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Careers at ÉTS

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# Canada Excellence Research Chairs (CERC)

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Posting from April 29<sup>th</sup> to June 5<sup>th</sup>, 2022

## IMPORTANT DATES

- Deadline for candidates to apply to the institution: **June 5, 2022**
- Deadline for the institution to register its intent to apply to the program: **September 15, 2022**
- Deadline for the Institution and its selected nominee(s) to submit the full application(s): **October 13, 2022**
- Results announced: **Spring 2023**

[École de technologie supérieure \(ÉTS\)](#) is soliciting exceptional candidates to lead a **Canada Excellence Research Chair (CERC)**. The [CERC program](#), which is the most prestigious of the Canada Research Chair programs, seeks to attract the highest-calibre researchers in the world. ÉTS is taking advantage of this unique opportunity to obtain a grant of up \$1 M per year for a Chair holder for a period of eight years.

## Available Chairs

The proposed research programs must contribute to the major strategic orientations indicated in the ÉTS Strategic Research Plan, namely:

Orientation 1 – Fight against and adaption to climate change;

Orientation 2 – Security, safety and accessibility;

Orientation 3 – Creativity, collaboration and entrepreneurship;

Orientation 4 – Health and wellness.

These orientations are closely aligned with the [five priority areas established by the Government of Canada](#).

More specifically, the proposed Excellence Research Chairs must fall within the following sectors:

- **Sustainable and circular manufacturing materials and processes**. Development of manufacturing materials and processes with smaller environmental footprints that are compatible with a circular economy model. This may involve improving the energy and material efficiency of manufacturing processes, developing innovative materials using renewable resources, improving the recyclability of materials or developing repair techniques to prolong the service life of infrastructure assets.
- **Digital monitoring and optimization technologies**. Development of digital technologies, including instrumentation, distributed intelligence and modeling, to optimize construction, maintenance, operation and circularisation processes for infrastructure assets. This may include sensors, non-intrusive inspection technologies, material-traceability tools, logistical models or digital twins.
- **Integrated approach to designing resilient systems**. Innovation in how infrastructure assets are planned and built by adopting an integrated approach to design that focuses on society as a whole and promoting partnerships and interdisciplinary practices. Whether they are focused on infrastructure assets for the production and transportation of energy, on mobility or on buildings, the designs for these interconnected systems must take

into account the latest scientific advances regarding the impacts of climate change, as well as social acceptability, sustainable and circular operationalization, and economic prosperity.

- **Health care technology** . Development of significant innovations aimed at improving the service offer and effectiveness of health care and contributing to the wellness of populations at all stages of life. The following areas of expertise will be given priority: biomechanics, processing of biological signals, medical imaging, personalized medicine, rehabilitation, occupational health and safety, biomaterials, biomanufacturing, connected sports training, injury prevention.

Other areas of research will also be considered, insofar as they contribute to the major strategic orientations established by ÉTS and Canada.

## Candidate profile

Candidates must be global leaders in their fields. Holders of Excellence Research Chairs are expected to develop groundbreaking research avenues and enhance the reputation of ÉTS on the world stage as a hub for research excellence in the targeted sectors. They must achieve this through an innovative research program funded by external organizations. After joining the ÉTS faculty, they will be expected to establish a strong and dynamic team and actively contribute to the mobilization and application of the new knowledge beyond the academic world. Both the composition of the team (students, postdoctoral fellows, other highly-qualified personnel, early career researchers), the design and execution of the research project, and the application of the results must be guided by strict application of the EDI principles.

Once an Excellence Research Chair has been granted through the program, the holder will take up the position of Professor, in compliance with the hiring procedures in effect at ÉTS.

## Eligibility conditions

- Candidates must currently either hold the title of Full Professor or that of Associate Professor and soon be eligible for full professorship. Candidates with a background outside of post-secondary education must possess the required qualifications for appointment to similar positions.
- Candidates must hold a Ph.D. in Engineering in a discipline that is taught at ÉTS or in a related field.
- Candidates must be able to teach in French or demonstrate the intent to learn French and undertake a Francization process with the support of ÉTS.

