

## PhD Scholarships

**Area:** Optimization of electric mobility solutions  
**Start date:** September 2026 or January 2027.  
**Deadline:** Evaluation of applications will begin immediately.

The Department of Civil Engineering at McMaster University invites applications for a fully funded PhD position in Transportation Engineering beginning in Fall 2026 or Winter 2027. The successful candidate will work under the supervision of **Dr. Moataz Mohamed**.

Two research projects are currently underway:

- Optimization of zero-emission buses for transit applications
- Energy management estimation and forecasting for zero-emission buses

### Candidate Profile

Applicants must hold a master's degree in Civil Engineering, Operations Research/Engineering, Industrial and Systems Engineering, Engineering Mathematics, or a closely related field.

The research activities will include:

- System-level analysis of electric mobility solutions for transit bus applications
- Mathematical formulation and modeling of system components
- Vehicle routing algorithms and trajectory planning
- Integration of renewable energy resources and energy storage systems
- Quantification of environmental impacts and greenhouse gas (GHG) emissions
- Preparation of journal manuscripts and conference presentations

Experience with multi-vehicle routing problems and/or optimization modeling is essential. Proficiency in at least one programming language (e.g., Python, MATLAB, R, C++, or Java) is required. Python experience is particularly encouraged.

For more information about Dr. Mohamed's research activities, please visit the [Google Scholar](#) profile.

### Application process

Interested applicants should submit a **single PDF** file that compiles the four documents listed below:

- Resume with a list of publications (if applicable)
- Academic transcripts for undergraduate and master's degrees (unofficial copies are acceptable at this stage),
- A statement of research interest (maximum two pages) outlining your academic background, research experience, motivation for pursuing a PhD, and potential contributions to the research program,

Please email your application package to [mcmaster.research.opportunity@gmail.com](mailto:mcmaster.research.opportunity@gmail.com).

**Review of applications will begin immediately and continue until the position is filled. Only shortlisted candidates will be contacted.**

In alignment with McMaster University's commitment to equity, diversity, inclusion, and accessibility (EDIA), we are dedicated to fostering a research environment that values inclusive excellence. We recognize that diverse perspectives enhance creativity, innovation, and research impact. We strongly encourage applications from individuals who identify as members of equity-seeking and historically underrepresented groups, including but not limited to women, racialized persons, Indigenous peoples, persons with disabilities, members of marginalized community, and others who may contribute to the diversification of ideas and perspectives.

Accommodation is available throughout the recruitment process for applicants with disabilities. If you require accommodation, please indicate this in your application or contact us directly.

McMaster University is internationally recognized for innovative programs, cutting-edge research, and excellence in student-centered education. As one of Canada's most research-intensive universities, McMaster is consistently ranked among the top 100 universities globally (Times Higher Education World University Rankings 2025). Our vision is to achieve international distinction for creativity, innovation, and excellence, working together to build a brighter world.

More information about PhD studies at McMaster University is available at:

<https://www.eng.mcmaster.ca/civil/resources/>

**Best Regards,**

Moataz Mohamed

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