

# 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  
Ph.D. Geography  
Columbus, Ohio  
Aug 2019 – Present

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

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

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

Peking University, School of Mathematical Sciences  
B.S. Mathematics and Applied Mathematics  
Beijing, China  
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

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

Measuring and Decomposing Global CO2 emission Inequality  
Undergraduate thesis, Peking University, with Dr. Bengang Li  
Feb 2015 – Jun 2017

## Publications

### Journal Articles

**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.

#### 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  
Workshop organizer and instructor July 2021

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

West Washington University ENVS 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**

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, PKU, 2013-2016 2013 – 2016  
Honorable Mentioned by "Mathematical Contest in Modeling" Sponsored by COMAP 2016  
President of "Outstanding Class" award winner of PKU in 2015 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  
Journal of Public Transportation  
American Journal of Infection Control

Department/University Service

Graduate Geography Organization, Social Chair

Sep 2021 – Present