

The University of Liège is recruiting a

PhD Candidate in Agent-Based Modeling of Mobility-as-a-Service (MAAS) for Sustainable Cities

- **Full time**
- **Fixed-term contract for up to 4 years**
- **Supervision by Prof. Mario Cools**
- **Earliest start date: January 1, 2021**
- **Work location: Sart-Tilman Campus, Liège, Belgium**

Project description

Cities are continuously renewing and reshaping. This urban renewal goes along with the emergence of new mobility services, that might provide a solution to the negative externalities associated with abundant car use (e.g., congestion, pollution, loss of quality of life, etc.). In this research project, the potential of Mobility-as-a-Service (MAAS) will be investigated from a technical point of view, to provide advanced, scalable methodological approaches for modelling interactions and combinations of multiple new mobility solutions. In particular, the model includes deep Q-networks for smart-decision making under complex environments in conjunction with a MATSIM traffic model. The main outcome of this research project is a smart decision support system that enables policymakers to anticipate the implications of MAAS-related policy measures on the transportation system.

Your role

- The PhD student is embedded in a group of PhD students in the research group [LEMA](#) of the Urban & Environment Engineering ([UEE](#)) Department of the Faculty of Applied Sciences of the [University of Liège](#);
- Present his/her research at research seminars and conferences;
- Build his/her professional network of peers and to gain scientific status and visibility;
- Produce high impact journal publications and peer-reviewed conference papers;
- Deliver a PhD dissertation.

Your profile

- MsC in Engineering, Mathematics, Computer Science, Geography or Commercial Engineering;
- High qualifications and grades in statistics and programming related subjects;
- Being proficient in English. French is not required, but having proficiency in it is seen as an asset.
- Experience with programming languages (e.g. Python, Java, C++).

We offer

- An exciting multi-disciplinary research environment
- A competitive salary for the full-time PhD position for a period of maximum 4 consecutive years.
- A package of mentoring, training and career development.
- Enrollment as a PhD candidate in one of the Doctoral Schools attached to the Faculty of Applied Sciences.

Application process

Please submit your complete application in a single PDF file via mail to mario.cools@uliege.be before January 18th, 2021.

- Curriculum Vitae
- Cover letter outlining your background, skills and demonstrating your competences and motivation to carry out this project.
- Copies of degrees, transcript with grades in English or French.
- If available your master thesis and/or one relevant publications.

Shortlisted candidates will be invited for virtual interviews.

For project-related information, please contact Prof. Mario Cools (mario.cools@uliege.be)