Xiang 'Jacob' Yan

 \diamond Phone: +01 443-240-1099 \diamond Email: xiangyan@ufl.edu \diamond Personal website: https://jacobyan0.github.io/

EDUCATION

University of Michigan, Ann Arbor, Michigan	
· Ph.D. in Urban and Regional Planning	2019
\cdot Master's in Urban Planning (Housing, Community, and Economic Development)	2015
University of Florida, Gainesville, Florida	
\cdot M.S. in Civil Engineering (Transportation Engineering)	2021
Nanjing University, Nanjing, China	
\cdot B.E. in Urban and Regional Planning (Economic Geography)	2013
EMPLOYMENT	
Assistant Professor,, Civil & Coastal Engineering, University of Florida	2022 -
Research Assistant Professor, Civil & Coastal Engineering, University of Florida	2021 - 2022
Postdoctoral Associate, Urban and Regional Planning, University of Florida	2019 - 2020
Graduate Student Research Assistant, Urban & Regional Planning, Univ. of Michigan	2015 - 2019
GIS Analyst, School for Environment & Sustainability, University of of Michigan	2014 - 2015
AWARDS, HONORS, AND FELLOWSHIPS	
Best Dissertation Award, World Society for Transport and Land Use Research	2021
Outstanding Paper Award 2020, Travel Behaviour and Society	2021 2020
Distinguished Dissertation Award in Urban and Regional Planning, University of Michigan	
Rackham One-Term Dissertation Fellowship, University of Michigan	2019 2018
AICP Student Project Award, American Planning Association Honorable Mention, Karen Polenske Best Student Paper Award, Intl. Assoc. for China Planning	
ICR-Rackham Summer Training Award (\$2500), University of Michigan	
Engaged Pedagogy Initiative Fellow, University of Michigan	2016 2014
Meng Minwei Exchange Student Scholarship (25,000 RMB), Shun Hing Group Foundation	2011

PUBLICATIONS

Peer-reviewed Journal Articles

[19] Zhao, X., Xu, Y., Lovreglio, R., Kuligowski, E., Nilsson, D., Cova, T., Wu, A., Yan, X. (2022). Estimating wildfire evacuation decision and departure timing using large-scale GPS data. *Transportation Research Part D: Transport and Environment.* 107. 103277. https://doi.org/10.1016/j.trd.2022.103277

[18] Xu, Y., Yan, X., Sisiopiku, V., Merlin, L., Xing, F., Zhao, X. (2022). Micromobility trip origin and destination inference using General Bikeshare Feed Specification (GBFS) data. *Transportation Research Record: Journal of the Transportation Research Board*. https://doi.org/10.1177/03611981221092005

