Canada Excellence Research Chair in Artificial Intelligence and Exascale Computing

Stephen J. R. Smith Faculty of Engineering and Applied Science Queen's University, Kingston, Ontario, Canada

May 8, 2025

Description

The Queen's University Department of Electrical and Computer Engineering in the Stephen J. R. Smith Faculty of Engineering and Applied Science welcomes applications from outstanding established scholars in the area of Artificial Intelligence and Exascale Computing.

The **Canada Excellence Research Chairs (CERC) program** awards world-renowned researchers and their teams $8 million or $4 million over 8 years to lead ambitious research programs in areas that align with the Government of Canada's Science, Technology and Innovation (ST&I) priority areas. Canada Excellence Research Chairs are among the most prestigious research positions available globally, offering chairholders the opportunity to grow their impact by launching ambitious research programs at Canadian universities. The CERC program stands at the centre of a national strategy to attract the world's top researchers, building a critical mass of expertise to further Canada's growing reputation as a global leader in research and innovation. Successful nominees will build upon a core of research excellence at Queen's University, expanding their research program to advance the frontiers of research on a global scale.

CERC recruitment is a multi-stage process, where applicants first apply to a nomination posting at the institution. Select nominees will work in partnership with Queen's to apply to the 2026 CERC competition. Interested applicants are invited to review the full program details. In addition, Queen's University will provide substantial institutional support in the co-preparation and co-development of the program application.

Research Alignment

Applicants will have a world-leading research program focused on one or more of the following areas related to Artificial Intelligence (AI): Agentic AI, Reinforcement Learning, AI Reasoning, Multimodal AI, Generative AI, Biologically Inspired Models, or AI in Robotics. The research of the candidate is expected to push the frontiers of the above fields through theoretical innovation and practical deployment, with demonstrated impact on applications such as physical and embodied AI, visual understanding, image processing, generative AI, large language models, or related applications.

Related research within the Department includes Generative AI, exascale computing at the Caesar Lab, natural language processing, robotics, wearable computing, intelligent communication systems, bio-inspired design, human-computer interaction, and software engineering. In

particular, faculty members in exascale computing are major contributors to the vision for Canadian sovereign supercomputing infrastructure. In addition, the Ingenuity Labs Research Institute at Queen's University has more than 40 faculty members from different departments, conducting research that combines AI, robotics, and human-machine interaction to create future intelligent systems and robotic machines that enhance productivity, safety, performance, and quality of life.

Eligibility

A successful nominee will be an outstanding scholar with a world-class reputation and must possess the qualifications necessary to be appointed[1] at the rank of tenured Professor. The program imposes no restrictions on nominees with regard to nationality or country of residence (see Eligibility of nominees in program guidelines for details). Researchers who hold a full-time academic appointment at a Canadian institution are eligible to be nominated; however, they may not be nominated by the institution at which they currently hold their appointment. If an institution nominates a researcher who is currently at a Canadian institution, the nominating institution must demonstrate the net benefit to the country in moving the researcher from one Canadian institution to another. Successful nominees will have up to 12 months to take up their appointment as chairholder at the host institution after the Notice of Award has been accepted by the nominating institution and the nominee.

Queen's University is committed to excellence in research and research training for the benefit of Canadians and to achieving a more equitable, diverse and inclusive Canadian research enterprise. The research community at Queen's is committed to and recognizes that building a culture of diversity is a socially responsible approach that actively removes discrimination and barriers to inclusion to provide benefits that reach beyond our institution. At Queen's, we recognize that diversity advances research for the greater good by valuing alternate perspectives, thereby unlocking creative potential and stimulating novel collaborations. Queen's is strongly committed to employment equity, diversity and inclusion in the workplace and encourages applications from Black, racialized/visible minority and Indigenous people, women, persons with disabilities, and 2SLGBTQ+ persons.

About Queen's University

From Nobel Prize-winning research exploring the building blocks of the universe to cancer care and treatment to sustainable technologies, Queen's University is tackling humanity's most pressing challenges. A member of the U15 group of Canadian research universities, Queen's is home to a vibrant research community that includes 48 Canada Research Chairs, two Canada Excellence 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. Queen's is in the top 200 of the QS World University Rankings. In 2024, for the fourth year in a row, Queen's ranked in top 10 globally of the Times Higher Education Impact Rankings. The rankings measured over 2,100 post-secondary institutions from 125 countries on their work to advance the United Nations' Sustainable Development Goals (SDGs).

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[1] Appointments are subject to review and final approval by the Provost. Academic staff at Queen's University are governed by a Collective Agreement between the University and the Queen's University Faculty Association (QUFA), which is posted at https://www.queensu.ca/facultyrelations/qufa/collective-agreements-lous-moas and at http://www.qufa.ca.

How to Apply
A complete application package consists of:
  i)   a cover letter addressing the following selection criteria:
       o global leadership and innovation in at least one area of research alignment
       o track-record of mentorship and training highly qualified personnel
       o potential contribution to the excellence of the Canadian and international research ecosystem
  ii)   a full curriculum vitae (including a list of publications, awards and grants received); and
  iii) a summary of the proposed research program, including a description of how equity, diversity and inclusion has been incorporated into research design and research team.

In addition, life circumstances such as illness, disability, family and community responsibilities (e.g., maternity leave, parental leave, leaves due to illness, leaves due to caring for family members, slowdowns due to chronic illness or disability, or COVID 19 impacts) are often an expected part of life and are likely to have an impact on a nominee's record of research achievement. These impacts will be given careful consideration during the assessment process. Candidates are encouraged to provide any relevant information about their experience and/or career interruptions.

Note nominations will be subject to the Government of Canada's [Policy on Sensitive Technology Research and Affiliations of Concern](#) (STRAC), which applies to this funding opportunity.

To apply, please email your complete application package to: CERC@queensu.ca.

Closing Date: Posted for a minimum of 30 days with the possibility of extension until positions are filled.

Note this posting may be used to identify Tier 1 Canada Research Chair nominees or named chairs of similar value.

The University will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant's accessibility needs. If you require accommodation during the interview process, please contact Ms. Jennifer Miller in the Vice-Principal, Research Portfolio, at jennifer.miller@queensu.ca.

Queen's University is situated on the traditional Anishinaabek and Haudenosaunee territory. Ne Queen's University e'tho nońwe nikanónhsote tsi nońwe ne Haudenosaunee tánon Anishinaabek tehatihsnónhsahere ne óhontsa. Gimaakwe Gchi-gkinoomaagegamig atemagad Naadowe miinwaa Anishinaabe aking.