

## Xiaofan Liang

**Assistant Professor (2024-present)**

**Taubman College of Architecture and Urban Planning, University of Michigan – Ann Arbor**

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## Education

- Ph.D. City and Regional Planning, **Georgia Institute of Technology** 2019 – 2023
- Master of City and Regional Planning, **Georgia Institute of Technology** 2019 - 2023
- Bachelor of Science in Computational Science, **Minerva University** 2015 - 2019
- Bachelor of Art in Sociology, **University of California – Berkeley** 2013 - 2015

## Research Interests

- Urban Networks and Associated Infrastructure and Governance (i.e., Social, Digital, and Transportation)
- Effective, Appropriate, and Human-centered AI Application for Urban Planning
- Implications of AI Algorithms and Infrastructure on Urban Planning

## SCHOLARLY WORK

### Honors and Awards for Research, Practice, or Scholarship

- Liang, X. (2026). *Empowering Research with AI Award*. AI Institute at Michigan. University of Michigan. (\$1000).
- Liang, X. (2025). *Faculty Excellence Award*. Taubman College of Architecture and Urban Planning, University of Michigan.
- Liang, X. (2023). *Professional Excellence Award*. School of City and Regional Planning, Georgia Institute of Technology.
- Liang, X. (2023). *ACSP Diversity & Inclusion Fellowship*. Association of Collegiate Schools of Planning (\$800).
- Liang, X. (2022). *ACRP Graduate Research Award*. Airport Cooperative Research Program, Transportation Research Board (\$12,000).
- Liang, X. (2020). *Data Science Research Scholarship*. Institute of Data Engineering and Science, Georgia Institute of Technology.

### Book Chapters

- **Liang, X.,** Kang, Y. (2021). A Review of Spatial Network Insights and Methods in the Context of Planning: Applications, Challenges, and Opportunities. In C. Pettit, R. Goodspeed, A. Staffans (eds.), *Urban Informatics and Future Cities* (71-91). Springer Nature. [https://doi.org/10.1007/978-3-030-76059-5\\_5](https://doi.org/10.1007/978-3-030-76059-5_5)

### Peer Reviewed Journal Articles

- **(Accepted) Liang, X.** (2026). What and How Should Urban Planners Learn in the AI Era? Exploring Urban AI Pedagogy from a Pilot Course in Urban Planning Education. *Journal of Planning Education and Research*. (preprint) [https://osf.io/preprints/socarxiv/g9cps\\_v1](https://osf.io/preprints/socarxiv/g9cps_v1).
- **Liang, X., & Yang, P.P.J.** (2025). Transforming Mobility Barriers to Connectivity: Examining the Impact of the AeroATL Greenway Plan in Reconnecting Communities Around Aerotropolis Atlanta. *Transportation Research Record*, 03611981251380587. <https://journals.sagepub.com/doi/full/10.1177/03611981251380587>
- Lin, X., **Liang, X.**, Garcia K., Lyons, J., Andris, C. (2025). Social Infrastructure, Opportunities, and Barriers to Socializing in Savannah, Georgia. *Southeastern Geographer*. <https://muse.jhu.edu/pub/12/article/966476/summary>
- **Liang, X.**, Brainerd, B., Hick, T., Andris, C. (2024). Lessons from a human-in-the-loop machine learning approach for identifying vacant, abandoned, and deteriorated properties in Savannah, Georgia. *Journal of Planning Education and Research*. 0739456X241273945. <https://doi.org/10.1177/0739456X241273945>
- **Liang, X.**, Hidalgo, C.A., Balland, P.A., Zheng, S., & Wang, J. (2024). Intercity connectivity and innovation. *Computers, Environment, and Urban Systems*, 109, 102092. <https://doi.org/10.1016/j.compenurbsys.2024.102092>
- Sarkar, D., Gogarten, J. F., **Liang, X.**, Andris, C., Opito, E. A., Valenta, K., Kalbitzer, U., Sengupta, R & Chapman, C. A. (2024). Impacts of COVID-19 on biodiversity conservation and community networks at Kibale National Park, Uganda. *The Professional Geographer*, 76(2), 119-132. <https://doi.org/10.1080/00330124.2023.2250416>
- **Liang, X.**, Baker, J., DellaPosta, D., Andris, C. (2023). Is your neighbor your friend? Scan methods for spatial social network (SSN) hotspot detection. *Transactions in GIS*, 27(3), 607-625. <https://doi.org/10.1111/tgis.13050>
- **Liang, X.**, Lee, S., Chen, H., de la Peña, B., Andris, C. (2022). Characteristics of Jetters and Little Boxes: An Extensibility Study Using the Neighborhood Connectivity Survey. *Social Inclusion* 10(3), 221-232. <https://doi.org/10.17645/si.v10i3.5366>
- **Liang, X.**, Andris, C. (2021). Measuring McCities: Landscapes of chain and independent restaurants in the United States. *Environment and Planning B: Urban Analytics and City Science*, 49(2), 585-602. <https://doi.org/10.1177/23998083211014896>
- Taylor, R.C\*, **Liang, X\***, Kempes C., Dumas M., West G., Laubichler, M. (2021). Systematic shifts in scaling behavior based on organizational strategy in universities. *PLOS one*, 16(10), e0254582. (\*equal contributions) <https://doi.org/10.1371/journal.pone.0254582>

