



MINING ENGINEERING PROFESSOR (INTEGRATED DESIGN FOR RESPONSIBLE MINING)

Job Reference Number : 19-PR-14

Posting/Closing Date : November 8, 2019 to January 15, 2020

Workingplace : Principal Pavilion

Department or Service : Department of Civil, Geological and Mining Engineering

POSITION SUMMARY

Polytechnique Montréal promotes excellence, creativity, integrity, collaboration, respect, openness and diversity. Recognized as one of Montreal's best employers, it offers excellent working conditions, in particular by fostering employees' work-life balance and well-being.

Polytechnique Montréal is strongly committed to equity, diversity and inclusion, which fosters its development and constitutes an undeniable catalyst for excellence in teaching, research and outreach activities. Accordingly, Polytechnique particularly encourages women, members of visible and ethnic minorities, Aboriginal people and persons with disabilities to apply. Accommodations can be provided based on the needs of the candidates.

Applying to Polytechnique means taking a leap toward a rewarding career and opening up to a world of opportunities.

Located on Mount Royal, an exceptional setting in the heart of Montreal, Polytechnique is a world-renowned engineering university that operates in a STARS certified environment. It excels in multidisciplinary and multisectoral research and in high-quality training at all academic levels. Founded in 1873, Polytechnique Montréal hosts more than 8,500 students and relies on the expertise of more than a thousand persons with a wide variety of qualifications. As an active advocate for sustainable development, Polytechnique stands out by its leading-edge innovations and its active role in technological, economic and social development. Polytechnique is involved locally, nationally and internationally by spurring synergy among research ecosystems.

Polytechnique Montréal's Department of Civil, Geological and Mining Engineering hosts around 1,200 students, of whom a third are women and 400 are graduate students. With 42 professors and two full-time lecturers, including ten women, the Department is a Canadian research leader in several sectors, such as transportation planning, structural and earthquake engineering, mining waste management, hydraulics, and drinking water and wastewater treatment. The Department also hosts several chairs and research groups, notably the MADITUC group (transportation), the Geothermal and Hydrogeology Group, CREDEAU (water management), the NSERC Industrial Chair on Drinking Water, the Canada Research Chair in Modelling Complex Hydro-Environmental Systems, the Canada Research Chair in Numerical Modelling and Experimental Simulation in Earthquake Engineering, the Canada Research Chair on Personal Mobility, and the MOBILITÉ Research Chair on the Evaluation and Implementation of Sustainability in Transportation.

The Department is a partner of the Research Institute on Mines and the Environment - RIME UQAT - Polytechnique and of the Canadian International Resources and Development Institute (CIRDI).

The successful candidate will also become a member of the Research Institute on Mines and Environment (RIME - www.irme.ca/en/) RIME was founded in 2013 by the University of Quebec in Abitibi-Témiscamingue and Polytechnique Montreal, in collaboration with several mining companies which invest around 1.6 million dollars per year in the institute research program. Focused on mining environment and mine waste management, the Research Institute develops innovative environmental solutions for the entire life cycle of mines. This innovative partnership supports a leading-edge research program that addresses needs from industry, governmental agencies and society in general, as well as the training of highly qualified personnel.

RESPONSIBILITES

The successful candidate will be expected to carry out the duties of this position with a dynamic and creative approach. In particular, he or she will:

- demonstrate a commitment to excellence in teaching at both the undergraduate and graduate levels;
- supervise undergraduate and graduate students;
- carry out innovative research projects;
- obtain grants and contracts aimed at training highly qualified personnel through research work;
- publish the scientific results of his or her research;
- participate in the teaching and research activities;
- collaborate with other researchers at RIME and other research teams within Polytechnique Montréal or with other institutions;
- collaborate with the industrial partners of RIME;
- contribute to the influence of Polytechnique Montréal in Québec and internationally.

AREA OF EXPERTISE

The development of responsible mining has always been a priority of the research carried out at Polytechnique Montreal. The development over the last decades of several innovative mine waste management methods (e.g. waste rock inclusions in tailings impoundments, new construction approaches for waste rock piles, valorisation, backfilling) was part of this strategy. However, the integration of these approaches to mine planning and mining methods remains a challenge. Our objective is therefore to propose to the mining industry new integrated design approaches that consider the entire life cycle of mines, including mining (extraction), processing, waste management, closure and resilient reclamation. The overall objective is to contribute to the development of a more sustainable mining industry by integrating economic, environmental, practical and human aspects.

The Department of Civil, Geological and Mining Engineering invites applications for a tenure-track position in Mining Engineering within the following research areas:

- Selective mining methods
- Mine planning
- Valorisation (re-use) and integrated mine waste management
- Circular economy applied to mining
- Mine reclamation

These aspects could be studied by either experimental and/or numerical approaches.

STARTING DATE

As soon as possible.

QUALIFICATIONS

The successful candidate must hold a Bachelor's degree and a Ph.D. in mining engineering or a relevant discipline, with a specialization in mining operations.

He or she is registered as a Professional Engineer with the Ordre des ingénieurs du Québec (OIQ), or will take the necessary measures to register prior to applying for tenure. Candidates must demonstrate excellent research and teaching skills. Relevant industry or practical experience is an asset. Given that the teaching language is French, the successful candidate will be fluent in French, both spoken and written, before applying for tenure. Polytechnique Montréal will provide the necessary assistance and support for the successful candidate to become a registered member of the OIQ and to learn French.

Polytechnique Montréal recognizes that career breaks such as maternity leaves, parental leaves, extended sick leaves, clinical trainings, as well as disabilities, can impact productivity and research achievements. The impact of these leaves will be taken into account in the recruitment process.

WORKING CONDITIONS

This faculty position is tenure-track. Salary and benefits will be set in accordance with the collective agreement in effect. The latter includes arrangements for work-life balance and offers maternity, paternity and adoption leaves in addition to the Québec Parental Insurance Plan (<http://www.rqap.gouv.qc.ca/>).

APPLICATIONS

Candidates are invited to submit an application that includes:

- their résumé;
- a description of their area of expertise;
- a statement of their teaching and training objectives;
- a description of their proposed research objectives and program;
- official records of their diplomas;
- full contact information of three persons able to provide references;
- a few examples of work relevant to the position;
- three recent scientific contributions;
- teaching evaluations if applicable.

Applications must be received no later than Wednesday January 15, 2020 at 5 PM, and submitted to:

Professor Louise Millette, ing., Ph.D.
Director
Department of Civil, Geological and Mining Engineering
Polytechnique Montréal
PO Box 6079, Succ. Centre-Ville
Montreal (Quebec) H3C 3A7
CANADA

E-mail: candidaturescgm@polymtl.ca

Examination of the applications will begin as soon as possible and will continue until the position is filled.

We encourage all qualified candidates to apply, particularly women, members of visible and ethnic minorities, Aboriginal people and persons with disabilities. However, in accordance with immigration requirements, Canadians and permanent residents will be given priority.