

Posted: September 30, 2024

Tenure-Track Faculty Positions in
Supercomputing/High Performance Computing
Department of Electrical and Computer Engineering

research support for the first 5 years of their tenure from the Bruce Mitchell Research Program, including resources to support the recruitment of multiple postdoctoral researchers/students. Decreased teaching and administrative responsibilities will be associated with this position to enable the candidate to develop a world-class research program.

Qualifications (both positions)

The ideal candidates will have:

- a PhD or equivalent degree completed at the start date of the appointment (Note: the requirement for a PhD is that of the University and not the CRC program).
- a background in supercomputing systems and a solid understanding of the challenges of building and operating large supercomputers.
- the ability to design and build supercomputers and be familiar with the components and overall system design.
- extensive experience with building, improving, and using software on supercomputers, direct experience with large supercomputers with traditional batch systems like Slurm and expertise with Message Passing Interface, collective communication libraries like NCCL/RCCL and experience with high performance computing middleware is highly desirable. Optimizations of large parallel code bases and experience with GPU programming languages such as CUDA and HIP is an asset. Candidates should have strong backgrounds in C and/or C++ programming, have knowledge of shared memory programming models like OpenMP and hybrid MPI+X models.
- enthusiasm about teaching supercomputing/HPC to diverse groups.

The main criteria for selection are:

- evidence of high-

CRC Tier 2 candidates more than 10 years from their highest degree at the time of nomination may have their eligibility for a Tier 2 Chair assessed through the program's Tier 2

the new [Engineering Strategic Plan, Reimagining Engineering Education](#), and the dynamic outreach programs including [Indigenous Futures in Engineering](#) and [Black Youth in STEM](#).

Institution

[Queen's University](#) has a long history of scholarship, discovery, and innovation that shapes our collective knowledge and helps address some of the world's most pressing concerns. Home to more than 25,000 students, Queen's offers a comprehensive research-intensive environment. Diverse perspectives and a wealth of experience enrich our students and faculty while a core part of our mission is to engage in international learning and research.

In 2024, for the fourth year in a row, Queen's University has [ranked in top 10 globally Times Higher Education Impact Rankings](#), securing the position of third worldwide and first in North America. The rankings measured over 2,100 post-secondary institutions on their work to advance the United Nations' Sustainable Development Goals (SDGs).

A member of the U15 group of Canadian research universities, Queen's is home to a vibrant research community that includes 33 Canada Research Chairs and over 20 research institutes who work in partnership with communities, governments, and industry to advance research and innovation, making a measured impact on Canada and the world.

Faculty and their dependents are eligible for an extensive benefits package including prescription drug coverage, vision care, dental care, long term disability insurance, life insurance and access to the Employee and Family Assistance Program. Employees also participate in a pension plan. Tuition assistance is available for qualifying employees, their

The University will provide support in its recruitment processes to applicants with disabilities,