### Professional Articles, White Papers (Non-peer reviewed)

- **Liang, X.** (2025). From Infrastructure to Implications: Data Center 101 for Urban Planners. University of Michigan. White Paper. <https://www.xiaofanliang.com/publication/DataCenterVis/DataCenter101.pdf>
- **Liang, X.** (2023). Connectivity for whom and at what cost: Contesting network infrastructure duality in urban planning. Dissertation. <https://repository.gatech.edu/items/17423254-589d-4fc3-84a3-e66b05eab76e>

### Academic or Professional Conference Papers

- Snehalkumar, G., Iyer, S., Lunga D., Yabe, T., **Liang, X.**, Ananthabhotla, B., Behari, N., Guggilam, S., Chi, G. (2022). Data-driven Humanitarian Mapping and Policymaking: Toward Planetary-Scale Resilience, Equity, and Sustainability. In *Proceedings of the 28<sup>th</sup> ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '22), August 14-18, 2022, Washington, DC, USA, 4872-4873*. <https://doi.org/10.1145/3534678.3542918>

### Academic or Professional Lectures or Presentations

- **Liang, X.** (2026). *Restructuring the New York City subway network from accessibility experience*. Presented at UrbanNET Satellite of NetSci (International School & Conference on Network Science). Boston: NetSci.
- **Liang, X.** (2026). *From infrastructure to implications: Data center 101 for urban planners*. Presented at UrbanNetAI Satellite of NetSci (International School & Conference on Network Science). Boston: NetSci.
- **Liang, X.** (2026). *Empowering research and reporting about local politics with AI*. Invited presentation at University of Michigan School of Information workshop. Ann Arbor: University of Michigan.
- **Liang, X.** (2025). *New technologies for informed & engaged climate planning*. Invited panel presentation at Urban Tech Summit. New York: Urban Tech Summit.
- **Liang, X.** (2025). *Data center 101*. Presented at University of Michigan Symposium on AI, Data Center Infrastructure, and Climate. Ann Arbor: University of Michigan.
- **Liang, X.** (2025). *Governing data centers in urban planning*. Presented at UM Climate Week, School of Information. Ann Arbor: University of Michigan.
- **Liang, X.** (2025). *What and how should urban planners learn in the era of AI? Insights from an Urban AI course*. Presented at Annual Conference of Association of Collegiate Schools of Planning, AI workshop. Minneapolis: ACSP.
- **Liang, X.** (2025). *State of urban spatial analytics education*. Invited panel discussion at Annual Conference of Association of Collegiate Schools of Planning. Minneapolis: ACSP.
- **Liang, X.** (2025). *Decoding the municipal AI landscape: Generative AI-driven insights for AI governance and application in the City of Seattle*. Presented at Annual Conference of Association of Collegiate Schools of Planning. Minneapolis: ACSP.
- **Liang, X.** (2025). *Decoding the municipal AI landscape: Generative AI-driven insights for AI governance and application in the City of Seattle*. Presented at Computational Social Science Seminar, University of Michigan School of Information. Ann Arbor: University of Michigan.
