



Faculty of Engineering | Department of Civil Engineering

## 加拿大麦吉尔大学土木系孙立君课题组招收博士硕士生

课题组拟招收博士生、硕士生（2018 秋季/2019 春季入学）以及访问学者、访问学生。博士生会提供全额奖学金，招生专业不限（交通、计算机、控制、数学等），要求有一定计算机（基础编程、机器学习、算法设计等）或数学（运筹优化、控制系统等）背景，对城市及交通大数据比较敏锐。主要方向包括但不限于：(1) 城市计算和智慧交通（Urban computing & Smart Transportation），众包（Crowdsourcing）以及“Human as Sensors”、“Connected Communities”在城市管理中的应用；(2) 移动性与出行行为（基于个体数据如公交智能卡、手机、车辆卡口等，探索大数据与机器学习模型在描述个体出行行为中的应用）；(3) 智能基础设施、网络实体系统（Cyber-Physical System）及基础设施弹性（Critical Resilient Interdependent Infrastructure Systems）；(4) 公共交通系统（城市综合公共交通[综合地铁、公交、最后一公里等]网络系统的设计、优化、控制，系统弹性 resilience 分析）；(5) 智能体建模与仿真（Agent-based modeling and simulation, e.g., MATSim <http://matsim.org/>）等。

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**Lijun Sun** will join the Department of Civil Engineering and Applied Mechanics as an Assistant Professor in January 2018. He earned his Bachelor degree in Civil Engineering from Tsinghua University in 2011 and PhD in Transportation Engineering from National University of Singapore in 2015. During PhD, he worked at Mobility and Transport Planning module at the Future Cities Laboratory (<http://www.fcl.ethz.ch/>), Singapore-ETH center, combining smart card-driven public transport modeling and agent-based simulation to improve urban public transport service quality and reliability. He did post-doc research at MIT Media Lab (<https://www.media.mit.edu/>) from 2015 to 2017, focusing on developing and applying crowdsourcing and data-driven approaches in the domain of civil systems and transportation. His research interests include data-driven transport modeling, resilience of urban transportation infrastructure, cyber-physical systems, mobility and travel behavior profiling, urban computing and complexity, and large-scale agent-based simulation. His research aims to provide a better understanding of urban and transportation systems and how big data and artificial intelligence could benefit urban life and build smart cities. His work has been published in transportation journals (e.g., Transportation Research Part A, B, C, E) and interdisciplinary journals (e.g., PNAS, Science Advances, Scientific Reports, Royal Society Interface), and also featured in popular media outlets including Wired, Citylab, Scientific American and MIT Technology Review.

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**McGill University** is a world top research university located in Montreal, Quebec, Canada. It is one of the most prestigious universities of the world. It has been ranked 1<sup>st</sup> in Canada in Maclean's annual and 32<sup>nd</sup> in the world (QS World University Ranking 2018). **Montreal** is also ranked as the best student city (<https://www.topuniversities.com/student-info/university-news/montreal-named-worlds-best-student-city>). It becomes the new hub of artificial intelligence of the world. **Canada** is the world's most livable country, according to the Economist Intelligence Unit.

Department: <http://www.mcgill.ca/civil/>

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