Yuqin Jiang, Ph.D.

Postdoctoral Scholar
Department of Geography and Environmental Studies
Texas State University
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Email: yuqinjiang@txstate.edu

EDUCATION

2022   Ph.D.   **Department of Geography, University of South Carolina**
Advisor: Dr. Zhenlong Li
Dissertation: *Quantifying human mobility patterns during disruptive events with geospatial big data*

2017   M.S.   **Department of Geography, University of South Carolina**
Advisor: Dr. Diansheng Guo
Thesis: *Urban accessibility measurement and visualization – a big data approach*

2014   B.A.   **Department of Geography, University at Buffalo**
Summa Cum Laude

Employment

2023 – present **Postdoctoral Scholar**
Department of Geography and Environmental Studies
Texas State University
Supervisor: Dr. Su Yeon Han

2022 – 2023   **Postdoctoral Researcher**
Zachry Department of Civil and Environmental Engineering
Texas A&M University
Supervisor: Dr. Ali Mostafavi

2018 – 2022   **Research Assistant**
Geoinformation and Big Data Research Lab
Campus GIS
Carolinas Integrated Science and Assessments
University of South Carolina

2017 – 2022   **Teaching Assistant**
Department of Geography
University of South Carolina

RESEARCH INTERESTS

Cyberinfrastructure, geo-computation, and high performance computing
Geospatial data and data-driven visualization
Big data, spatio-temporal data mining
Computational social science, urban computing
Social media networks, human mobility, nature hazards, transportation

HONORS AND AWARDS

2022	First Place in Robert Raskin Student Competition, Cyber Infrastructure Specialty Group of the Association of American Geographers ($300)
2019	UCGIS-CyberGIS Center at UIUC Award for Advancing Reproducible Geospatial Research
2019	AAG-UCGIS Summer School Travel Award for Reproducible Problem Solving with CyberGIS and Geospatial Data Science
2019	C. C. Royal Trustee Fellowship nominee, University of South Carolina
2019	SPARC Graduate Research Grant, University of South Carolina ($5,000)
2018	Teaching Assistant Award, Department of Geography, University of South Carolina
2018	Third Place in Robert Raskin Student Competition, Cyber Infrastructure Specialty Group of the Association of American Geographers
2018	Outstanding Master's Thesis Award, Transportation Geography Specialty Group of the Association of American Geographers
2014	Outstanding Academic Performance Award, Department of Geography, University at Buffalo
2010 – 2014	International Admission Scholarship, University at Buffalo

PUBLICATION

Peer-reviewed Journal Articles

[16] Rajput, A.A., **Jiang, Y.**, Nayak, S., Mostafavi, A. (2023) Mapping Inequalities in Activity-based Carbon Footprints of Urban Dwellers using Fine-grained Human Trajectory Data. *arXiv preprint arXiv:2304.14417*

[15] Li, X., **Jiang, Y.**, & Mostafavi, A. (2023). AI-assisted Protective Action: Study of ChatGPT as an Information Source for a Population Facing Climate Hazards. *AI & Society: Journal of Knowledge, Culture and Communication.* (Under revision)

[14] **Jiang, Y.**, Yuan, F., Farahmand, H., Acharya, K., Zhang, J., Mostafavi, A. (2023). Data-driven tracking of the bounce-back path after disasters: critical milestones of

population activity recovery and their spatial inequality. *International Journal of Disaster Risk Reduction*, *92*, 103693.

[13] Huang, X., **Jiang, Y.**, Mostafavi, A. (2023). Emergence of urban heat traps from the intersection of human mobility and heat hazard exposure in cities. *npj Urban Sustainability*. (Under revision)

[12] **Jiang, Y.**, Popov, A.A., Li, Z. & Hodgson, M.E. (2022). A novel method for spatiotemporal event detection using Discrete Empirical Interpolation Method. *arXiv preprint arXiv:2208.07969*.

[11] **Jiang, Y.**, Li, Z. & Cutter, S.L. (2021). Social distance integrated gravity model for evacuation destination choice. *International Journal of Digital Earth*, DOI: 10.1080/17538947.2021.1915396

[10] **Jiang, Y.**, Guo, D., Li, Z., & Hodgson, M.E. (2021). A novel big data approach to measure and visualize urban accessibility. *Computational Urban Science*. 1(10). DOI: https://doi.org/10.1007/s43762-021-00010-1

[9] **Jiang, Y.**, Huang, X. & Li, Z. (2021). Spatiotemporal patterns of human mobility and its association with land use types during COVID-19 in New York City. *International Journal of Geo-Information*. 10(5):344. DOI: 10.3390/ijgi10050344