- **Liang, X.** (2025). *Decoding the municipal AI landscape: Generative AI-driven insights for AI governance and application in the City of Seattle*. Presented at the 19th International Conference on Computational Urban Planning and Urban Management. London: CUPUM.
- **Liang, X.** (2025). *Exploring human-AI collaboration: From machine learning, document analysis, to pedagogy*. Presented at The Bartlett Centre for Advanced Spatial Analysis, University College London. London: University College London.
- **Liang, X.** (2025). *Exploring human-AI collaboration: From machine learning, document analysis, to pedagogy*. Presented at Urban Big Data Centre, University of Glasgow. Glasgow: University of Glasgow.
- **Liang, X.** (2025). *Beyond nodes and edges: Integrating spatial contexts into urban network science*. Presented at NYU Center for Urban Science + Progress. New York: New York University.
- **Liang, X.** (2025). *Lessons from a human-in-the-loop machine learning approach for identifying vacant, abandoned, and deteriorated properties in Savannah, Georgia*. Presented at AI Journey Presentations – AI in Science and Engineering Symposium (MIDAS). Ann Arbor: University of Michigan.
- **Liang, X.** (2024). *Social infrastructure and social life in Detroit*. Presented at Detroit GIS Day. Detroit: Detroit GIS Day.
- **Liang, X.** (2024). *Connectivity for whom and at what cost: Contesting network infrastructure duality in urban planning*. Presented at Annual Conference of the Association of Collegiate Schools of Planning (ACSP). Seattle: ACSP.
- **Liang, X.** (2024). *Supporting social life through urban analytics*. Presented at Shenzhen University. Shenzhen: Shenzhen University.
- **Liang, X.** (2024). *Beyond nodes and edges: Integrating spatial contexts into urban network science*. Presented at University of Michigan Center for the Study of Complex Systems. Ann Arbor: University of Michigan.

## Grants & Funding

- (PI) **Liang, X.** (2026/04-2026/08). *Interviews with urban planners working on data centers*. Taubman College Climate Futures Flex Funding, University of Michigan (\$1500). ORSP.
- (PI) Haider, R., (Co-PI) Love, N., (Co-PI) Ullman A., (Co-PI) **Liang, X.**, (Co-PI) Mills, S. (2026/01 – 2027/01). *Datacenter energy and water systems (DEWS): Modeling the impacts on infrastructure, environment, and affordability*. UM Graham Sustainability Institute (\$15,000). ORSP.
- (PI) **Liang, X.**, (Co-PI) Mills, S. (2025/09 – 2026/07). *Governing AI's footprint: A scalable human-AI workflow to extract zoning codes for data centers and renewable energy siting*. Michigan Institute for Data and AI in Society (PODS) and Microsoft (\$70,000). ORSP.
- (PI) **Liang, X.** (2025/01 – 2025/12). *Urban AI policy documents analysis*. Taubman College Seed Fund, University of Michigan (\$5,000). ORSP.
- (PI) **Liang, X.** (2024/01 – 2024/12). *Urban AI pedagogy workshop*. Taubman College Get It Going Fund, University of Michigan (\$1,500). ORSP.
- (PI) **Liang, X.** (2024/01 – 2024/12). *Curriculum development for a new urban AI class at Taubman College*. Center for Research on Learning and Teaching (CRLT), University of Michigan (\$1,000). ORSP.

