

Call for candidates

Professor – Power Corporation Research Chair in Carbon Negativity

N° 07000

Posting period: May 15 to August 31, 2024

JOB DESCRIPTION: Professor

LOCATION: Main Campus

STATUS: Regular

ADMINISTRATIVE UNIT:

Faculty of Engineering

Chemical and Biotechnology Engineering Department or

Mechanical Engineering Department

SCHEDULE: Full time tenure-track position



The [Université de Sherbrooke](https://www.usherbrooke.ca) (UdeS) is seeking applications for a full-time tenure track position in the development of carbon-friendly technologies.

Research Chair in Carbon Negativity

The successful candidate will set up and manage a strategic research chair with the aim of contributing to the advancement of knowledge and technological developments for the capture and/or sequestration of atmospheric greenhouse gases (GHGs). This Chair, which is supported by the Université de Sherbrooke, a leader in the development of cutting-edge technologies to combat climate change, falls within one of the six "Climate Change and the Environment" federating themes. In fact, the UdeS has been awarded the world's top position in sustainable development by the international STARS ranking via its STARS Platinum certification. The chairholder will receive a contribution of \$250,000/year over 5 years to support research activities. The candidate will be expected to explore co-financing opportunities to enhance the Chair.



About the Faculty of Engineering

The UdeS [Faculty of Engineering](#) is a leader in education and applied research. Recognized for its dynamism in collaborative research, it stands out particularly in terms of technology transfer and concrete impacts on society.

It is also a faculty on a human scale, which favours rigorous and complete training of its students, particularly through the alternating [study and internship program](#). In a friendly and highly collaborative environment, discovery and innovation are strongly encouraged.

To foster its long-term growth, the Faculty of Engineering is particularly focused on interdisciplinary initiatives and emerging fields. The Faculty of Engineering has several research centers as well as the [Interdisciplinary Institute for Technological Innovation](#) (3IT), a part of the Integrated Innovation Chain along with the [Institut quantique](#) (IQ) and the [Centre de collaboration MiQro Innovation](#) (C2MI).


[Discover all the advantages of a career at the UdeS Faculty of Engineering, in the heart of the Eastern Townships!](#)

About the Department

The faculty members of the [Chemical and Biotechnological Engineering Department](#) are active in the areas of materials, environment and sustainability, renewable energy, green processes, biological and biotechnological processes, pharmaceutical processes, and thermal plasmas. The Department has five research chairs and offers master's and doctoral programs that allow students to work in state-of-the-art laboratories under the supervision of internationally recognized researchers. The Department is distinguished by its facilities, which include a process scale-up center, environmental laboratories, characterization laboratories, nanotechnology laboratories, chemical metallurgical process laboratories, biotechnology process laboratories, including a Biosafety 2 laboratory, and a pharmaceutical process laboratory.

The faculty members of the [Civil and Building Engineering Department](#) is active in the fields of materials such as concrete, structures, water resources, geotechnics, the environment, life cycle assessment, building energy efficiency and integrated building design. The Department offers master's and doctoral programs that enable students to work in state-of-the-art laboratories under the supervision of internationally renowned researchers. The Department's facilities include over 2,000 square meters of laboratories for structure and material testing, a concrete pilot plant, three large reaction walls, two test slabs, state-of-the-art testing equipment, environmental laboratories, building energy efficiency laboratories, an external hydraulics and hydrology complex, and a 2,000-square-meter scale-up center for the manufacture of large-scale concrete specimens.

The faculty members of the [Mechanical Engineering Department](#) is active in the fields of audible and ultrasonic acoustics, aeronautics, bioengineering and sports engineering, product design and development, industrial energy efficiency, solar energy, advanced materials, mechatronics, microelectromechanical devices, shock wave physics, robotics, thermofluids and vibration. The



Department has six research chairs and offers master's and doctoral programs that enable students to work in infrastructures housing numerous cutting-edge research laboratories, under the direction of internationally recognized researchers. The department stands out for its facilities, which include coupled anechoic and reverberation chambers, wind tunnels including an anechoic one, a range of equipment for characterizing materials and structures, research ultrasound scanners, controller prototyping platforms, and several of its members are part of 3IT, a unique infrastructure for micro-fabrication that includes 1,600 square meters of clean rooms, as well as for its approach to teaching design and a rich entrepreneurial component, supported by numerous partnerships.