- [17] Yan, X., Bejleri, I., Zhai, L. (2022). A spatiotemporal analysis of transit accessibility to low-wage jobs in Miami-Dade County. *Journal of Transport Geography*. 98. 103218. https://doi.org/10.1016/j.jtrangeo.2021.103218
- [16] Yan, X., Yang, W., Zhang, X., Xu, Y., Bejleri, I., Zhao, X. (2021). A spatiotemporal analysis of e-scooters' relationships with transit and station-based bikesharing. *Transportation Research Part D: Transport and Environment.* 12, 103088. https://doi.org/10.1016/j.trd.2021.103088
- [15] Wang, X., Yan, X., Zhao, X., Cao, Z. (2022). Identifying latent shared mobility preference segments in low-resourced communities: Ridehailing, fixed-route bus, and mobility-on-demand transit. *Travel Behaviour and Society*, 26, 134-163. https://doi.org/10.1016/j.tbs.2021.09.011
- [14] Chen, S., Yan, X., Pan, H., Deal, B. (2021). Using big data for last-mile performance evaluation: An accessibility-based approach. *Travel Behaviour and Society*, 25, 153-163. https://doi.org/10.1016/j.tbs.2021.06.003
- [13] Steiner, R., Bejleri, I., Bai, X., Han, M., Yan, X. (2021). Partnerships between agencies and transportation network companies for transportation-disadvantaged populations: Opportunities and challenges. Transportation Research Record: Journal of the Transportation Research Board. https://doi.org/10.1177/03611981211032629
- [12] Yan, X., Zhao, X., Han, Y., Van Hentenryck, P., Dillahunt, T. (2021). Mobility-on-demand versus fixed-route transit systems: An evaluation of traveler preferences in low-income communities. *Transportation Research Part A: Policy and Practice*, 148, 481-495. https://doi.org/10.1016/j.tra.2021.03.019
- [11] Yan, X. (2021). Toward accessibility-based planning: Addressing the myth of travel-cost savings. Journal of the American Planning Association, 87 (3), 409-423. https://doi.org/10.1080/01944363.2020.18
- [10] Merlin, L., Yan, X., Xu, Y., Zhao, X. (2021). A segment-level model of shared scooter origins and destinations. Transportation Research Part D: Transport and Environment, 92, 102709. https://doi.org/10.1016/j.trd.2021.102709
- [9] Xu, Y., Yan, X., Liu, X., Zhao, X. (2021). Identifying key factors associated with ride-splitting rate and modeling their nonlinear relationships. *Transportation Research Part A: Policy and Practice*, 144, 170-188. https://doi.org/10.10416/j.tra.2020.12.005
- [8] Zhao, X., Yan, X., Yu, A., Van Hentenryck, P. (2020). Prediction and behavioral analysis of travel mode choice: A comparison of logit models and machine learning. *Travel Behavior and Society*, 20, 22-35. https://doi.org/10.1016/j.tbs.2020.02.003 (Won the 2020 Outstanding Paper Award)
- [7] Yan, X., Liu, X., Zhao, X. (2020). Using machine learning for direct demand modeling of ridesourcing services in Chicago. *Journal of Transport Geography*, 83, 102661. https://doi.org/10.1016/j.jtrangeo.2020. 102661
- [6] Yan, X. (2020). Evaluating household residential preferences for walkability and accessibility across three U.S. regions. Transportation Research Part D: Transport and Environment, 80, 102255. https://doi.org/10.1016/j.trd.2020.102255
- [5] Deng, L., Yan, X., Chen, J. (2019). Housing affordability, subsidized lending and cross-city variation in the performance of China's housing provident fund program. *Housing Studies*, 1-24. https://doi.org/10.1080/02673037.2019.1585521

- [4] Yan, X., Levine, J., Marans, R. (2019). The effectiveness of parking policies to reduce parking demand pressure and car use. *Transport Policy*, 73, 41-50. https://doi.org/10.1016/j.tranpol.2018.10.009
- [3] Yan, X., Levine, J., Zhao, X. (2019). Integrating ridesourcing services with public transit: An evaluation of traveler responses combining revealed and stated preference data. *Transportation Research Part C: Emerging Technologies*, 105, 683-696. https://doi.org/10.1016/j.trc.2018.07.029
- [2] Goodspeed, R., Yan, X., Hardy, J., Vydiswaran, V.G.V., Berrocal, V.J., Clarke, P., R., Gomez-Lopez, I.N., Romero, D., Veinot, T.C. (2018). Comparing the data quality of GPS devices and smartphones for assessing relationships between place, mobility, and health: A field study. *Journal of Medical Internet Research mHealth and uHealth*, 6 (8), e168. https://doi.org/10.2196/mhealth.9771
- [1] Hardy, J., Veinot, T. C., Yan, X., Berrocal, V. J., Clarke, P., Goodspeed, R., Gomez-Lopez, I.N., Romero, D., Vydiswaran, V. G. V. (2018). User acceptance of location-tracking technologies in health research: implications for study design and data quality. *Journal of Biomedical Informatics*, 79, 7-19. https://doi.org/10.1016/j.jbi.2018.01.003

Peer-reviewed Book Chapters

[1] Goodspeed, R., Yan, X. (2017). Crowdsourcing street beauty: Visual preference surveys in the big data era. in Schintler, L.A. and Chen, Z. (Eds.), Big Data for Regional Science (Routledge Advances in Regional Economics, Science and Policy (pp.75-93). London and New York: Routledge.

