

Multiple Postdoctoral and PhD Positions in Frozen Soil and Permafrost Modelling at Carleton University, Ottawa, Canada

Multiple openings are available for **postdoctoral researchers** and **fully funded PhD students** at **Carleton University** in Ottawa, Canada, in a collaborative research program led by **Dr Mehdi Pouragha** (Department of Civil and Environmental Engineering) and **Dr Stephan Gruber** (Department of Geography and Environmental Studies).

The research focuses on the mechanics and modelling of **frozen soils and permafrost**, including **constitutive modelling, THM modelling, computational simulation**, and the response of infrastructure and hazards in permafrost environments to climate change. Positions are available immediately and will remain open until filled.

The **postdoctoral positions** are oriented primarily toward **computational and numerical modelling**, including the development and application of THM-FEM simulations. Different positions could entail varying emphasis on theory, constitutive modelling, and simulation development. Applicants should have a strong background in computational modelling and coding, along with solid scientific writing skills, a collaborative attitude, and the ability to work with a good degree of independence as researchers. Experience with THM modelling, permafrost or frozen soil mechanics, and related constitutive models will be considered assets. The successful candidate must be eligible to work in Canada. Initial appointments will be for one year, with the possibility of extension.

The **PhD positions** will combine **constitutive modelling** and **numerical modelling** of frozen soils, permafrost, and related infrastructure problems. We welcome applicants from engineering fields (such as civil or mechanical engineering) with strong mathematics, physics, and coding background. Both domestic and international applicants will be considered. Very strong candidates with only a BSc degree may also be considered for direct entry to the PhD. These PhD positions are **fully funded for four years**.

Across both categories, we are especially interested in candidates motivated by scientifically challenging problems at the intersection of mechanics, computation, and permafrost engineering. Required qualifications include scientific writing ability, coding experience, and a strong teamwork attitude. Particularly strong coding skills, familiarity with THM processes, and prior knowledge of permafrost or frozen soils will be viewed favourably.

The positions are based **in person in Ottawa** at Carleton University.

Applications should include a cover letter, curriculum vitae, and the names and contact information of two references. PhD applicants should also include transcripts (official or unofficial). Postdoctoral applicants may optionally include a publication sample. In the cover letter, **postdoctoral applicants must explicitly state their current status and eligibility to work in Canada**.

Applications should be sent to **mehdi.pouragha@carleton.ca**.