[8] Li, Z., Huang, X., Ye, X., **Jiang, Y.**, Martin, Y., Ning, H., Hodgson, M.E. & Li, X. (2021). Measuring Place Connectivity Using Big Social Media Data. *Scientific Report.* 11(1). DOI: https://doi.org/10.1038/s41598-021-94300-7

[7] Huang, X., Li, Z., **Jiang, Y.**, Ye, X., Deng, C., Zhang, J., Li, X. (2021). The characteristics of multi-source mobility datasets and how they reveal the luxury nature of social distancing in the U.S. during the COVID-19 pandemic. *International Journal of Digital Earth*, 14:4, 424-442, DOI: 10.1080/17538947.2021.1886358

[6] Li, Z., Shan, Q., **Jiang, Y.**, Li, X. (2021). Building a social media-based HIV risk behavior index to inform the prediction of HIV new diagnosis: a feasibility study. *AIDS*, 35, S91-99, DOI: 10.1097/QAD.0000000000002787

[5] Li, Z., Li, X., Portor, D., Zhang, J., **Jiang, Y.**, Olatosi, B., Weissman, S. (2020). Monitoring the Spatial Spread of COVID-19 and Effectiveness of Control Measures Through Human Movement Data: Proposal for a Predictive Model Using Big Data Analytics. *JMIR Research Protocols*, 9(12), e24432, DOI: 10.2196/24432

[4] Huang, X., Li, Z., **Jiang, Y.**, Li, X., Porter, D. (2020). Twitter reveals human mobility dynamics during the COVID-19 pandemic. *PLoS ONE*. 15(11): e0241957. DOI: 10.1371/journal.pone.0241957

[3] Li, Z., Huang, Q., **Jiang, Y.**, Hu, F. (2020). SOVAS: A Scalable Online Visual Analytic System for Big Climate Data Analysis. *International Journal of Geographical Information Science*, 34(6), 1188-1209.

[2] **Jiang, Y.**, Li, Z., Cutter, S.L. (2019). Social Network, Activity Space, Sentiment, and Evacuation: What Can Social Media Tell Us?. *Annals of American Association of Geographers*, 109(6), 1795-1810.

[1] **Jiang, Y.**, Li, Z & Ye, X. (2019). Understanding Demographic and Socioeconomic Bias of Geotagged Twitter Users at the County Level. *Cartography and Geographic Information Science,* 1-15. DOI: 10.1080/15230406.2018.1434834

Peer-reviewed Conference Paper

[1] **Jiang Y.,** Li, Z., Ye, X. (2018). Measuring inter-city network using digital footprints from Twitter users, in *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on PredictGIS*, ACM.

PRESENTATIONS

Invited Talks:

[9] **Jiang, Y.** Accessibility Measurement and Visualization – A Big Data Approach. *Guest Speaker*. Texas State University, San Marcos, TX, October 5, 2023

[8] **Jiang, Y.** Understanding Hurricane Evacuation Decisions using Social Media Data. *Guest Speaker.* Texas State University, San Marcos, TX, September 21, 2023

[7] Mostafavi, A. & **Jiang, Y.** Harnessing Big Data and AI to Augment Disaster Situational Awareness. *Applied Emergency Management Research Grant Symposium,* Texas Division of Emergency Management, College Station, TX, February 21, 2023

[6] **Jiang, Y.** Quantifying Human Mobility Patterns during Disruptive Events with Big Geospatial Data. *Construction, Geotechnical, and Structural Engineering Seminar*, Texas A&M University, College Station, TX, February 3, 2023

[5] Paal, S., Wang, Y., & **Jiang, Y**. Bring-Your-Own-Data Workshop: Exploratory Data Analysis, Texas A&M Institute of Data Science, Texas A&M University, College Station, TX, February 6, 2023

[4] **Jiang, Y.**, Social Media Big Data in Geographical Information Science. *Guest Lecturer,* University of South Carolina, Columbia, SC, December 3, 2019

[3] **Jiang, Y.**, Spatial Analysis with ArcGIS. *Guest Lecturer,* University of South Carolina, Columbia, SC, April 2, 2019

[2] **Jiang, Y.**, How to make maps?. *Guest Lecturer*, University of South Carolina, Columbia, SC, November 21, 2017

[1] Li, Z. & **Jiang, Y.**. Social Media, Human Movement, and the Eclipse, *Public Mini-lecture on the Eclipse*, University of South Carolina, Columbia, SC, August 21, 2017

Conferences:
[11] **Jiang, Y.**, Popov, A.A., Li, Z., Hodgson, M.E. A novel method for spatiotemporal event detection using Discrete Empirical Interpolation Method, *AAG Annual Meeting,* New York City & virtual, February 26, 2022

