CURRICULUM VITAE

Peng Luo

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Assistant professor
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Google Scholar

EDUCATION

Ph.D. Chair of Cartography, **Technical University of Munich**, Munich, Germany.
2020.10 – 2024.07

M.S. Institute of Remote Sensing and GIS, **Peking University**, Beijing, China.
2017.09 – 2020.08

B.S. School of Geomatics and Saptial Information Science, **Shandong University of Science and Technology**, Qingdao, China.
2013.09 – 2017.07

ACADEMIC APPOINTMENT

2026.08-Now	Assistant professor, School of Earth, Environment, and Sustainability, University of Iowa, Iowa City, USA
2024.08-2026.08	Postdoc Research Fellow, Senseable City Lab, Massachusetts Institute of Technology, Cambridge, USA
2023.05-2023.10	Visiting Scientist, Department of Geography, University of Oxford, Oxford, UK
2020.11-2024.05	Research Associate/Lecturer, Chair of Cartography, Technical University of Munich, Munich, Germany
2018-2020	Research Assistant, Institute of Remote Sensing and GIS, Peking University, Beijing, China

RESEARCH INTERESTS

GeoAI
Spatial Data Science
Spatial Statistics
Explainable, Uncertainty-Aware, and Reproducible Spatial Analysis
LLMs for Spatial Analysis

PUBLICATIONS

*#equal contribution; *corresponding author, the supervisor of the project*

Refereed Journal Articles (as leading author: 25; as co-author: 17)

2026 **Luo,P.,** Wu, Y., Song, Y., 2026. Focal-feature regression kriging. Geographical Analysis

Luo,P.*, 2026. Quantifying uncertainty in spatial prediction for nonstationary spatial processes. Annals of the American Association of Geographers

Chen, C., **Luo, P.*,** Zhao, B., Feng, Y., Meng, 2026. Toward Ethical Spatial Analysis: Revealing Endogenous Bias Through Visual Analytics. Journal of Geovisualization and Spatial Analysis

Zhu, D., Wang, S., **Luo, P,** 2026. Uncovering spatial process heterogeneity from graph-based deep spatial regression. ISPRS Journal of Photogrammetry and Remote Sensing

Yap, W., Duarte, F., Yu, Z., Jang, K., **Luo, P**., Ratti, C., Biljecki, F., Multifold Health Gains from Addressing Urban Inequality across Major US Cities. Nature Health

2025 **Luo, P.,** Song, C., Zhu, D., Li, H., Duarte, F. 2025. Modeling shared micromobility as a label propagation process for detecting the overlapping communities. Computers, Environment and Urban Systems, doi: 10.1016/j.compenvurbsys.2025.102336

Luo, P., Chen, C,. Gao, S., Zhang, X., Deng, M., Yang, Z., Meng, L. 2025. Understanding of the predictability and uncertainty in population distributions empowered by visual analytics. International Journal of Geographical Information Science, 39(3), pp.675-705, doi: 10.1080/13658816.2024.2427870 *No.1 most read paper in IJGIS (2025)

Luo, P., Li, Y., Song, Y., Li, Z., Meng, L. 2025. Measuring univariate effects in the interaction of geographical patterns. International Journal of Geographical Information Science, doi: 10.1080/13658816.2025.2526042 *No.5 most read paper in IJGIS (2025)

Lou, X., **Luo, P.*,** Li, Z., Gao, S., and Meng L. GeoXCP: uncertainty quantification of spatial explanations in explainable AI. International Journal of Geographical Information Science, doi: 10.1080/13658816.2025.2574900

Lou, X., **Luo, P.*,** Meng, L. 2025. GeoConformal prediction: a model-agnostic framework of measuring the uncertainty of spatial prediction. Annals of the American Association of Geographers, doi: 10.1080/24694452.2025.2516091

Jiao, L., **Luo, P.#(co-first),** Huang, R., Xu, Y., Ye, Z., Liu, S., Liu, S. and Tong, X., 2025. Modeling hydrous mineral distribution on Mars with extremely sparse data: A multi-scale spatial association modeling framework. ISPRS Journal of Photogrammetry and Remote Sensing, 222, pp.16-32, doi: 10.1016/j.isprsjprs.2025.02.003

Luo,H., **Luo, P.*,** Meng, L. 2025. A robust geographically optimal zones-based heterogeneity model for analyzing the spatial determinants of national traffic accidents. GIScience and Remote Sensing, doi: 10.1080/15481603.2024.2448283

Yao, Y., Wang, Y., **Luo, P.*,** 2025. Evaluation and spatial optimization model of urban medical resource distribution considering equity and efficiency. Transactions in GIS, doi: 10.1111/tgis.70089