Peer-reviewed Conference Proceedings

- [15] Su, L., Yan, X., Zhao, X. (2022). Micromobility equity: A comparison of shared e-scooters and station-based bikeshare in Washington DC. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [14] Zhao, X., Xu, Y., Lovreglio, R., Kuligowski, E., Nilsson, D., Cova, T., Wu, A., Yan, X. (2022). Estimating Wildfire Evacuation Decision and Departure Timing Using Massive GPS Data. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [13] Yan, X., Zhao, X., Broaddus, A., Johnson, J., Srinivasan, S. (2022). Exploring the potential of shared e-scooters as a last-mile complement to public transit. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [12] Yan, X., Bejleri, I., Zhai, L. (2022). A spatiotemporal analysis of transit accessibility to low-wage jobs in Miami-Dade County. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [11] Yan, X., Yang, W., Zhao, X. (2022). Do e-scooters complement or compete with public transit and station-based bikesharing? A case study of Washington DC. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [10] Zhang, X., Zhou, Z., Yan, X., Zhao, X. (2022). Examining Spatial Heterogeneity in the Determinants of Ridesourcing Trips with Explainable Machine Learning. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [9] Fang, J., Yan, X., Bejleri, I. (2022). Which Trip Destination Matters? Estimating the Influence of Land Use on Mode Choice for Home-Based Complex Tours. *Proceedings of Transportation Research Board 101st Annual Meeting*.
- [8] Wang, X., Yan, X., Zhao, X., & Cao, Z. (2021). Identifying latent shared mobility preference segments

- in low-resourced communities: Ride-hailing, fixed-route bus, and mobility-on-demand transit. *Proceedings* of Transportation Research Board 100th Annual Meeting.
- [7] Steiner, R., Bejleri, I., Bai, X., Han, M., Yan, X. (2021). Partnerships between Agencies and Transportation Network Companies for Transportation-Disadvantaged Populations: Benefits, Problems, and Challenges. *Proceedings of Transportation Research Board 100th Annual Meeting*.
- [6] Zhao, X., Wang, X., Yan, X., & Cao, Z. (2021). Assessing preference heterogeneity for Mobility-on-Demand transit service in low-income communities: A latent segmentation based decision tree method. Proceedings of Transportation Research Board 100th Annual Meeting.
- [5] Xu, Y., Yan, X., Sisiopiku, V. P., Merlin, L. A., Xing, F., & Zhao, X. (2021). Micromobility trip origin and destination inference using General Bikeshare Feed Specification (GBFS) data. *Proceedings of Transportation Research Board 100th Annual Meeting*.
- [4] Zhao, X., Zhou, Z., Yan, X., & Van Hentenryck, P. (2020). Distilling black-box travel mode choice model for behavioral interpretation. *Proceedings of Transportation Research Board 99th Annual Meeting*.
- [3] Zhao, X., Liu, X., & Yan, X. (2020). Modeling demand for ridesourcing services in the City of Chicago: A direct demand machine learning approach. *Proceedings of Transportation Research Board 99th Annual Meeting*.
- [2] Xu, X., Yan, X., and Dillahunt, T. (2019). Reaching hard-to-reach populations: an analysis of survey recruitment methods. *In Conference Companion Publication of the 2019 Conference on Computer Supported Cooperative Work and Social Computing* (pp. 428-432). https://doi.org/10.1145/3311957.3359447
- [1] Yan, X., Levine, J., Marans, R. (2019). The effectiveness of parking policies to reduce parking demand pressure and car use. *Proceedings of Transportation Research Board 98th Annual Meeting*.

Reports and Other Publications

- [5] Bejleri I., Zhang, Y., Zhai, L., and Yan, X. (2020). Timely, dynamic, and spatially accurate road-way incident information to support real-Time management of traffic operations. *Florida Department of Transportation*, Report No. BDV31-977-111.
- [4] Dillahunt, T., Yan, X. (2019). Mobility-on-demand versus fixed-route transit systems: An evaluation of traveler preferences in low-income communities. Poverty Solutions, University of Michigan. Policy Brief, March 2019.
- [3] Yan, X. (2014). The mortgage interest deduction: The debate and possible reforms. Agora: The Urban Planning and Design Journal of the University of Michigan, 8, 84-93.
- [2] Yu T., Yan, X. (2011). Creating a dynamic urban planning assessment system: to solve the problem of authoritarian plans. *Modern Urban Research* (In Chinese), 12, 22-27.
- [1] Yan, X., Yu, T., Wang, X. (2011). Headquarters economy in the context of globalization: A review. *Modern Urban Research* (In Chinese), 9, 91-96.

