Geological Sciences and Geological Engineering

PhD and MSc positions: Environmental Geochemistry of Mine Wastes

Starting January 2021, one PhD and one MSc position are open in the GeoEnvironmental Engineering group in the Department of Geological Sciences and Geological Engineering at Queen’s University.

This project focuses on the mobility of (trace) metal contaminants in mine waste rock and tailings environments. Incoming students will deploy a combination of laboratory and field experiments and numerical modeling to elucidate processes controlling the release of metal contaminants. Advanced aqueous speciation analysis and automated mineralogy will be used to study geochemical reactions; reactive-transport modeling will be used to unify geochemical reactions and hydrogeological transport phenomena with practical design parameters for waste storage systems.

Our research involves active collaboration with an international team of analytical geochemists, numerical modelers and industry partners in Canada and Peru.

To apply: Both positions are available starting January 2021 and are offered as part of a PhD/MSc program in the department of Geological Sciences and Engineering at Queen’s University. Our department offers and attractive Graduate Funding Package, including tuition credits and teaching assistantships, which may be topped-up through scholarships, awards, and the PI, commensurate with qualifications. For specific information about the project, please contact Prof. Dr. Bas Vriens: bas.vriens@queensu.ca. Applications should include a letter of motivation, a CV outlining your previous experience and university transcripts, and the contact information of two references. Applications can be submitted until October 15th 2020 by email addressed to GeoEnvironmental@queensu.ca, max 10MB.

Queen’s University is an internationally recognized center of excellence. Its research-intensive environment and interdisciplinary programs are highly-ranked for student experience. The Department of Geological Sciences and Geological Engineering at Queen’s houses first-rate analytical facilities such as the Queen’s Facility for Isotope Research, and a lively community of approximately 200 students and world-renowned faculty.

Requirements: We seek talented, self-motivated students with a strong background and broad interest in environmental geochemistry and engineering. The candidates should hold a BSc and/or MSc degree in a relevant field, including (hydro)geology, environmental sciences, or civil engineering. Excellent communications skills and written and spoken English are required. Hands-on experience in the laboratory or with numerical modeling is preferred.

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