

ZHAO, ZHAN

RESEARCH INTERESTS

- Urban Computing and Spatiotemporal Data Mining
- Human Mobility and Travel Behavior
- Public Transit and Shared Mobility on Demand Systems

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA, USA

Ph.D. Transportation, July 2018

Department of Civil and Environmental Engineering

Thesis: *“Uncovering Individual Mobility Patterns from Transit Smart Card Data: Trip Prediction, Activity Inference, and Change Detection”*

Committee: Jinhua Zhao, Haris Koutsopoulos, Nigel Wilson, Tamara Broderick

University of British Columbia, Vancouver, BC, Canada

M.S. Civil Engineering, August 2013

Department of Civil Engineering

Thesis: *“Understanding Car Pride”*

Tongji University, Shanghai, China

B.E. Transportation Engineering, July 2011

College of Transportation Engineering

ACADEMIC EXPERIENCE

University of Hong Kong, Hong Kong, China

Assistant Professor

Faculty of Architecture

07/2020-Present

SMART, Singapore, Singapore

Visiting Researcher

06/2017-08/2017

Massachusetts Institute of Technology, Cambridge, MA, USA

Graduate Research Assistant

01/2014-07/2018

University of British Columbia, Vancouver, BC, Canada

Graduate Research Assistant

09/2011-08/2013

INDUSTRY EXPERIENCE

Via Transportation, Inc., New York, NY, USA

Senior Data Scientist

08/2018-06/2020

IBM Research, Dublin, Ireland

Research Intern

06/2016-09/2016

Transport for London, London, UK

Research Intern

06/2015-08/2015

Translink, Vancouver, BC, Canada

Research Intern

09/2012-11/2012

TEACHING AND ADVISING EXPERIENCE

Massachusetts Institute of Technology, Cambridge, MA, USA

Teaching Assistant

- *11.478 Behavior and Policy*, Spring 2015

Student Advisor

- Baichuan Mo, summer research project, Summer 2018
- Margo Dawes, undergraduate Capstone project, Spring 2015

University of British Columbia, Vancouver, BC, Canada

Teaching Assistant

- *CIVL 441 Transportation Planning and Analysis*, Spring 2013
- *CIVL 587 Urban Transportation Economics and Policy*, Fall 2012

JOURNAL
PUBLICATIONS

- **Zhao, Z.**, Koutsopoulos, H. N., and Zhao, J. (2020). Discovering latent activity patterns using transit smart card data. *Transportation Research Part C: Emerging Technologies*, 116, 102627.
- **Zhao, Z.**, Koutsopoulos, H. N., and Zhao, J. (2018). Detecting pattern changes in individual travel behavior: A Bayesian approach. *Transportation Research Part B: Methodological*, 112, 73-88.
- **Zhao, Z.**, Koutsopoulos, H. N., and Zhao, J. (2018). Individual mobility prediction using transit smart card data. *Transportation Research Part C: Emerging Technologies*, 89, 19-34.
- Goulet-Langlois, G., Koutsopoulos, H. N., **Zhao, Z.**, and Zhao, J. (2018). Measuring regularity of individual travel patterns. *IEEE Transactions on Intelligent Transportation Systems*, 19(5), 1583-1592.
- **Zhao, Z.**, and Zhao, J. (2018). Car pride and its behavioral implication: An exploration in Shanghai. *Transportation*, 1-10.
- Zhao, J., Frumin, M., Wilson, N. H., and **Zhao, Z.** (2013). Unified estimator for excess journey time under heterogeneous passenger incidence behavior using smartcard data. *Transportation Research Part C: Emerging Technologies*, 34, 70-88.
- Frumin, M., Zhao, J., Wilson, N. H., and **Zhao, Z.** (2013). Automatic data for applied railway management: Case study on the London Overground. *Transportation Research Record: Journal of the Transportation Research Board*, 2353, 47-56.
- **Zhao, Z.**, Zhao, J., and Shen, Q. (2013). Has transportation demand of Shanghai, China, passed its peak growth? *Transportation Research Record: Journal of the Transportation Research Board*, 2394, 85-92.

CONFERENCE
PAPERS

- **Zhao, Z.**, Koutsopoulos, H. N., and Zhao, J. (2018). Discovering latent activity patterns from human mobility. *The 7th ACM SIGKDD International Workshop on Urban Computing (UrbComp'18)*, London, UK.
- **Zhao, Z.**, Koutsopoulos, H. N., and Zhao, J. (2018). Detecting changes in individual travel behavior patterns. *Transportation Research Board 97th Annual Meeting*, Washington, DC.
- **Zhao, Z.**, Koutsopoulos, H. N., and Zhao, J. (2017). Mobility as a language: Predicting individual mobility in public transportation using n-gram models. *Transportation Research Board 96th Annual Meeting*, Washington, DC.
- **Zhao, Z.**, Zhao, J., and Koutsopoulos, H. N. (2016). Individual-level trip detection using sparse call detail record data based on supervised statistical learning. *Transportation Research Board 95th Annual Meeting*, Washington, DC.
- **Zhao, Z.**, and Zhao, J. (2015). Car pride: Psychological structure and behavioral implications. *Transportation Research Board 94th Annual Meeting*, Washington, DC.
- **Zhao, Z.**, Chua G., and Zhao, J. (2012). Evolution of trip chaining patterns in London from 1991 to 2010. *Innovations in Travel Modelling Conference*, Tampa, FL.

BOOK CHAPTERS	<ul style="list-style-type: none"> • Zhao, Z., Koutsopoulos, H. N., and Zhao, J. (2019). Uncovering Spatiotemporal Structures from Transit Smart Card Data for Individual Mobility Modeling. Book chapter for <i>Demand for Emerging Transportation Systems</i>, 123-149.
HONORS AND AWARDS	<ul style="list-style-type: none"> • Mitacs-Accelerate Internship Award, 2012 • Tongji University Outstanding Graduate Award, 2011 • Second Prize, Competition of Transport Science and Technology of Tongji University, 2010 • Scholarships for Excellent Academic Performance, 2008-2010
SERVICE	Ad-hoc reviewer for <i>Transportation Research Part C: Emerging Technologies</i> , <i>Transportation Research Part A: Policy and Practice</i> , <i>IEEE Transactions on Intelligent Transportation Systems</i> , and <i>Transportation Research Board Annual Meetings</i> .