RESEARCH FUNDING

Survey of Evacuation Behavior in the 2021 Boulder County, CO Grass Fires

Mar 2022 -

- · Amount: \$5,000
- · Funding source: Natural Hazards Center Weather Ready Research Award Program
- · Collaborators: Xilei Zhao (UF), Thomas Cova (Univ. of Utah), Erica Kuligowski (Royal Melbourne

Institute of Technology), Daniel Nilsson (Univ. of Canterbury), Ruggiero Lovreglio (Massey Univ.)

· My role: PI

Promoting Equitable AI in Transportation

Apr 2022 - Aug 2023

- · Amount: \$130,000
- · Funder: USDOT Region 4 STRIDE UTC center
- · Co-PIs: Xilei Zhao (UF), Michael Hunter (Georgia Tech), Philip Omunga (Savannah State)
- · My role: PI

Federal Transit Administration (FTA) Research to Practice Initiative Grant

August 2022 -

- · Amount: \$545,000
- · Funding source: Federal Transit Administration
- · Team: CALSTART (lead), Morgan State University, University of Florida
- \cdot My role and share of funding: UF PI (\$25,000)

Investigating Shared E-scooters as a First/Last Mile Connection to Transit

Oct 2021 - Sep 2022

- · Amount: \$35,000
- · Funder: Ford Motor Company
- · Collaborators: Xilei Zhao (UF, PI), Andrea Broaddus (Ford PI)
- · My role and share of funding: Co-PI (\sim 80%)

Mobility-on-Demand Transit for Smart and Sustainable cities

Sep 2020 - Dec 2021

- · Amount: \$413,430
- · Funder: USDOT Region 4 STRIDE UTC center
- · PI/co-PIs: Xilei Zhao (UF, PI), Noreen McDonald, Nikhil Kaza, Noah Kittner (UNC Chapel Hill), Virginia Sisiopiku (Univ. of Alabama at Birmingham), Xia Jin (Florida International University), Jeffrey Lamondia (Auburn University), Andrea Broaddus (Ford Motor Company)
- · My role and share of funding: Co-PI (\sim 18%)

Mobilizing Accessibility in Detroit and Ypsilanti

Jan 2018 - Jan 2019

- · Amount: \$50,000
- · Funder: Poverty Solutions University of Michigan
- · PI: P. Van Hentenryck (transferred to T. Dillahunt in Aug 2018)
- · My role and share of funding: Co-PI ($\sim 50\%$)

INVITED TALKS, ROUNDTABLES, AND WORKSHOPS

Invited Talks (Job talks included)

"Leveraging Spatial Big Data and AI for Sustainable and Equitable Transportation." Department of Civil & Coastal Engineering, University of Florida, March 15, 2022.

"Leveraging Spatial Data Science for Smart and Equitable Public Transportation." Department of Geography & Geoinformation Science, George Mason University, February 11, 2022.

"Urban Planning in the Digital Era: Leveraging Data Science for Smart and Equitable Transportation." Department of Geography, Planning & Sustainability, Rowan University, February 8, 2022.

"Urban Planning in the Digital Era: Leveraging Data Science for Smart and Equitable Transportation." Department of Community & Regional Planning, University of Nebraska-Lincoln, February 3, 2022.

- "Urban Planning in the Digital Era: Leveraging AI and Data Science for Smart and Equitable Transportation." College of Design, Construction and Planning, University of Florida, January 31, 2022.
- "Machine Learning in Travel Behavior Research." Transportation Research Board Standing Committee AMS50 Webinar Series, November 12, 2021.
- "Do e-scooters fill mobility gaps and promote equity before and during COVID-19? A spatiotemporal analysis using open big data." UF Biocomplexity Engineering Group Seminars, October 19, 2021.
- "Exploring the potential for public transit and share micromobility integration." Ford Motor Company Robotics and Mobility Research EMM/SAR Meeting Series, September 30, 2021.
- "The effectiveness of parking policies to reduce parking demand pressure and car use." 511NY Rideshare Car Free Day Webinar, September 14, 2021.
- "Using big data and machine learning for transportation research." University of Florida Student Chapter for the Institute of Transportation Engineers, March 4, 2021.
- "The promises and pitfalls of machine learning and big data: Reflectively leveraging data science for transportation planning." Department of City and Regional Planning, University of North Carolina, Chapel Hill, November 30, 2020.
- "Ridesourcing as a solution to the last-mile travel problem: Evidence from stated preference data." Next Generation Transportation Systems Seminar. University of Michigan, Ann Arbor, January 17, 2018.