[10] **Jiang, Y.**, Li, Z., Cutter, S.L. Understanding human mobility pattern during hurricane evacuation, *Discover USC*, Columbia, SC (canceled due to COVID-19)

[9] **Jiang, Y.**, Li, Z., Cutter, S.L. Social connection integrated gravity modeling for evacuation destination choice, *AAG Annual Meeting,* Denver, CO (canceled due to COVID-19)

[8] **Jiang, Y.**, Li, Z., Cutter, S.L. Understanding human mobility pattern during hurricane evacuation with social media, *Big Data Health Science Conference*, Columbia, SC, February 10, 2020

[7] **Jiang, Y.**, Li, Z., Cutter, S.L., Analyzing Human Mobility Patterns during Hurricane Matthew Evacuation using Twitter, *AAG Annual Meeting,* Washington DC, April 5, 2019

[6] **Jiang, Y.**, Li, Z., Ye, X. Measuring inter-city network using digital footprints from Twitter users, *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on PredictGIS*, Seattle, WA, USA. November 6, 2018

[5] **Jiang, Y.**, Li, Z. Social Network, Activity Space, Sentiment and Evacuation: What can Social Media Tell us?, *AAG Annual Meeting*, Artificial Intelligence and Deep Learning Symposium: Big Data and Mining for Natural Hazards Session, *AAG Annual Meeting*. New Orleans, LA. April 13, 2018

[4] Li, Z., Huang, Q., **Jiang, Y.**, Hu, F., SCOVAS: A Scalable Climate Online Visual Analytical System, *AAG Annual Meeting*. New Orleans, LA. April 13, 2018

[3] **Jiang, Y.** Measuring Multimodal Transit Accessibility in Urban Area – A Big Data Approach, *AAG Annual Meeting,* Transportation and Geospatial Modeling Session, Boston, MA. April 9, 2017

[2] **Jiang, Y.** Measuring Accessibility in Urban Area – A Big Data Approach, *Symposium on Research Computing Infrastructure*. University of South Carolina, Columbia, SC, April 15, 2016

[1] **Jiang, Y.** Measuring Accessibility in Urban Area: Case Study in New York City, *AAG Annual Meeting*, Spatial Data Mining and Big Data Analytics Session, San Francisco, CA. March 29, 2016

TEACH

2022	**Teaching Assistant** *Geographic Information Systems (GEOG 363)*	
2021	**Teaching Assistant** *Geographic Information Systems (GEOG 363)*	
2021	**Teaching Assistant** *Quantitative Methods in Geographic Research (GEOG531)*	
2019	**Instructor** *Digital Earth (GEOG 105)*	
2018	**Instructor** *Geographic Information Systems (GEOG 363)*	
2017	**Lab Instructor** *Interpretation of Aerial Photo (GEOG 345)*	
2017	**Teaching Assistant** *GIS-Based Modeling (GEOG 564)*	
2015-2017	**Lab Instructor** *Geographic Information Systems (GEOG 363)*	

SERVICE

2022 – 2023	Ad hoc reviewer for NSF proposals, Human-Environment and Geographical Science Program
2022	Organizer and chair for AAG session "Symposium on Human Dynamics Research: Human Mobility in Big Data Era I & II", New York City & virtual
2021	Selection Committee for "Methods Training for Students" – COVID-19 Task Force Program, American Association of Geography
2020	Volunteer for Big Data Health Science Conference. University of South Carolina, Columbia, SC
2020	Organizer and chair for AAG session "Symposium on Human Dynamics Research: Human Mobility in Big Data Era" (canceled due to COVID-19)
2019 – 2020	Student Board, Cyberinfrastructure Specialty Group, American Association of Geography

JOURNAL REVIEWS (year[reviews])

Geo-spatial Information Science (2023[1])
International Journal of Digital Earth (2018[3], 2021[1], 2022[1])
PlosONE (2018[1], 2019[1], 2021[2], 2023[1])
Annals of American Association of Geographers (2019[1], 2021[1])
Applied Geography (2020[1])
International Journal of Geo-Information (2021[4], 2023[2])

Sustainability (2021[1])
Scientific Report (2021[2], 2023[1])
International Journal of Applied Earth Observation and Geoinformation (2021[1], 2022[1], 2023[1])

PROFESSIONAL MEMBERSHIP

2014-present   American Association of Geographers (AAG)
2017-2022   SouthEastern Division of the American Association of Geographers (SEDAAG)
2017-present   International Association of Chinese Professional in Geographic Information Sciences (CPGIS)