This call for proposals is intended exclusively for external candidates, or in other words, those who do not hold the position or status of Professor at ÉTS at the time of posting.

## Commitment to equity, diversity and inclusion

The Canada Excellence Research Chairs Program is committed to excellence in research and research training while promoting the implementation of best practices with respect to EDI. ÉTS fully adheres to this objective, and invites women, members of visible and ethnic minorities, indigenous people and persons with disabilities to apply. Individuals of all sexual orientations and gender identities are also encouraged to apply .

ÉTS recognizes that career interruptions may have repercussions on a researcher's portfolio of achievements without diminishing the level of excellence. In light of this, candidates are encouraged to describe any such periods in their curriculum vitae or cover letter. This information will be taken into consideration when evaluating the proposals.

ÉTS was also among the first universities in Canada to sign the San Francisco Declaration on Research Assessment (DORA), which recommends using a wide range of parameters to evaluate the results of academic research rather than solely the Journal Impact Factor. Candidates will be evaluated in accordance with these principles.

## Candidate application

Interested individuals are invited to submit their proposals by **June 5, 2022** at the latest.

**The file, which must be submitted as a single PDF document, should include the following:**

- 1) A curriculum vitae (maximum 3 pages) , including justification for career interruptions, if applicable; plus a list of your publications from the past five years ;
- 2) A cover letter (maximum 2 pages);
- 3) A research program proposal (maximum 2 pages) comprising the following sections:
  - a. objectives and main outcomes to be achieved;
  - b. contributions to existing knowledge and summary program of activities in at least one of the 4 strategic orientations, and manner in which the EDI principles (GBA+ or SGBA+) will be integrated, as applicable; and
  - c. Training of highly-qualified personnel and maintaining a diversified team in accordance with EDI principles
- 4) A justified support request (maximum 1 page) for infrastructure necessary to realise the program, if required.

We also encourage candidates to answer the questions indicated on the Nominee self-identification form, including those related to the employment equity program.

Nomination for a CERC follows a two-stage process. During the first stage, candidates are evaluated in strict confidentiality by a selection committee in response to this call for applications. This evaluation may include a meeting with the committee. The selected candidates then move on to the second stage, where they will work with ÉTS to develop the final application to be submitted to the government granting council. If you have any question concerning your candidacy or the selection process, please send them to [Decanat.Recherche@etsmtl.ca](mailto:Decanat.Recherche@etsmtl.ca) .

### **Accommodation measures**

Accommodation measures may be provided for persons with disabilities, in accordance with their needs during this competition and in strict confidentiality. If you require accommodation measures, please contact Alissa Lauriault, Equity, Diversity and Inclusion Advisor with the Faculty Affairs Office, at [edi@etsmtl.ca](mailto:edi@etsmtl.ca) .

### **About ÉTS**

With a student population totalling approximately 11,000, including 3,100 graduate students, *École de technologie supérieure* (ÉTS) in Montréal is among the largest engineering schools in Canada, offering bachelor's, master's and doctoral programs focused on applied engineering. ÉTS maintains strong ties with industry thanks to a dynamic cooperative education system, boasts an exceptional level of partnership-based research and innovation, and features world-class research equipment and facilities .

### **Working conditions**

Working conditions are governed by the current collective agreement of the Faculty Association.

Regular full-time position.

Expected start date: to be determined – spring 2024 at the latest.

### **Immigration requirements**

**All qualified individuals are invited to apply.** The Program does not impose any restrictions on nominees with respect to nationality or country of residence. Employment and Social Development Canada and Immigration, Refugees and Citizenship Canada have established procedures to allow Chair holders who do not have Canadian citizenship to work in Canada.

Position Category:

**Autre**

ID:

**2069**

Department:

**Décanat de la recherche**

Deadline to apply:

**June 5, 2022**

Target start:

**Spring 2023**

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