Tier 1 Canada Research Chair, Electronics/ Mechanical and Aerospace Engineering/Systems and Computer Engineering, Faculty of Engineering and Design (Mechatronics and Robotics Applications)

About the Position

Field of Specialization:	Mechatronics and Robotics Applications
Academic Unit:	Electronics/ Mechanical and Aerospace Engineering/Systems and Computer Engineering, Faculty of Engineering and Design
Category of Appointment:	Associate/Full Professor
Rank/Position Title:	Tier I Canada Research Chair
Start Date:	July 1, 2026
Closing Date:	June 15, 2025
Date Posted:	May 9, 2025

The Faculty of Engineering and Design invites applications from qualified candidates for a Tier I Canada Research Chair (CRC) in Mechatronics and Robotics Applications at the rank of Associate or Full Professor beginning July 1, 2026. The candidate will become a member of one of three engineering units, the Department of Electronics, Department of Mechanical and Aerospace Engineering or Department of Systems and Computer Engineering. Appointment is conditional on the approval of the application by the CRC Secretariat.

To see the full position posting, please visit Carleton University's [Deputy Provost's website](https://carleton.ca/deputyprovost/jobs/academics/) at https://carleton.ca/deputyprovost/jobs/academics/.

The candidate will be expected to lead an outstanding research program in the areas of Mechatronics and Robotics Applications. Mechatronics is a multidisciplinary field that merges mechanical, electrical, and computer engineering to design, model, and control intelligent devices capable of executing complex tasks. Its applications are wide-ranging, covering application areas and industries such as manufacturing, automotive, aerospace, robotics, autonomous systems, and communications, among others.

Expertise in areas such as but not limited to:
- Artificial Intelligence (AI) in Mechatronics (Data-driven mechatronic design, reliable/safe AI design for mechatronics, predictive maintenance, and intelligent automation)
- Cyber-Physical System Design for Mechatronics (Digital twin, mechatronics design with cyber-security, distributed mechatronics system design)
- Robotic System Design for Mechatronics (Sensor and/or actuator design, multi- agents, control systems, optimization)

Carleton University recognizes the breath of topics described and will be considering applicants coming from a wide range of areas within Mechatronics and Robotics Applications.

The candidate will be expected to take a leadership role in support the development of a graduate program in Mechatronics. This position will support the new undergraduate program in Mechatronics in the Faculty of Engineering and Design that will train the next generation of engineers and researchers in this area.

The candidate is expected to have a desire to promote interest in our students, particularly those in underrepresented groups, in a mechatronics and robotics career.

Tier 1 Chairs are intended for outstanding researchers acknowledged by their peers as world leaders in their fields. Candidates must be full professors or associate professors expected to be promoted to full professor within two years of CRC nomination.

For more details, please see the Canada Research Chairs Secretariat at https://www.chairs-chaires.gc.ca/ and the Carleton Office for Research Initiatives and Services at https://carleton.ca/coris/.

About the Academic Unit
The Faculty of Engineering and Design (https://carleton.ca/engineering-design/) is composed of four engineering departments and the Schools of Information Technology, Architecture and Urbanism, and Industrial Design. With over 200 academics and 90 staff members provide over 6,000 undergraduate and 1,200 graduate students with an extensive range of undergraduate, masters, and doctoral programs.

The department of Electronics oversees three programs: Electrical Engineering, Engineering Physics, and Sustainable and Renewable Energy Engineering (Stream A). The DOE comprises 25 faculty members, 10 staff, approximately 500 undergraduate students, and 140 graduate students. Faculty members specialize in areas like analog/mixed-signal and VLSI IC design, microwaves and antennas, photonics, computer aided design and modeling, neuromorphic and AI hardware, MEMS and semiconductor processing, power systems, and electrical machines.

The department of Mechanical and Aerospace Engineering has four programs, i.e., Mechanical, Aerospace, Biomedical and Mechanical, and Sustainable and Renewable Energy (Stream B). The department has 46 faculty members, 12 staff (including administrative assistants, technologists, and machinists), over 1500 undergraduate students, and over 180 graduate students. Approximately 12 faculty members have expertise in mechanical systems, robotics, or dynamics and control systems.

