



FACULTY OF  
LIBERAL ARTS AND  
PROFESSIONAL  
STUDIES

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Technology (SIT)

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## Postdoctoral Visitor in Software Engineering / Distributed Systems

**Employer:** York University

**Location:** Toronto, Canada

**Salary:** \$50,000/year CAD

**Closing date:** February 10<sup>th</sup>, 2023 or until the position is filled

**Preferred Start Date:** March. 1<sup>st</sup>, 2023 (flexible)

**Disciplines:** Computer Science, Software Engineering, Blockchain

**Position Type:** Full Time

**Job Type:** Postdoctoral Visitor

**Organization Type:** Academia

### Overview

The [Enterprise Systems Group](#) at York University is seeking applicants for a Postdoctoral position in the intersection of software engineering and distributed systems. The position is associated with [York University's Digital Currencies Project](#) (DCP) funded by York University's Catalyzing Interdisciplinary Research Clusters (CIRC), and involves the modeling, simulation, and analysis of distributed consensus algorithms.

The project aims at building a set of tools for helping researchers, designers and implementors of digital currencies navigate the enormous design space that has emerged in the blockchain area, through applying model-driven analysis, simulation, and development techniques. The postdoctoral fellow will work on improving and completing our current toolset towards public release, while using it to instantiate and perform exemplary analyses of popular distributed consensus proposals. In addition, the ideal candidate is eager to bring their own ideas and expertise for quick and efficient model-driven analysis of consensus networks, specifically using model-checking and AI automated reasoning.

### Qualifications

- Completed PhD degree in Computer Science or related discipline.
- A competitive publication record in software engineering or other evidence of strong research and dissemination ability.
- Strong object-oriented software engineering skills, most preferably in Java, including quality assurance, configuration, documentation.
- Solid understanding of distributed computing as related to blockchain technologies. Ability to quickly read and understand papers describing consensus algorithms.
- Awareness (or ability to acquire such) of the latest tools and frameworks for model-driven design and development.
- The following additional skills are an asset:
  - Knowledge of to formal modeling and automated reasoning techniques within the areas of AI and automated verification.
  - Good understanding of the basics of cryptography. Ability to read and understand complex cryptographic protocols.
  - Experience with parallel and multi-threaded programming.

### Salary and Term

- **Salary:** \$50,000/year + benefits including extended health care.

- **Term:** 1 year
- **Preferred Start Date:** March 1<sup>st</sup>, 2023 (flexible)
- Position under [YUFA collective agreement \(see Article 33\)](#).

## Benefits

- Dissemination opportunities in both model-driven software engineering and blockchain-related publication venues.
- Possibility to work on own independent side-projects and ideas.
- Possibility to directly supervise graduate and undergraduate students.
- (Optional) May be possible to teach an undergraduate course for the School of Information Technology for additional compensation.
- Located in Toronto, Canada, the position offers a wealth of opportunities for establishing connections with industry and other academic labs within and outside of York University.

## How to apply

Interested applicants should [apply online \(https://tinyurl.com/esgpostdoc\)](https://tinyurl.com/esgpostdoc) by submitting the following information:

- Curriculum Vitae (CV)
- Cover letter (2 page max) describing:
  - the candidate's so far research
  - why the candidate is a good fit for the position
  - their long-term research plans as they relate to the objectives and scope of the research described above.
- The names and contact information of two (2) academic referees familiar with the candidate's research ability. We will notify applicants before we reach out to referees.
- Two representative first-authored papers (published or otherwise).

We will start processing applications after February 10<sup>th</sup>, 2023 and until position is filled. Only considered applicants will be contacted.

Please direct questions to Prof. Sotirios Liaskos ([liaskos@yorku.ca](mailto:liaskos@yorku.ca)), subject: "ESG PostDoc Opening"

