Post date: August 18th, 2023
Position: Postdoctoral Fellow on modelling and control of building energy systems
Start Date: As soon as filled
Duration: One year term, renewable once after first year
Primary Location: University of Toronto, Department of Civil & Mineral Engineering, St. George Campus
Salary: $50-75K + benefits, depending on qualifications and experience. For details, see employee PDF information here https://postdoc.sgs.utoronto.ca/

Description
This position will primarily support two projects on modelling and control of building energy systems: (i) Machine-Learning-Based Optimal Control Technologies for Integrated Energy Systems; (ii) Development of a Digital Twinning Tool for Building Cooling Systems. The specific tasks for this position will include working with three graduate students on literature reviews; development of virtual testbeds using simulation tools; development and evaluation of forward and data-driven modelling and control approaches for building energy systems; and authoring project reports and journal articles from the research.

Position Requirements
The applicants need to have a completed doctoral degree with a specialization in building science, smart building operations, modelling and control of building energy systems, building performance assessment, indoor environmental quality, and/or other closely related subject areas. The applicants for this position should demonstrate their ability to:

- Conceptualize and execute research on modelling and control of building energy systems,
- Develop and follow lab protocols and manuals that are responsive to data quality, security, documentation, and preservation requirements,
- Author high-impact journal articles and/or reports in related technical areas,
- Complete technical literature reviews,
- Work independently and as part of a highly diverse community with students, faculty, and collaborators,
- Manage multiple projects,

And be able to demonstrate evidence of a commitment to equity, diversity, inclusion, and the promotion of a respectful and collegial, comfortable, and safe learning and working environment.

Desirable Qualities
The ideal applicant for this position would further demonstrate:

- Knowledge of building science, building energy systems, building automation systems, indoor environmental quality, occupant comfort and behaviour.
• Knowledge of forward and inverse (data-driven) building and system modelling including extensive experience with various physics-based modelling tools (e.g., EnergyPlus, Modelica) and data-driven modelling techniques.
• Knowledge of modern optimal control techniques and their application in buildings including experience with their deployment/implementation in real and virtual testbeds.
• Knowledge of building performance monitoring and assessment.

Application Procedure
Submit a maximum 2-page Cover Letter and a CV to the following email address sjae.lee@utoronto.ca with the subject line “PDF position – [YOUR NAME]”. Either your cover letter or your CV should indicate three references/contact information who can comment on your record with regards to the position requirements and desirable qualities. No content in the body of the message (other than the two attachments) will be considered. Please do not submit additional attachments (e.g., reference letters, transcripts, sample articles).

Application Deadline: Applications will start being reviewed on September 1st, 2023 and will be considered until the position is filled.

Diversity Statement
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, LGBTQ2S+ persons, and others who may contribute to the further diversification of ideas.

Accessibility Statement
The University strives to be an equitable and inclusive community, and proactively seeks to increase diversity among its community members. Our values regarding equity and diversity are linked with our unwavering commitment to excellence in the pursuit of our academic mission.

The University is committed to the principles of the Accessibility for Ontarians with Disabilities Act (AODA). As such, we strive to make our recruitment, assessment, and selection processes as accessible as possible and provide accommodations as required for applicants with disabilities. If you require any accommodations at any point during the application and hiring process, please contact sjae.lee@utoronto.ca.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.