Panels, Roundtables, and Workshops

- "Micromobility" Panel Session (Moderated by Nikhil Kaza, other panelists include Mike Fortier, Barbara Godwin, and Will Sowers). UNC Clean Tech Summit 2022, Chapel Hill, North Carolina, March 30, 2022.
- "Exploring nonlinear relationships with machine learning." Roundtable (Moderated by Jason Cao, other panelists include Tao Tao and Sadegh Sabouri). Association of Collegiate Schools of Planning (ACSP) Annual Conference, October 7-8 & 21-23, 2021.
- "Exploring nonlinear relationships with machine learning." Roundtable (Moderated by Jason Cao, other panelists include Tao Tao, Kailai Wang, and Wenjia Zhang). The 15th International Association for China Planning (IACP) Annual Conference, virtually from Nanjing, China, September 11-12, 2021.
- "Extracting travel behavioral insights from black-box machine-learning models." (jointly presented with Xilei Zhao) Workshop on Machine Learning Methods to Calibrate Integrated Land Use and Transport Models. Georgia Institute of Technology, Atlanta. June 13-14, 2019.

CONFERENCE PRESENTATIONS

- "Micromobility equity: A comparison of shared e-scooters and station-based bikeshare in Washington DC." 7th UTC Conference for the Southeastern Region, Boca Raton, Florida, March 25, 2022.
- "Exploring the potential of shared e-scooters as a last-mile complement to public transit." 7th UTC Conference for the Southeastern Region, Boca Raton, Florida, March 24, 2022.
- "Do e-scooters fill mobility gaps and promote equity? A spatiotemporal analysis using open big data." Association of Collegiate Schools of Planning (ACSP) Annual Conference, October 7-8 & 21-23, 2021.

"Do e-scooters fill mobility gaps and promote equity before and during COVID-19? A spatiotemporal analysis using open big data." The 15th International Association for China Planning (IACP) Annual Conference, virtually from Nanjing, China, September 11-12, 2021.

"Do e-scooters fill mobility gaps before and during COVID-19? A spatiotemporal analysis using open big data." 2021 World Symposium on Transport and Land Use Research (WSTLUR), virtually from Portland, Oregon, August 9-11, 2021.

"Evaluating household residential preferences for walkability and accessibility across three U.S. regions." The 14th International Association for China Planning (IACP) TR-D Special Issue on "Planning for Accessibility" Session, August 18, 2020.

"Using machine learning for direct demand modeling of ridesourcing services in Chicago." The Transportation Research Board (TRB) 99th Annual Meeting, Washington DC, January 12-16, 2020

"Mobility-on-demand versus fixed-route transit systems: An evaluation of traveler preferences in low-income communities." Association of Collegiate Schools of Planning (ACSP) Annual Conference, Greenville, SC, October 24-27, 2019.

"The value of accessibility in residential location choice." The 13th International Association for China Planning (IACP) Annual Conference, Chengdu, China, June 14-15, 2019.

"The effectiveness of parking policies to reduce parking demand pressure and car use." The Transportation Research Board (TRB) 98th Annual Meeting, Washington DC, January 13-17, 2019.

"The value of accessibility in residential location choice." Association of Collegiate Schools of Planning (ACSP) Annual Conference, Buffalo, NY, October 24-28, 2018.

"Integrating ridesourcing services with public transit: An evaluation of traveler responses combining revealed and stated preference data." The 12th International Association for China Planning (IACP) Annual Conference, Xi'an, China, June 29-30, 2018.

"Efficiency and equity issues in the use of Chinese Housing Provident Fund: Evidence from seven major cities." Association of Collegiate Schools of Planning (ACSP) Annual Conference, Denver, CO, October 11-15, 2017.