Expertise

The will contribute to the creation of cutting-edge technological solutions that ensure carbon neutrality. He/she will be involved in teaching and conducting fundamental and applied research in the field of negative greenhouse gas (GHG) emission technologies:


- GHG capture: development of processes, technologies or materials for capturing GHGs directly from the atmosphere, oceans or industrial sources.
- Sustainable GHG sequestration: development of processes, technologies or materials for long-term GHG sequestration.

Functions

- Teach at the undergraduate and graduate levels.
- Develop fundamental or applied research activities.
- Supervise graduate students.
- Participate in university life.
- Contribute to community service.

Requirements

- Hold a doctorate in a relevant discipline
- Have an interest in and aptitude for teaching, university pedagogy and skills development.
- Have an interest in research (disciplinary, interdisciplinary), innovation and knowledge transfer.
- Be able to plan, organize and develop a project independently.

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- Demonstrate an ability to supervise graduate students.
 - Have previously published in peer-reviewed journals.
 - Demonstrate the ability to establish and maintain good interpersonal relationships, collaboration and teamwork skills.
 - Demonstrate leadership qualities, initiative and excellent ability to communicate and interact effectively and smoothly with various internal and external partners.
 - Ability to comply with the requirements of [responsible research conduct](#).
 - Have the ability to **teach in French** or to achieve this ability within a reasonable time frame.
 - Be a member of the *Ordre des ingénieurs du Québec* (OIQ) or have the qualifications to become a member and commit to becoming a member within 5 years.

The working conditions are governed by the collective agreements in force.

Regular, full-time, tenure-track position

Anticipated start date: January 2025

Equity, diversity and inclusion

The Université de Sherbrooke (UdeS) values equity, diversity, equality and inclusion in employment within its community and invites all qualified individuals to apply, particularly women, members of visible and ethnic minorities, Aboriginal peoples and [persons with disabilities](#) in compliance with the Quebec Act respecting equal access to employment in public bodies. The screening and assessment tools can be adapted according to the needs of persons with disabilities who request them, and this, in complete confidentiality. The Université de Sherbrooke also encourages people of all sexual orientations and gender identities to apply. Priority will be given to Canadians and permanent residents. [Learn more about equity, diversity and inclusion at UdeS](#).

Application process

The deadline for submitting applications is **August 31, 2024**.

Review of applications will begin on September 3, 2024 and will continue until the position is filled.

We invite you to submit your application electronically by clicking on the "[Postuler](#)" button.



Please combine the following in one pdf document: (please provide complete files)

1. Your curriculum vitae;
2. A letter of motivation;
3. A proposal for a research chair program (2 pages) describing the problem, objectives, methodological approach, links with your previous work, as well as the training of highly qualified personnel (students, research staff, etc.). The adequacy with the strategic plan of the Université de Sherbrooke and the Faculty of Engineering should also be explained. Funding opportunities (granting agency programs, companies, etc.), as well as the collaborations and networking envisaged should be described;
4. A description of your vision of teaching (2 pages) including the [courses](#) to which you could contribute and/or that you would like to develop and the teaching methods that you advocate;
5. A one-page text on equity-diversity-inclusion (EDI) that presents specific actions already taken or planned to promote EDI (i) in the training of new staff (recruitment, mentoring, career development); (ii) in the realization of research projects; and (iii) in the involvement in university life. We invite you to consult the [guide to submitting an EDI text](#) (in French). The Faculty is interested in individuals whose research, teaching, and community involvement demonstrate the importance it places on diversity in higher education;
6. Reprints from the most relevant recent contributions (maximum 3).

In addition, please have **three external referees** each send a letter of recommendation directly to the contact information below:

Dean of the Faculty in Engineering
Job Posting no 07000
Université de Sherbrooke
2500, boulevard de l'Université
Sherbrooke (Québec) J1K 2R1
doyen.genie@USherbrooke.ca