

Associate or Full Professor and Canada Research Chair, Tier 1, Computer Science/ Nursing (Healthcare Simulation)

About the Position

Field of Specialization: Healthcare Simulation

Academic Unit: Computer Science / Nursing

Category of Appointment: Tenured

Rank/Position Title: Associate or Full Professor and Canada Research Chair, Tier 1

Start Date: January 1, 2027

Closing Date: Consideration of candidates will begin on July 1, 2025.

Date Posted: April 7, 2025

The Faculty of Science invites applications for a Natural Science and Engineering Research Council (NSERC) Tier 1 Canada Research Chair (CRC) appointment in computer simulation in healthcare at the rank of associate or Full Professor with tenure.

We welcome submissions from researchers with a strong track-record of research in simulation, with a focus on the development and understanding of fundamental algorithms and tools enabling simulation across healthcare applications. Diverse perspectives to address complex problems in healthcare simulation are sought. We especially encourage candidates from underrepresented groups in the field and with demonstrated experience in mentoring such students.

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/>.

Research Areas of Interest: The successful NSERC-funded applicant should have a strong track-record of research in simulation, with focus on development and understanding of fundamental algorithms and tools enabling simulation across healthcare specialties. Research on algorithms and tools should be oriented toward one or more of (1) human-computer interaction in simulation, with emphasis on augmented, virtual, or mixed reality systems, (2) methods in artificial intelligence or data science for processing sensor data with various applications, including interventional healthcare applications, (3) development of computer-assisted intervention systems, (4) other related topics and tools.

Research might relate to questions such as: How should we design physical or virtual interfaces for interaction with simulated individuals that are applicable across applications? How do we provide data-driven feedback and coaching to trainees based on performance in simulation? How do we integrate layers of information from multiple modalities (e.g. textual, visual, auditory) into simulation environments to promote learning? How can we design processes for rapidly prototyping high-fidelity simulation?

The Faculty of Science strongly encourages research that occurs at the intersection of these descriptions.

Tier 1 Chairs are intended for outstanding researchers acknowledged by their peers as world leaders in their field of study. For more details, please see the [Canada Research Chairs Secretariat at https://www.chairs-chaire.gc.ca/](https://www.chairs-chaire.gc.ca/) and the [Carleton Office for Research Initiatives and Services at https://carleton.ca/coris/](https://carleton.ca/coris/).

Appointment is conditional on the approval of the application by the CRC Program.

Qualifications

Carleton University requires that the successful candidate must:

- hold a PhD in a relevant field, such as computer science, and/or closely aligned degree in a healthcare field;
- be acknowledged by their peers as being a world leader in their domain;
- have recognized talent attracting and supervising graduate students and post-doctoral fellows;
- have established an internationally recognized NSERC-funded research program in simulation
- have a record of high-quality teaching and supervision appropriate to the stage of career; and
- have the capacity to attract substantial external research funding.

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 CRCTier1Simulation25@scs.carleton.ca, including:

- a signed letter of application;
- up-to-date curriculum vitae;
- three publications; and
- a five-page statement (describing (1) the proposed research program including research objectives, potential contribution to knowledge, and methods; (2) the training and mentoring plan; and (3) your strengths and/or experience in advancing equity, diversity and inclusion in your teaching, service, and/or scholarly activities.
- Applicants should arrange to have three referees send supporting letters electronically.
- 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/?p=1784>.

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

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 the Academic Unit: The chair will join or be closely affiliated with the School of Computer Science (<https://carleton.ca/scs/>), a prominent unit within the Faculty of Science with 47 full-time faculty members with research strengths in algorithms, AI, data science, computer and internet security, graphics, human-computer interaction, distributed computing, and machine learning. The School of Computer Science is home to prestigious award winners such as the *NSERC Arthur B. McDonald Fellowship* in Usable Security and Privacy research, and current *Canada Research Chairholder* in Machine Learning. The new chair will build upon this momentum by tapping into the School's strong national and international reputation for collaboration with other institutions, partnerships with industry, and research strengths. For example, Carleton's Data Day – brings researchers and industry experts together annually on data science and analytics research; Ottawa-Carleton Institute for Computer Science – promotes collaborative training of highly qualified personnel and research in computer science among the two universities.

Unique to this opportunity, the chair also has the opportunity to join or leverage the Faculty of Science's new School of Nursing (<https://science.carleton.ca/nursing/>), with its innovative program employing simulation in its provider training to improve outcomes in healthcare interventions and therapies.

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. Carleton has long been known for promoting research excellence and connectedness and is involved in partnerships around the globe. Learn more about [our university and the city of Ottawa](#).

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 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.