"Rethinking agglomeration economies, accessibility, and productivity: the importance of urban form." Annual Conference of the American Association of Geographers (AAG), Boston, MA, April 5-9, 2017.

"Agglomeration economies, accessibility, and labor productivity: Evidence from US regions." LunchUP Seminar Series, Taubman College of Architecture and Urban Planning, UM, Ann Arbor, March 17, 2017.

TEACHING

Instructor for Applied Data Science for Civil & Environmental Engineers, UF

2021-

- · Teach students the intricacies of data science techniques and their applications to real-world problems
- · Student Rating: 4.68/5 (Fall 2021)

Graduate Student Instructor for Introduction to Statistics for Urban Planning, UMich Fall 2014

- · Worked with Prof. Margi Dewar
- · Student Rating: 4.73/5

Teacher for AP Statistics, GRE/GMAT Analytical Writing, New Oriental School, China 2012 - 2013

STUDENTS MENTORED AND SUPERVISED

Doctoral Student Advisees

· Anran Zheng (Ph.D. student in Transportation Engineering)

Student Research Assistants

Current Student Research Assistants

Tejaswi Polimetla (UF undergrad), Amay Patel (UF undergrad), Shoujing Ke (UF undergrad)

Former Student Research Assistants

· Lin Su (UF Master's student in Transportation Engineering), Erik Huang (UF undergrad), Qi Zheng (UF undergrad), Jack Rummler (UF undergrad), Jason Nguyen (UF undergrad)

FACULTY SERVICE

Faculty Search Committee

· AI endowed professorship position, Computer & Information Science & Engineering, UF

2022

SERVICE TO THE PROFESSION

Transportation Research Board (TRB) Committee Member

- TRB Committee on Innovative Public Transportation Services & Technologies (AP020)
- · TRB Committee on Information Systems & Technology (AED30)

2022 -2022 -

Conference/Symposium/Workshop Organizing Committee Member

- · XPOTENTIAL 2022, Association for Unmanned Vehicle Systems International (AUVSI)
- · 2022 TRB Annual Conference Young Members Coordinating Council "Early Academic Successful Careers: Resources and Advice" Workshop
- · 2021 Research-to-Practice Transit Symposium, University of Florida Transportation Institute

Board of Directors Member, International Association for China Planning

2019 -

Journal/Conference Reviewer

· Journal of the American Planning Association, Transportation Research Part A: Policy and Practice, Transportation Research Part D: Transport and Environment, Journal of Transport Geography, Transportation, Transport Policy, Travel Behavior and Society, Journal of Land Use and Transport, Housing studies, Environment and Planning B: Urban Analytics and City Science, Geoforum, Sustainable Cities and Society, Urban Rail Transit, Safety Science, TRB Annual Meeting, IACP Annual Meeting

Panel Member/Proposal Reviewer

- · 2021 Panel member for Transit Cooperative Research Program Project H-59: Racial Equity, Black America and Public Transportation
- · 2021 Ad hoc reviewer for NSF Economics Program
- · 2019 Proposal reviewer for USDOT Tier-1 University Transportation Center CTEDD

MEDIA

Mentions in the Press / Media Coverage of Research

Spin Blog Post. (February 10, 2022). New Research Shows Positive Impacts of Micromobility May Be Underestimated. Spin (Ford Mobility). https://www.spin.app/blog-posts/new-research-shows-positive-impact s-of-micromobility-may-be-underestimated

Herbert, Kiran. (May 12, 2021). Xiang Yan wants to make micromobility better. Better Bike Share Partnership. https://betterbikeshare.org/2021/05/12/xiang-yan-wants-to-make-micromobility-better/

lonescu, Diana. (April 8, 2021). How e-scooters can complement public transit. *Planetizen*. Available at: https://www.planetizen.com/news/2021/04/112885-how-e-scooters-can-complement-public-transit

Guest, Greta. (August 28, 2018). Commuters: Ridesourcing could fix public transit. *Michigan News*. Available at: https://news.umich.edu/commuters-ridesourcing-could-fix-public-transit/

Opinion Pieces

Yan, X. (Apri 5, 2021). Make e-scooters work with transit, not against it. *Greater Greater Washington*. Available at: https://ggwash.org/view/80884/make-e-scooters-work-with-transit-not-against-it