The department of Systems and Computer Engineering hosts an active community of 40 faculty members and instructors, and approximately 1300 undergraduate and 250 graduate students. It oversees four undergraduate programs (Biomedical and Electrical Engineering, Communications Engineering, Computer Systems Engineering, Software Engineering), and several graduate programs. Faculty members specialize in several areas related to mechatronics, including Simulation and control, Robotic systems, Imaging, telemedicine and robot-assisted surgery, Embedded system analysis, design, and quality, Signal (sound, image, video) processing, Applications of Artificial intelligence, Security of embedded systems, Software engineering, Wired and wireless communications.

Qualifications

Carleton requires the candidate to have a PhD in a relevant area, with significant research accomplishments in Mechatronics and Robotics Applications and:

- Record of attracting and mentoring students, trainees and research personnel
- Commitment to establishing an equitable and inclusive research environment
- Excellent track record of research output that demonstrates independent research and leadership skills.
- Demonstrated potential for innovative and scholarly research and the ability to develop an externally-funded, high quality research program.
- Demonstrated aptitude to develop research collaboration with industry and supervise graduate students.
- High potential for collaborative research with existing members of the Faculty is an asset.
- Demonstrated teaching excellence.
- Excellent ability to contribute to the academic life of the Unit.
- Willingness to comply with funders' terms and conditions for research security compliance.

The successful candidate will be required to become registered as a professional engineer in Ontario within five years of appointment.

Preference will be given to candidates external to Carleton University, although internal candidates can apply and be assured fair consideration in the process.

Application Instructions

Applications must be sent electronically in one single PDF file to FED_CRC@cunet.carleton.ca and include:

- a maximum three-page signed letter of application expressing interest in being nominated for a Tier 1 Canada Research Chair in Mechatronics and Robotics Applications, specifying your specific research area, describing how Carleton University provides an ideal research environment, and specifying the engineering department you envisage as your home unit for teaching purposes;
- a current curriculum vitae;
- a maximum three-page statement of contributions to research, supervision and international leadership in the area;
- a maximum three-page summary of your 5 year proposed research program, including description of potential contribution to knowledge in the field, and integration of EDI consideration in the research design or justification for why EDI consideration are not relevant to the research design; (Including a description of how you would foster larger collaborative groups within the university is encouraged.)
- a maximum two-page statement that identifies your strengths, experience in, and/or commitment to advancing equity, diversity and inclusion in your teaching, service and/or scholarly activities (including student training).
- a maximum three-page statement that highlight teaching excellence

- three sample research publications.
- the name of three references (who will not be contacted without consent of the candidate).
- Please indicate in your application if you are currently legally eligible to work in Canada.
- We invite all applicants to provide an optional Career Interruption Statement outlining any career interruptions https://carleton.ca/deputyprovost/career-interruptions-special-circumstances-statement-tiers-1-and-2/.

To help us develop our equity programs, a confidential equity and diversity self- identification survey will be sent to all applicants separately.

In Canada, both the Government of Canada and the Ontario Ministry of Colleges and Universities have introduced research security policies and guidelines to protect Canada's world-class research. To ensure a positive and productive experience as a CRC, Carleton University encourages all applicants to review the federal Policy on Sensitive Technology Research and Affiliations of Concern, the federal National Security Guidelines for Research Partnerships and the provincial Research Security Guidelines for Ontario Research Funding Programs.

About Carleton University
Located in Ottawa, Carleton is an innovative teaching and research institution with a tradition of leading change. Internationally recognized academics, staff, and researchers engage more than 31,000 students in over 100 programs of study. Learn more about our university and the city of Ottawa at https://carleton.ca/deputyprovost/jobs/.

We are strongly committed to equity, diversity, and inclusion in the nomination and appointment process. Carleton University is committed to fostering diversity within its community as a source of excellence, cultural enrichment, and social strength. We welcome those who would contribute to the further diversification of our university including, but not limited to: women and gender equity-seeking groups; racialized individuals; Indigenous Peoples; persons with disabilities; and persons of any sexual orientation and/or gender expression. Furthermore, Carleton understands that career paths vary and interruptions will not prejudice the assessment process. We invite you to review our revitalized Indigenous strategy, Kinàmàgawin at https://carleton.ca/indigenousinitiatives/cu-files/kinamagawin/ and visit our Department of Equity and Inclusive Communities at http://carleton.ca/equity for information about our commitment to leadership in the areas of equity, diversity, and inclusion.

Accessibility is a university strategic priority and applicants selected for an interview who require accommodations are invited to contact the Chair at FED_CRC@cunet.carleton.ca, as soon as possible to ensure that appropriate arrangements may be made.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. All positions are subject to budgetary approval.