

About the Position

Field of Specialization: Next Generation Net-Zero Modelling

Academic Unit: Department of Mechanical and Aerospace Engineering

Category of Appointment: Preliminary (tenure-track)/tenured

Rank/Position Title: Assistant or Associate Professor and Canada Research Chair, Tier 2

Start Date: January 1, 2024

Closing Date: Complete applications will be considered starting August 31 and continue until the position is filled

The Faculty of Engineering and Design, in association with its Department of Mechanical and Aerospace Engineering invites you to apply for a Tier II CRC in Next Generation Net-Zero Modelling at the rank of Assistant or Associate Professor.

To be successful, your research interests should develop new mathematical models for renewable energy deployment, while intersecting with one or more of our areas of strengths:

- 1) Energy modelling, prediction and forecasting through the development and advancement of machine learning, statistical learning and artificial intelligence models, including physics-informed deep learning models.
- 2) Development of optimization models to advance the planning of renewable energy deployment at the community, regional and national levels.
- 3) Integrated energy-economy-policy modelling to address interdisciplinary challenges.

The successful candidate will establish a strong and impactful research program at Carleton University in Next Generation Net-Zero Modelling. The research program should focus on advancing mathematical models of both renewable energy sources, such as wind and hydrokinetic power, as well as models of the larger energy system. Models should represent both the engineering constraints of energy production, as well as societal preferences for energy use and siting, to advance the study of net-zero achievement in the real world. The successful candidate will attract competitive external funding to support their research activities. Additionally, the successful candidate should have a demonstrated desire to encourage young people, and especially women, to pursue an engineering career.

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/>.

Tier 2 Chairs are intended for exceptional emerging scholars (i.e., candidates must have been an active researcher in their field for fewer than 10 years at the time of nomination). Applicants who are more than 10 years from having earned their highest degree (and where career breaks exist, such as maternity, parental or extended sick leave, clinical training, etc.) may have their eligibility for a Tier 2 Chair assessed through the program's Tier 2 justification process.

For more details, please see the [Canada Research Chairs Secretariat](https://www.chairs-chaire.gc.ca/) at <https://www.chairs-chaire.gc.ca/> and the [Carleton Office for Research Initiatives and Services](https://carleton.ca/coris/) at <https://carleton.ca/coris/>.

About the Academic Unit

In the last few years the Faculty of Engineering and Design went through a growth and renewal phase for its faculty complement and infrastructure. Our four engineering Departments, and the Schools of Information Technology, Architecture and Urbanism, and Industrial Design are made up of 215

academics, over 6000 undergraduates and 1250 graduate students supported by 110 technical and administrative staff. We are in the process of expanding and enriching our research enterprise in terms of space and graduate student numbers, while capping the collective size of our undergraduate programs. For more information about the Academic Unit, please see: <https://carleton.ca/mae/>.

Qualifications

Carleton requires applicants to have a Ph.D., an excellent track record of high-quality research output that demonstrates potential for independent research, and a demonstrated aptitude for teaching courses at the undergraduate and graduate levels. You must also demonstrate the potential to develop research collaborations with industry, become a graduate-student supervisor, and attract funding to support independent research programs yielding high-quality peer-reviewed publications. If appointed to an engineering department, membership in a Canadian professional engineering association (e.g., Professional Engineers Ontario) will be necessary within five years of appointment.

Application Instructions

Please submit a cover letter and highlight your strengths in advancing equity, diversity, and inclusion in your discipline and on campus as well as your future plans, curriculum vitae, names of three referees, and statements on your teaching and research interests. Please send your application as a single PDF file to: Professor Larry Kostiuik, Dean, Faculty of Engineering and Design, Carleton University, Email: Hiring.FED@carleton.ca

Please indicate in your application if you are currently legally eligible to work in Canada.

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

We invite all applicants to provide an optional Career Interruption Statement outlining any career interruptions <https://carleton.ca/deputyprovost/?p=1784>.

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. With strong leadership, it enjoys a healthy financial position and our proximity to government and cultural institutions, media, and a thriving knowledge economy make Carleton and Ottawa a great place to work, learn, and live. Our picturesque campus is fully accessible and, along with award-winning student services, Carleton's Paul Menton Centre for Students with Disabilities has been heralded as the gold standard for disability support services in Canada. Learn more about [our university and the city of Ottawa](https://carleton.ca/deputyprovost/jobs/) 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 minorities; racialized individuals; Indigenous Peoples; persons with disabilities; and persons of any sexual orientation and/or

expression. We invite you to review our revitalized Indigenous strategy, [Kinàmàgawin](https://carleton.ca/indigenousinitiatives/cu-files/kinamagawin/) at <https://carleton.ca/indigenousinitiatives/cu-files/kinamagawin/> and visit our [Department of Equity and Inclusive Communities](http://carleton.ca/equity) 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.