Luyu Liu

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Research Area
• Human mobility
• Public transit and micro-mobility
• Mobility equity
• Geo-visualization

Education

Aug 2019 - present	Department of Geography, The Ohio State University, Columbus, Ohio Ph.D. Geography
Aug 2020 - present	Department of Educational Studies, The Ohio State University, Columbus, Ohio Graduate Certificate in College and University Teaching
Aug 2017 - Jul 2019	Department of Geography, The Ohio State University, Columbus, Ohio M.A. Geography
Sep 2013 - Jul 2017	College of Urban and Environmental Sciences, Peking University, Beijing, China B.S. Environmental Science
Sep 2014 - Jul 2017	School of Mathematical Sciences, Peking University, Beijing, China B.S. Mathematics and Applied Mathematics

Thesis

Aug 2019 - present	Accessibility in Motion: Measuring Real-time Accessibility with Dynamic Data Ph.D. thesis, The Ohio State University, with Dr. Harvey Miller, Dr. Gulsah Akar, Dr. Huyen Le, and Dr. Ningchuan Xiao.
Feb 2018 - Aug 2019	"Measuring public transit transfer risk using high-resolution schedule and real-time bus location data" Master's thesis, The Ohio State University, with Dr. Harvey Miller, Dr. Ningchuan Xiao, and Dr. Morton O'Kelly Develop a series of indexes and an integrated information system to assess, visualize and analysis the public transit system's transfer performance
Feb 2015 - Jun 2017	"Measuring and Decomposing Global CO2 emission Inequality"

Undergraduate thesis, Peking University, with Dr. Bengang Li
Develop new approaches to quantifying the inequality of global FF-CO2 emission

Publication

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

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 Projects

Mar 2019 - Sep 2020	MORPC Sustainability Dashboard
	The Ohio State University, with Dr. Harvey Miller and Dr. Ningchuan Xiao
	Visualize sustainability progress in a holistic dashboard with integrated backend.
Aug 2017 - Oct 2018	Columbus Urban & Regional Information Observatory (CURIO)
	The Ohio State University, with Dr. Harvey Miller and Dr. Ningchuan Xiao
	Visualize the geographic information in city of Columbus in comprehensive web-map
May 2018 - Aug 2019	Infant Mortality Research Partnership (IMRP) Online GIS Platform
	The Ohio State University, with Dr. Elisabeth Root
	Integrate and visualize public health and GIS data in a holistic web-based platform

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

Teaching and public speaking

May 2021 - July 2021	Ohio State University GEOG 5210: Fundamental GIS (3 credits). Instructor
Feb 2020	Ohio State University GEOG 2200: Mapping Our World. Guest lecture on geo-visualization
Jan 2021	West Washington University ENVS 412: Environmental Journalism. Guest lecture and group interview on the pandemic's impact on public transit
Nov 2020	Presentation on 3C GIS day 2020
Jan 2021	Presentation on Geography OSU Graduate Colloquium Presentation 2020
Nov 2020	Ohio State News: "Pandemic has surprising impacts on public transit demand" from https://news.osu.edu/pandemic-has-surprising-impacts-on-public-transit-demand/
Oct 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/

Grant

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

Awards

2020	TR Lakshmanan and Lata Chatterjee Awards 2020
2020	Collaborative Achievement in Sustainability Award from Mid-Ohio Regional Plannin Commission (as group)
2013 - 2016	Scholarship of Tiehan, PKU, 2013-2016
2016	Honorable Mentioned by "Mathematical Contest in Modeling" Sponsored by COMAP
2015	President of "Outstanding Class" award winner of PKU in 2015