



Faculté des sciences et de génie

## Master's, PhD, Postdoc Positions Available

### Smart and Sustainable Transportation Lab, Laval University (Université Laval)

The Smart and Sustainable Transportation Lab at Laval University (ULaval) has several Master's, PhD and Postdoc positions opening. The position involves research in Travel Behavior Analysis, Transportation and Climate Change, Mobility as a Service (MaaS), Transportation Network Analysis, the Interaction of AI and decision-making theories, and data science. Candidates are preferred to have Agent-based Simulation, Discrete Choice Modelling, Machine Learning Methods, Optimization Modeling basics. They should be able to work independently and are expected to collaborate with professors at Cornell University, University of Toronto, University of Montreal, and Concordia University. If you are interested, welcome to send your Cover letter, CV, and Transcripts in a single email at the following address: [bobin.wang@gmc.ulaval.ca](mailto:bobin.wang@gmc.ulaval.ca). Clearly indicate in the Subject of the email with "Prospective [Master/PhD/Postdoc]\_Number(s) of the project".

#### Available Positions

##### 1. Master's and PhD projects with full scholarships (2 MSc, 2 PhD)

There are 6 projects opened, and related descriptions and requirements are as follows (English and French):

(1) Carrots and sticks: assessing intervention effectiveness for sustainable mobility systems to reduce GHG emissions (441306)

<https://www.projets-recherche.ulaval.ca/en/project?id=441306>

(2) Application of gamification to incentivize sustainable urban mobility (441311)

<https://www.projets-recherche.ulaval.ca/en/project?id=441311>

(3) Simulate travel demand under carrots and sticks measures (441313)

<https://www.projets-recherche.ulaval.ca/en/project?id=441313>

(4) Measuring life cycle GHG emission and economic values (441316)

<https://www.projets-recherche.ulaval.ca/en/project?id=441316>

(5) Integrated Multimodal Travel Behavior Analysis under Mobility as a Service (441293)

<https://www.projets-recherche.ulaval.ca/en/project?id=441293>

(6) PASA-GES: Exploration of the potential of alternatives to single occupancy vehicles to reduce GHG emissions (441299)

<https://www.projets-recherche.ulaval.ca/en/project?id=441299>

**Desired Enrollment Time: As soon as possible until all positions are filled**

##### 2. Postdoc positions with full-time salary (1 Postdoc and 1 Research Professional)

Based on the above projects, the postdoc needs to have strong basics on Agent-based Simulation, Discrete Choice Modelling, Machine Learning Methods, and Optimization Modeling.

The research professional needs to be able to communicate in both English and French.

##### 3. Other Opportunities

(1) Visiting scholars and Internships

I always welcome visiting scholars, exchange students, and internships who share the same research interests.

(2) China Scholarship Council (CSC) project (for PhD, postdoc and visiting scholar)



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<https://www.csc.edu.cn/article/2306>

(3) Quebec-China Scholarship (for PhD, postdoc and visiting scholar)

<https://www.csc.edu.cn/chuguo/s/2366>

### **Tuition Fees at ULaval**

1. Fees and budgeting at ULaval

<https://www.ulaval.ca/en/future-students/plan-your-studies/fees-and-budgeting>

2. Exemption from international tuition fees for Master's Students in Quebec (selected by an educational institution)

<https://www.quebec.ca/en/education/study-quebec/financial-assistance-international-students/exemption-additional-tuition-fees-depending-program-region>

3. Exemption from international tuition fees for Doctoral Students at Laval University

<https://www.bbaf.ulaval.ca/en/scholarships-bursaries/international-students/doctoral-program-funding/tuition-fee-exemption-programs/>

### **Scholarships at ULaval**

There are a lot of scholarships or fellowships for Master's, PhD and Postdoc provided by ULaval, Research Foundations in Quebec-Nature and Technologies (FRQNT), Industry partners, and the Natural Sciences and Engineering Research Council of Canada (NSERC).

### **Admission Advantage at ULaval**

- No language test requirement
- Low living cost
- Flexible graduation criteria
- Beautiful campus with advanced and completed infrastructures
- Beautiful view of Quebec City
- Safe city and good human environment
- Learn French for free and can earn money at the same time

### **About Prof. Bobin Wang and the Smart and Sustainable Transportation Lab**

Dr. Wang's major is Traffic and Transportation Planning and Management, and she has more than 10 years of research experience in Travel Behaviour Analysis. She is an expert in Transportation and Climate Change, Mobility as a Service (MaaS), Discrete Choice Modeling, Machine Learning Methods, and Data Science. Her research interests focus on the development of efficient, intelligent, and sustainable multimodal transport systems under the context of Industry 4.0. Dr. Wang obtained her Bachelor's degree and PhD degree from Beijing Jiaotong University, and she has many years of working experience at Eindhoven University of Technology (TU/e), Delft University of Technology (TU Delft), and Polytechnique Montréal in the University of Montreal. She is the Principal Investigator (PI) of national and provincial projects in Canada with financial support from NSERC and FRQNT. As an emerging researcher, Dr. Wang is a regular member of several research centers in Transportation, Logistics, and Data Science in Canada, she is also a reviewer for many authority international journals in the field.

Web: <https://www.fsg.ulaval.ca/departements/professeurs/bobin-wang-1008>



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### **About ULaval**

Université Laval (<https://www.ulaval.ca/en>), located in the world heritage city of Québec, is the oldest French-language university in North America. One of Canada's top research universities, it is ranked 8th among the country's institutions of higher learning, with a research budget of over \$300 million in 2021. Université Laval boasts over 3,900 professors, lecturers, and teaching staff who share their knowledge with 48,000 students, including 13,000 at the graduate level.

### **Living in Quebec City**

Known worldwide for its rich history and European charm, Québec City is recognized as a UNESCO World Heritage treasure (<https://www.ulaval.ca/en/future-students/why-choose-universite-laval/living-in-quebec-city>). The city on the St. Lawrence River offers an exceptional quality of life and affordable cost of living and tops the list of Canada's safest urban centres. With its cultural and economic vitality, Québec has all the benefits of a big city in spectacular natural surroundings.