



Assistant Professor – Intelligent Mining Systems
The Robert M. Buchan Department of Mining
Queen's University at Kingston

The Robert M. Buchan Department of Mining, Faculty of Engineering and Applied Science at Queen's University, invites applications for a tenure-track faculty position at the rank of Assistant Professor, in the area of *Intelligent Mining Systems* within the Mine-Mechanical Engineering group. The preferred starting date of the appointment is July 1, 2017.

This position is part of an exciting new interdisciplinary initiative within the Faculty of Engineering and Applied Science, and across Queen's more broadly. Cross-appointment to other relevant academic departments will be encouraged, depending on the area of expertise and research focus of the appointee.

The department has operated an undergraduate option in Mine-Mechanical Engineering, within the Mining Engineering degree program, since 1990 and has two established faculty members with active research programs in this area. The thrust of this research in the department, in alignment with the emerging priorities of the global mining industry, is now focused on *Intelligent Mining Systems*: machines, processes, software, and related technologies that leverage, enhance, augment, and/or optimize the capabilities of existing elements, both human and machine, within the mining life cycle – with the aim of enabling natural resource extraction that is safer and more effective, and which helps mitigate any potentially negative social, environmental, and economic impacts.

The area of *Intelligent Mining Systems* potentially encompasses a very broad range of areas of application within mining. Such applications include, but are not limited to: machine design, autonomous mining vehicles, materials handling (including waste management, transportation systems, etc.), energy and environmental systems (including underground ventilation, etc.), fleet management, distributed monitoring and control systems, process planning and optimization, reliability engineering, and risk management.

We are looking for outstanding candidates who have either already worked on some aspect of mining research relevant to *Intelligent Mining Systems*, or those who are eager to apply their leading edge research expertise to this exciting emerging field within

mining. Applications are particularly encouraged from candidates with research backgrounds in one or more of the following: Cyber-Physical Systems, Control Systems, Industrial Internet of Things, Mechatronics, Robotics & Automation, Autonomous Systems, Systems Modelling & Optimization, Data Analytics, and Machine Learning.

The successful candidate must hold at least one degree in Engineering and will have a PhD in a relevant discipline completed at the start date of the appointment. Registration as a Professional Engineer in Ontario, or eligibility to acquire registration in Canada, is an essential requirement. Relevant industrial experience is an asset.

The main criteria for selection are academic and teaching excellence. The successful candidate will provide evidence of high quality scholarly output that demonstrates potential for independent research leading to peer assessed publications and the securing of external research funding, as well as strong potential for outstanding teaching contributions at both the undergraduate and graduate levels, and an ongoing commitment to academic and pedagogical excellence in support of the department's programs. Candidates must also provide evidence of an ability to work in an interdisciplinary, collaborative environment. The successful candidate will be expected to make substantive contributions through service to the department, the Faculty, the University, and/or the broader community. Salary is commensurate with qualifications and experience.

Established in 1893, Queen's Mining has grown to be one of the largest mining schools in the world. Its graduates occupy senior engineering, management, and executive positions throughout the global minerals industry. Further information on the Department is available at <http://www.mine.queensu.ca/>. The department has a long and firmly established track record of generating research outcomes that are relevant to industry as well as beneficial to society as a whole. One of the primary strengths of the department is the breadth of relevant expertise that its faculty members can bring to bear on a broad array of research challenges facing the mining and minerals industry, ranging from innovative mining technologies and methods through to techniques for mitigating mining related environmental impacts. In 2009, the department received a major philanthropic donation from Robert Buchan, after whom the department is now named. This transformative gift enabled investment in faculty renewal and has further strengthened an already healthy departmental endowment fund, Departmental resources are also augmented by a number of named Chairs and Professorships.

Queen's University is a campus with a global reputation in the heart of the vibrant Kingston community in the core of the Thousand Islands region of south-eastern Ontario. Kingston is home to the DuPont Canada Research and Development Centre, Bombardier Transportation Transit Systems unit, St. Lawrence College, and the Royal Military College of Canada.

Additional information about Queen's University, which may be of interest to prospective faculty members, can be found at <http://www.queensu.ca/facultyrecruitment/>.

The University invites applications from all qualified individuals. Queen's is committed to employment equity and diversity in the workplace and welcomes applications from women, visible minorities, Aboriginal peoples, persons with disabilities, and LGBTQ persons. All qualified candidates are encouraged to apply; however, in accordance with Canadian Immigration requirements, Canadian citizens and Permanent Residents of Canada will be given priority.

To comply with Federal laws, the University is obliged to gather statistical information about how many applicants for each job vacancy are Canadian citizens / permanent residents of Canada. Applicants need not identify their country of origin or citizenship, however, all applications must include one of the following statements: "I am a Canadian citizen / permanent resident of Canada"; OR, "I am not a Canadian citizen / permanent resident of Canada". Applications that do not include this information will be deemed incomplete.

A complete application consists of:

- cover letter (including one of the two statements regarding Canadian citizenship / permanent resident status specified in the previous paragraph)
- current Curriculum Vitae
- statement of research interests
- statement of teaching interests and experience (including teaching outlines and evaluations if available)
- three examples of relevant publications
- the names and contact information of three referees

Applicants are encouraged to send their application package electronically (either as PDFs or MS Word files) to: wanda.badger@queensu.ca with the subject line "Application for the Mine-Mechanical Engineering Faculty Position", although hard copy applications may be submitted to:

**Dr. Takis Katsabanis,
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The Robert M. Buchan Department of Mining
Queen's University
Goodwin Hall, Room 354
Kingston, ON, Canada K7L3N6
Phone: (613) 533-2230**

Review of applications will begin on March 15, 2017, and applications will continue to be accepted until the position is filled.

The University will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant's accessibility needs. If you require accommodation during the interview process, please contact Wanda Badger in The Robert M. Buchan Department of Mining at wanda.badger@queensu.ca.

Academic staff at Queen's University are governed by a *Collective Agreement* between the Queen's University Faculty Association (QUFA) and the University, which is posted at <http://www.queensu.ca/facultyrelations/faculty-librarians-and-archivists/collective-agreement> and at <http://www.qufa.ca>.