

Ph.D. scholarship in Civil Engineering, York University, Canada

Date: August 24, 2022

Job type: Graduate
Job Rank: Graduate Student Researcher
Job institution: York University
Starting date: Immediately or January 2023

RE: Two Graduate Research Assistantships in CIVIL ENGINEERING at York University, Toronto Canada

POSITION DESCRIPTION

The Civil Engineering Department at York University is seeking applications for at least two Ph.D. Graduate Research Assistantships (GRA) who enjoy environmental research and are keen to work at the chemistry biology interface. The assistantship will cover stipends, tuition waivers, and insurance. The successful candidate will work in Dr. Satinder Kaur Brar's research group (<https://inzymes.lab.yorku.ca/>). The research environment at York provides collaboration with other university researchers across the world. Our research group is diverse which helps students explore, prosper and learn parallel skills required by the job market.

The broad research areas include but are not limited to polymer chemistry, analytical chemistry, microbiology and wastewater treatment, solid waste management, and bioenergy production. Two example projects to be undertaken by the candidates are listed below. There could be many other research projects for selection at the time of onboarding. Details will be discussed during the video conference interview if invited.

1. Robust detection and characterization of microplastics and weathered microplastics

A Ph.D. will be supported by this NSERC project to develop qualitative and quantitative analytical methods using advanced instrumentation technologies such as FTIR, SEM, microscope, and LC-ToF-MS in wastewater/water samples. Since this is a joint project among three organizations, the candidate working on this NSERC project will have the opportunity to learn collaborative skills between universities, national labs, and industrial partners. Candidates with experience in polymer chemistry/analytical chemistry are especially encouraged.

2. Study of Microplastics Weathering in wastewater treatment systems

A Ph.D. student will be supported by this NSERC project to develop a novel bioreactor design depicting suspended/hybrid systems and operational strategies for likely consequences of microplastics weathering in the bioreactor. The success of this study would pave a critical understanding of the fate of microplastics in wastewater systems. Candidates with experience in biological wastewater treatment are especially welcomed.

CANDIDATE QUALIFICATION

The successful candidate is expected to be creative, self-motivated, possess a good research attitude, encompass dynamic problem-solving skills, and have a strong desire to solve real-world problems and collaborate in a multidisciplinary environment with both industrial and academic partners. The candidate is expected to communicate research results through high-quality peer-reviewed journals and deliver presentations at national/international professional meetings. Specifically, the successful candidate

- Must have (or must earn before the application deadline) a Bachelor's or Master's degree in chemical engineering, biological systems engineering, civil engineering, environmental engineering, or a closely related field.
- Demonstrated excellent scientific writing and communication skills (e.g., peer-reviewed publications, competitions, etc.).
- Applicants must also meet the English proficiency requirements and other requirements for admission to York University (<https://futurestudents.yorku.ca/requirements/hs-international-countries>)

Application closing date: October 9, 2022

How to apply: Send your CV (specify your publications, laboratory/field experience, and non-expired English test results, if applicable), transcripts, and contact information of three references to Dr. Satinder Kaur Brar (satinder.brar@lassonde.yorku.ca); and/or Dr. Rama Pulicharla (ramapuli@yorku.ca).

Satinder Kaur Brar, Ph.D.

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