Abstract)
2:30 PM	Cheryl Hartfield, Waviks	Adding Light to Your Microscope: A Review of Applications Enabled by Optical Delivery in FIB-SEM (Abstract)
2:50 PM		Break

Thursday, April 9, 2026
Continued

Time	Presenter	Title
3:20 PM	Yulia Trenikhina, Zeiss	Cryogenic FIB-SEM Preparation of Lithium Metal for Solid-State Battery Research (Abstract)
3:40 PM	Seth Villarreal, Leica	The Waffle Method (Abstract)
4:00 PM	Geoff Perumal, TFS	Innovative Solutions for Higher Efficiency and Throughput in Cryo-Electron Tomography (Abstract)
4:20 PM	Wrap-up	

Posters

Session	Presenter	Title
Mat Sci	Nicholas Antoniou, KLA	Throughput Enhancement for High Resolution Sample Preparation Workflows (Abstract) – P01
Mat Sci	Matt Nowell, Gatan	High-Confidence EBSD from Lower-Quality Patterns Enabled by Spherical Indexing (Abstract) – P02
Mat Sci	James Tordiff, NRC-NANO	Ion Beam Lithography using the ScanoMi Open Source Scan Generator (Abstract) – P03
Mat Sci	Sandip Basu, Zeiss	Seeing While Milling: Overcoming Low-kV FIB Endpointing Challenges in Advanced Semiconductor TEM Sample Preparation (Abstract) – P04
Mat Sci	Oytun Tasgit, 3D-Micromac	Scaling FIB-SEM Sample Preparation Through Automated Laser Processing for Wafer-Level and System-Level Failure Analysis (Abstract) – P07
Mat Sci	Amir H. Mohammadi, UMD	Microstructure Study of Hydrated Soft-Hard Materials (Abstract) – P09
Mat Sci	Al Schultz, Ionwerks	Maximizing and Correlating Elemental and Molecular Analysis During FIB SEM (Abstract) – P10

Posters

Continued

Session	Presenter	Title
Mat Sci	Marcus C. Lam, UVA	FIB Analysis on 3D structures of Gas Turbine EBCs: Quantifying Steam-Induced Degradation Kinetics (Abstract) – P11
Mat Sci	Audrey Liu, Georgetown	High Filtration Efficiency Copper Nanowire Foams with Tailored Microstructures (Abstract) – P12
Bio	Melissa R Mikolaj, NIH	Empanada, a napari plugin for automated segmentation of sub-cellular features imaged by volume electron microscopy (Abstract) – P05
Bio	Shweta Bhushan	Sample Preparation and Scanning Electron Microscopy of Brain Organoids (Abstract) – P06
Automation	Jamie Ford, UPenn	Modernizing Research Data Management in Multi-User Characterization Facilities: NexusLIMS v2.0 and Automated Data Harvesting with StreamWeave (Abstract) – P08

Meeting Notes

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