PhD Position in Experimental and Numerical Studies in Unsaturated Flow and Transport


Opportunity

A fully funded PhD Position is available in the Department of Civil Engineering (https://lassonde.yorku.ca/civil/) at Lassonde School of Engineering (https://lassonde.yorku.ca/) in York University (https://www.yorku.ca/). I am looking for a PhD student to work on a project related to forest fire induced hydrophobicity in soils. With climate change the forest fires are becoming increasingly common. Wildfires can alter forest soils. That's because hotly burning plant material releases a waxy substance which penetrates the soil, then solidifies around individual soil particles as they cool. This results in alteration of soil capillarity resulting in hydrophobic soils. This research aims to study soil hydrophobicity both from an experimental and numerical modeling perspective. The ultimate aim of the project is to develop remediation strategies to mitigate the hydrophobic behavior of such soils.

Requirements

I am looking for a talented and ambitious PhD Student with initiative, motivation and endurance. You are keen to invest in the growth of both yourself and our team. You should have:

- A MSc degree (or equivalent) in Civil Engineering, Earth Sciences, Soil Physics, Petroleum Engineering or a related discipline;
- Solid Background in Unsaturated flow and transport, Capillarity, and/or multi phase flow systems,
- Experience working in the laboratory studies related to flow and transport in the subsurface and numerical modeling of systems related to the vadose zone and/or multi phase flow systems
- Strong interest in programming, experience of coding in Fortran would be an asset;
- Excellent communication skills in English.

Funding

The position is fully funded, preference will be given to Canadian Citizens and Permanent Residents. Exceptional international students will also be considered.

Contact:

Please reach out to Prof. Rashid Bashir (rbashir@yorku.ca)