

Funded Master of Planning Studies (MPS) Student

Climate Action and Awareness Fund (CAAF): Development of a Bottom-up, Activity-based Transport Network and Emissions Modelling System

Overview of Dalhousie & DalTRAC:

Dalhousie University, located in Halifax, Nova Scotia, is one of Canada's top research-intensive universities, pioneering research in a wide array of disciplines. Dalhousie University houses the Dalhousie Transportation Collaboratory (DalTRAC), a CFI-sponsored multidisciplinary research facility dedicated to advancing transportation engineering and planning research.

Project Title: Development of a Bottom-up, Activity-based Transport Network and Emissions Modelling System

Supervisor: Dr. Chad Walker, Assistant Professor, School of Planning & Dr. Ahsan Habib, Professor, School of Planning, Department of Civil and Resource Engineering (cross)

DalTRAC is leading a multi-year project sponsored by Climate Action and Awareness Fund (CAAF) that advances a theoretical and empirical foundation for multi-scale integration of transport and emission models within urban systems modelling for multiple Canadian cities. The project will combine cross-cutting expertise from scholars and practitioners to advance data-driven, integrated urban systems modelling techniques for emissions estimation, a critical next step yet to be fully materialized to develop a standardized transport and emission modelling approach. The data, methods and tools developed in this project will provide a geo-temporally resolved understanding of emissions and inform policymaking to achieve Canada's goal of net-zero GHG emissions by 2050. More information on DalTRAC's research projects and publications can be found at: <https://www.dal.ca/sites/daltrac.html>.

For this advertised DalTRAC/CAAF position, we are looking for a student who will conduct research that helps us bridge our understanding of GHG emissions, transportation planning, and local climate action in Canada. Students will work with a variety of datasets, both quantitative and qualitative, to answer questions related to the barriers, enablers, and recommended pathways toward a low-carbon transportation system within Canadian urban centres. The successful candidate will be one driven to investigate how we can [re]design transportation systems that simultaneously lower emissions and in ways that create the conditions for a just and equitable low-carbon transition.

Required Qualifications:

- Undergraduate degree in engineering, environmental studies, planning, geography, or related discipline
- Strong interest in studying and advancing knowledge relating to climate change, transportation, and emission reduction pathways
- Proficiency in English, including writing
- Experience and/or strong interest in the research process (including literature reviews, question formulation, data collection, and data analysis)
- Knowledge of qualitative and/or quantitative data collection and analysis
- Strong commitment to upholding pillars of equity, diversity, and inclusion

We Offer:

1. *Expected start date and duration:* January 2024 for a duration of two years or until program requirements are met
2. *Stipend:* \$21,000 for first year with potential for renewal in year 2.
3. *A dedicated workspace* at the School of Planning
4. *Training and professional development* opportunities to support learning and career development

Application Instructions:

Thank you for your interest in joining the Dalhousie University community. Dalhousie University commits to achieving inclusive excellence through continually championing equity, diversity, inclusion, and accessibility. The university encourages applications from Indigenous persons (especially Mi'kmaq), persons with a disability, racialized persons, including persons of Black/African descent (especially African Nova Scotians), women, persons of a minority sexual orientation and/or gender identity, and all candidates who would contribute to the diversity of our community. For more information, please visit www.dal.ca/hiringfordiversity.

Please apply by sending your CV and an expression of interest (1 page max). Send all documents to: **Chad Walker**, Assistant Professor, School of Planning (chad.walker@dal.ca). The subject line of your email should be: **MPS Firstname LastName. Review of applications will start September 15th, 2023, and will continue until the position is filled.** We thank all applicants for their interest; however, only shortlisted candidates will be contacted for interviews.