



PhD & Postdoc positions: Development of very low embodied carbon concretes with optimal use of engineered fillers

Record number : OPR-896

Overview

RESEARCH DIRECTION

William Wilson, Professeur - Department of Civil and Building Engineering

INFORMATION

william.wilson@usherbrooke.ca

RESEARCH CO-DIRECTION

Arezki Tagnit-Hamou, Professeur - Department of Civil and Building Engineering

INFORMATION

arezki.tagnit-hamou@usherbrooke.ca

ADMINISTRATIVE UNIT(S)

Faculté de génie
Département de génie civil et de génie du bâtiment

LEVEL(S)

3e cycle
Stage postdoctoral

LOCATION(S)

Laboratoires du Groupe de recherche sur le ciment et le béton de l'UdeS

Project Description

The Cement and Concrete Research Group at the Université de Sherbrooke is currently looking for PhD students and a postdoc researcher to join this project on the development of very-low-intrinsic-carbon concretes with optimal use of engineered fillers and other local cementitious materials. Engineered fillers involve optimizing the mix of cementitious and inert powders to increase packing density while reducing water demand and cement content, without compromising properties (e.g., strength). Under the supervision of Professors William Wilson and Arezki Tagnit-Hamou, and in collaboration with an industrial partner, the team will work on the development of cementitious systems with local materials, the development of concretes to meet Canadian casting and performance constraints, and technology transfer with concrete producer and user partners. In addition to this main research project, the postdoc will directly assist Professor Wilson in the day-to-day activities of the group.

QUALIFICATIONS

We are looking for candidates with expertise and/or interest in the development and advanced characterization of cementitious materials, particle optimization and physical chemistry of cementitious systems, formulation and performance evaluation of concretes and, if possible, field experience with concretes. Candidates invited to apply may come from the fields of materials science and engineering, civil engineering, chemical engineering or another relevant field. Ideal candidates are self-motivated, dynamic, autonomous, well-organized and able to work as part of a team in an interdisciplinary environment. In addition, they possess excellent scientific rigor, a track record of high-quality publications and excellent English communication skills, both oral and written (knowledge of French is an asset).

DETAILS

The start date is scheduled for winter or summer 2024. Doctoral studies are funded for a period of 4 years, subject to a performance evaluation after one year. The postdoctoral position is for one year, renewable up to 3 years depending on performance and funding. Very competitive base salaries for the region are offered.

HOW TO APPLY

USherbrooke.ca/recherche

If you feel you have the required qualifications, please send your CV, transcripts, a one-page research statement (past and future research interests, if any) and a sample publication (if available) with job offer number OPR-896 by e-mail to Recrutement.grcb@usherbrooke.ca, as soon as possible. Interviews will take place as soon as applications have been selected. Please do not call or drop in, only successful candidates will be contacted.

MORE INFORMATION

Prof. William Wilson : <https://www.usherbrooke.ca/recherche/specialistes/details/william.wilson>

Prof. Arezki Tagnit-Hamou : <https://www.usherbrooke.ca/recherche/specialistes/details/arezki.tagnit-hamou>

This project can accommodate one or more students in the following programs:

- Postdoctoral fellowship
- Doctoral thesis

Discipline(s) by sector	Funding offered
--------------------------------	------------------------

Sciences naturelles et génie	Yes
-------------------------------------	-----

Génie civil	
-------------	--

The last update was on 13 March 2024. The University reserves the right to modify its projects without notice.