

CCEM Staff Position: Research Associate (Focused Ion Beam)

2024-09-04

The **Canadian Centre for Electron Microscopy (CCEM)** invites applications for a full-time Research Associate specializing in **Focused Ion Beam (FIB)** and **Scanning Electron Microscopy (SEM)**. This is an opportunity to work with a leading-edge suite of instruments in a dynamic, multidisciplinary environment supporting research in academia and industry.

About CCEM:

Based at McMaster University, CCEM hosts 19 state-of-the-art instruments, from X-ray CT to atom probe tomography. FIB technology plays a critical role in materials characterization, linking analysis and sample processing at scales from millimeter to sub-nanometer. Our instruments include Thermo Scientific Xe plasma and Ga-based Helios 5 FIBs, a Zeiss Crossbeam 350 with cryo transfer/liftout and fs laser ablation system, and a Zeiss Orion He/Ne FIB.

CCEM takes a leading role in research and development of FIB technique and applications. We co-organize the FIB-SEM User Group (<https://fibsem.net/>) and its annual meeting, and are engaged in partnerships with vendors of FIB instrumentation such as Fibics and others.

Position Overview:

The successful candidate will be responsible for operating, maintaining, and training users on FIB-SEM systems. Key duties include:

- Sample preparation and analysis, such as transmission electron microscopy (TEM) lamella preparation, nanoscale patterning, and 3D FIB tomography.
- Combining FIB with techniques like electron backscatter diffraction (EBSD) and energy dispersive x-ray spectroscopy (EDS).
- Consulting with a diverse range of users (graduate students, faculty, and industry partners) and communicating technical information clearly.
- Managing multiple projects and coordinating instrument scheduling.
- Collaborating with other CCEM staff and liaising with vendor service personnel for instrument maintenance.

Qualifications:

We value both academic achievement and hands-on experience. Candidates with a MAsc., Ph.D., or equivalent experience in a science or engineering-related field are encouraged to apply. Strong practical experience with FIB-SEM or related techniques will be highly regarded, even if your educational background differs.

What We Are Looking For:

- Hands-on experience with FIB-SEM systems (specific experience with ThermoFisher or Zeiss systems is a plus, but not required).
- A background in materials characterization and a passion for solving technical problems.
- The ability to effectively manage multiple projects and communicate complex technical concepts to a broad audience.

Why Work at CCEM:

CCEM is committed to fostering a diverse and inclusive work environment. We believe that a broad range of experiences and perspectives enhances our ability to innovate and solve problems. We support professional development, offering a collaborative and respectful space where all team members can thrive. Whether you come with a Ph.D., MAsc., or equivalent hands-on experience, we value the contributions of individuals from all backgrounds.

How to Apply:

To apply, please send your CV and cover letter to Brian Langelier, Facilities Manager (langelb@mcmaster.ca). This position will remain open until a suitable candidate is found.

Employment Equity Statement:

McMaster University is located on the traditional territories of the Haudenosaunee and Mississauga Nations and within the lands protected by the “Dish With One Spoon” wampum agreement. The diversity of our workforce is central to our innovation, creativity, and excellence. McMaster University seeks qualified candidates who share our commitment to equity, inclusion, and diversity of ideas. We particularly welcome applications from members of Indigenous (First Nations, Métis, Inuit), racialized, disabled, female, and 2SLGBTQ+ communities. Applicants requiring accommodation should contact the Human Resources Service Centre at 905-525-9140 ext. 22247.