## Media Coverage

- PBS Wisconsin (2026). What a boom in building and operating data centers means for Wisconsin's workforce. <https://pbswisconsin.org/news-item/what-a-boom-in-building-and-operating-data-centers-means-for-wisconsins-workforce/>
- SciLine and AAAS (2026). Local implications of data center growth. Media Briefing. <https://www.sciline.org/energy/data-center-news/>
- Washington Post (2022). The most common restaurant cuisine in every state, and a chain-restaurant mystery. <https://www.washingtonpost.com/business/2022/09/29/chain-restaurant-capitals/>
- CNN (2022). Why do areas with more chain restaurants favor Trump? <https://www.cnn.com/videos/politics/2022/10/08/smr-chain-restaurant-regions-vote-trump.cnn>
- Georgia Public Broadcasting (2022). Which states have the most chain restaurants? Georgia Tech Researchers map it out. <https://www.gpb.org/news/2022/10/06/which-states-have-the-most-chain-restaurants-georgia-tech-researchers-map-it-out>
- Bloomberg (2021). MapLab: The Cities Where Chain Restaurants Dominate. <https://www.bloomberg.com/news/newsletters/2021-06-16/maplab-how-many-chain-restaurants-are-in-your-city>

## TEACHING

### Courses Taught

#### University of Michigan – Ann Arbor

- (2026, winter). URP 530: Urban AI.
- (2026, winter). URP 535: Introduction to Urban Informatics.
- (2025, fall). URP 506: Planning Methods.
- (2025, fall). URP 538: Urban Networks.
- (2025, winter). URP 610: Urban AI (NEW).
- (2025, winter). URP 535: Introduction to Urban Informatics.
- (2024, fall). URP 506: Planning Methods (MAJOR REVISION).

*Xiaofan Liang*

- (2024, fall). URP 610: Urban Networks (NEW).
- (2024, winter). URP 535: Introduction to Urban Informatics (MAJOR REVISION).

## **SERVICE**

### **Committees**

#### *College*

- (2024-2025) Generative AI Taskforce. Taubman College.

#### *Program*

- (2025-2026) PhD Advisory Committee Member. Taubman College.
- (2025-2026) PhD Admission Committee Member. Taubman College.
- (2024-2025) Committee Member on Taubman College Urban Technology Faculty Hire. Taubman College.

#### *Science Community*

- (2026-2028) Inaugural ACSP AI in Planning Track Chair.
- (2024) Reviewer on NSF Civic Grant. NSF.
- (2021-present) Reviewers on Journal of American Planning Association, Journal of Planning Research and Education, Environmental Planning B: Urban Analytics and City Science, Computational Urban Science, Computer, Environment and Urban Systems, Journal of Regional Sciences, Journal of Transportation Geography

### **Mentored Students (2024-present)**

- Maina Wachira, PhD of Urban and Regional Planning, University of Michigan
- Zhixuan Qi, Research Associate, University of Michigan
- Lyu Chen, Master of Urban and Regional Planning, University of Michigan
- Samuel Sav, Master of Urban and Regional Planning, University of Michigan
- Yajun Dai, Master of Urban Design, University of Michigan
- Huy Dung Lou, Bachelor of Urban Technology, University of Michigan
- Katherine Cafaro, Bachelor of Urban Technology, University of Michigan
- Jack Bernard, Bachelor of Urban Technology, University of Michigan
- Danielle Schulz, Bachelor of Urban Technology, University of Michigan
- Meixin Yuan, PhD of Urban and Regional Planning, University of Michigan
- Neel Marathe, Bachelor of Urban Technology, University of Michigan
- Qifan Wu, Master of Landscape Architecture and Master of Data Science, University of Michigan
- Allison Yu, Master of Urban and Regional Planning, University of Michigan
- Aritra Gupta, Master of Urban and Regional Planning, University of Michigan