

Luyu Liu

The Ohio State University
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Research interests

Accessibility, Public transit, Micro-mobility, Mobility equity

Education

The Ohio State University, Department of Geography	Columbus, Ohio
Ph.D. Geography	Aug 2019 – May 2023 (expected)

The Ohio State University, Department of Educational Studies	Columbus, Ohio
Graduate Certificate in College and University Teaching	Aug 2020 – Aug 2021

The Ohio State University, Department of Geography	Columbus, Ohio
M.A. Geography	Aug 2017 – Jul 2019

Peking University, College of Urban and Environmental Sciences	Beijing, China
B.S. Environmental Science	Sep 2013 – Jul 2017

Peking University, School of Mathematical Sciences	Beijing, China
B.S. Mathematics and Applied Mathematics	Sep 2014 – Jul 2017

Thesis

Accessibility in Motion: Measuring Real-time Accessibility with Dynamic Data Ph.D. dissertation, The Ohio State University, with Dr. Harvey Miller, Dr. Ningchuan Xiao, Dr. Huyen Le, and Dr. Andre Carrel	Aug 2019 – present
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Public transit transfer risk with high-resolution schedule and real-time bus data Master's thesis, The Ohio State University, with Dr. Harvey Miller, Dr. Ningchuan Xiao, and Dr. Morton O'Kelly	Feb 2018 – Aug 2019
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Measuring and Decomposing Global CO ₂ emission Inequality Undergraduate thesis, Peking University, with Dr. Bengang Li	Feb 2015 – Jun 2017
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Publications

Journal Articles

Liu, L., & Miller, H. J. (2022). Measuring the Impacts of Dockless Micro-mobility Services on Public Transit Accessibility. Computers, Environment, and Urban Systems.

Liu, L., Porr, A., & Miller, H. J. (2022). Realizable accessibility: evaluating the reliability of public transit accessibility using high-resolution real-time data. *Journal of Geographical Systems*, 1-23.

Liu, L., & Miller, H. J. (2020). Measuring risk of missing transfers in public transit systems using high-resolution schedule and real-time bus location data. *Urban Studies*, 0042098020919323.

Liu, L., & Miller, H. J. (2020). Does real-time transit information reduce waiting time? An empirical analysis. *Transportation Research Part A: Policy and Practice*, 141, 167-179.

Liu, L., Miller, H. J., & Scheff, J. (2020). The impacts of COVID-19 pandemic on public transit demand in the United States. *Plos one*, 15(11), e0242476.

Park, Y., Mount, J., **Liu, L.,** Xiao, N., & Miller, H. J. (2019). Assessing public transit performance using real-time data: spatiotemporal patterns of bus operation delays in Columbus, Ohio, USA. *International Journal of Geographical Information Science*, 1-26.

Liu, L., Kar, A., Tokey, A. I., Le, H. T. K., & Miller, H. J. (2023). Disparities in Public Transit Accessibility and Usage by People with Mobility Disabilities: An Evaluation using High-Resolution Transit Data. *Journal of Transport Geography* (Under review).

Liu, L., Porr, A., & Miller, H. J. (2022). Measuring the Impacts of Disruptions on the Delivery of Reliable Accessibility by Public Transit Systems. *Transportation Research Record* (Under review).

Conference and Presentation

Liu, L., Miller, H. J. (2021). Revisiting the Impacts of Transit Real-time Information on Waiting Time Reduction: An Empirical Analysis in Columbus, Ohio. *At American Association of Geographers Annual Meeting 2021*.

Liu, L., Miller, H. J. (2019). Measuring public transit transfer risk using highresolution schedule and real-time location data. *At American Association of Geographers Annual Meeting 2019*, Washington, DC.

Root, E. D., **Liu, L.,** Porr, A. (2019). Addressing birth outcomes with data analytics and spatial analysis. *At 18th International Medical Geography Symposium 2019*, Queenstown, New Zealand.

Research Project Experience

MORPC Sustainability Dashboard Mar 2019 – Sep 2020
The Ohio State University, with Dr. Harvey Miller and Dr. Ningchuan Xiao
Visualize sustainability progress in a holistic dashboard with integrated backend.

Columbus Urban & Regional Information Observatory (CURIO) Aug 2017 – Oct 2018
The Ohio State University, with Dr. Harvey Miller and Dr. Ningchuan Xiao
Visualize the geographic information in city of Columbus in comprehensive web-map

Infant Mortality Research Partnership (IMRP) Online GIS Platform May 2018 – Aug 2019

The Ohio State University, with Dr. Elisabeth Root
Integrate and visualize public health and GIS data in a holistic web-based platform

Neighborhood Polygon Algorithm Based on Network Analysis Nov 2017 – May 2018
The Ohio State University, with Dr. Christopher Browning, Dr. Catherine Calder
Develop algorithm generating neighborhood polygons based on road network

Teaching and Public Speaking

Ohio State University GEOG 5210: Fundamental GIS, 3 credits May 2021 – July 2021
Instructor, student SEI rating: 4.71/5 (University average: 4.48), 34 enrollments

UCGIS Workshop: Full-stack Geo-visualization 101: How to Make Productive Webmaps June 2021
Instructor, participants rating: 4.44/5, 19 enrollments

Harvard University Vizathon: Learn to Make Your First Web Map July 2021
Workshop organizer and instructor

Ohio State University GEOG 2200: Mapping Our World Feb 2020
Guest lecturer on geo-visualization

West Washington University ENV5 412: Environmental Journalism Jan 2021
Guest lecture on COVID impact on public transit

Ohio State News: "Pandemic has surprising impacts on public transit demand" from <https://news.osu.edu/pandemic-has-surprising-impacts-on-public-transit-demand/> Nov 2020

Ohio State News: "Want to wait less at the bus stop? Beware real-time updates" from <https://news.osu.edu/want-to-wait-less-at-the-bus-stop-beware-real-time-updates/> Oct 2020

Grant

"Sharpe Innovation Commons Seed Grant Award" by Geography OSU - \$5000 2020
"Everest Project" by Department of Education and Peking University - \$6000 2014 – 2017

Award

The Presidential Fellowship of Ohio State University 2022 – 2023
TR Lakshmanan and Lata Chatterjee Awards 2020 2020
Collaborative Achievement in Sustainability Award from Mid-Ohio Regional Planning Commission (as group) 2020
Scholarship of Tiehan, Peking University 2013 – 2016

Honorable Mentioned by “Mathematical Contest in Modeling” Sponsored by COMAP	2016
President of “Outstanding Class” award winner of PKU	2015

Service

Peer Review for Journals

Sustainable Cities and Society

Journal of Transport Geography

Journal of Geographical Systems

Public Transport

Transportation

International Journal of Geo-Information

Transportation Research Part C: Emerging Technologies

Case Studies on Transport Policy

Travel Behavior and Society

Transport Policy

Transaction in GIS

Journal of Public Transportation

American Journal of Infection Control

Department/University Service

Graduate Geography Organization, Social Chair

Sep 2021 – May 2022