



Posting Date: May 6, 2022

JOB POSTING – POSTDOCTORAL FELLOW

Areas of Research: civil engineering materials, cement and concrete, sustainability, life cycle assessment, durability, natural and enforced carbonation, greenhouse gas (GHG) assessment & mitigation

Overview of the position: Applications are invited for a Postdoctoral position in the area of low carbon cement and concrete construction materials.

The research program is led by Prof. Daman Panesar. The objective of the research is to provide a scientific assessment of the implications of existing and emerging techniques and technologies to carbonate concrete and its constituents through natural and/or enforced approaches. This research includes:

- Understanding carbonation mechanisms, and critical assessment of CO₂ uptake and concrete performance over various life stages (product, use and end-of-life) in a Canadian context.
- Evaluation of implications of carbon capture and utilization (CCU) techniques, and naturally carbonated concrete on the properties and long-term performance of cement-based materials.
- The candidate will be the lead contributor to peer reviewed publications, technical reports, and conference proceedings; assist in the supervision of students; and participate in meetings with academic, industrial, and government partners.

Required qualifications:

- PhD degree in engineering with emphasis on cement-based materials, sustainability and durability, or related field awarded within the past 5 years
- Advanced statistics and probability
- Demonstrated awareness of sustainability and GHG emissions
- Experience managing large datasets containing confidential data
- Excellent verbal and written communication skills in English
- Demonstrated ability to work independently and as part of a team and a drive to create own novel research direction.

Application instructions

All individuals interested in this position must submit a single electronic file consisting of a cover letter, detailed CV, a one-page statement of research interests, and the names and addresses of three references to Prof. Daman Panesar (d.panesar@utoronto.ca) by the closing date. Please use **Application for Concrete Carbonation- Materials Postdoctoral Position** as the email subject.

Annual Salary: \$47 000

Closing date: August 15, 2022. The search will continue until the positions are filled.

Expected start date: September 2022

Term: 1 year with potential for renewal

FTE: 1

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.

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The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.