Chen, C., **Luo, P.*,** Zhao, H., Wei, M., Zhang, P., Liu, Z., Meng, L., 2025. A Unified Ontological and Explainable Framework for Decoding AI Risks from News Data. Scientific Reports, 15(1), p.25621, doi: 10.1038/s41598-025-10675-x

Yao, Y., Gao, R.,…, **Luo, P.*,** 2025. Explainable mapping of the irregular land use parcel with a data fusion deep learning model. IEEE Transactions on Geoscience and Remote Sensing, doi: 10.1109/TGRS.2025.3542628

Chen,C., Wei, M., Zhang, P., **Luo, P.,** Meng, L., An infographic framework of GeoAI ethics based on news data. Cartography and Geographic Information Science, doi: 10.1080/15230406.2025.2593949

Guan, Q., Fan, Y., Wang, Y., Liang, L., **Luo, P.,** Yao, Y., Dynamic Multi-Depot Logistics Optimization in Megacities Using Transformer-Enhanced Deep Reinforcement Learning for Real-Time Route Efficiency. International Journal of Geographical Information Science, doi: 10.1080/13658816.2025.2551723

Chen, D., Feng, Y., Li, X., Qu, M., **Luo, P**., Meng, L., 2025. Discovering core forms of urban morphology linked to urban functions with explainable graph neural network. Computers, Environment and Urban Systems, doi:10.1016/j.compenvurbsys.2025.102267

Wang, L., Tan, H., **Luo, P**., Meng, L., Fei, T., 2025. Species Habitat Mapping Based on Semantic Segmentation of Multiband Images: A Case Study of the Sandpiper Family in Taiwan. Scientific Reports.

2024 Yang, L., **Luo, P., #(co-first),** Zhang, Z., Song, Y., Ren, K., Zhang, C., Awange, J., Atkinson, P.M. and Meng, L. 2024. A spatio-temporal unmixing with heterogeneity model for the identification of remotely sensed MODIS aerosols: Exemplified by the case of Africa. International Journal of Applied Earth Observation and Geoinformation, 132, p.104068, doi: 10.1016/j.jag.2024.104068

Yao, Y., Shao, L.,…, **Luo, P.*,** 2024. Automated External Defibrillator (AED) location selection considering myocardial infarction risk and medical resources. Transactions in GIS, doi: 10.1111/tgis.13223

Zhao, H., **Luo, P.,** Cui, W., Xia, C., Xu, X. 2024. Geographical Scenario Knowledge Informed Graph Structure Attention for Image Segmentation. IEEE Transactions on Geoscience and Remote Sensing, doi: 10.1109/TGRS.2024.3521238

Cheng, S., Zhang, W., **Luo, P.,** Wang,L., Lu, F. 2024. An explainable spatial interpolation method considering spatial stratified heterogeneity. International Journal of Geographical Information Science, doi: 10.1080/13658816.2024.2426067

Yan, X., Jiang, Z., **Luo, P.,** Wu, H., Dong, A., Mao, F., Wang, Z., Liu, H. and Yao, Y., 2024. A multimodal data fusion model for accurate and interpretable urban land use mapping with uncertainty analysis. International Journal of Applied Earth Observation and Geoinformation, 129, p.103805, doi: 10.1016/j.jag.2024.103805

Chen, C., Feng, Y., Wei, M., Liu, Z., **Luo, P.,** Wang, S. and Meng, L., 2024. A hyper-knowledge graph system for research on AI ethics cases. Heliyon, 10(7), doi:10.1016/j.heliyon.2024.e29048

Dong, A., Zhang, Y., Guo,Z., **Luo, P.,** Yao,Y., He,J., Zhu,Q., Jiang,Y., Xiong, K., Guan,Q., 2024. Predicting the locations of missing persons in China by using NGO data and deep learning techniques. International Journal of Digital Earth, 17:1, doi:10.1080/17538947.2024.2304076

Wei, M., Feng, Y., Chen, C., **Luo, P.,** Zuo, C. and Meng, L., 2024. Unveiling public perception of AI ethics: an exploration on Wikipedia data. EPJ Data Science, 13(1), p.26, doi:10.1140/epjds/s13688-024-00462-5

2023 Li, Y., **Luo, P.#(co-first),** Song, Y., Zhang, L., Qu, Y., Hou, Z. 2023. A locally explained stratified heterogeneity model for examining wetland disparity. International Journal of Digital Earth 16(2), pp.4533-4552, doi:10.1080/17538947.2023.2271883

Yao, Y., Dong, A., Liu, Z., Guo, Z., Cheng, J., Guan, Q., **Luo, P.***, 2023. Extracting the pickpocketing information implied in the built environment by treating it as the anomalies. Cities, doi:10.1016/j.cities.2023.104575

Yao, Y., Feng, C.,…,**Luo, P,*.** 2023. A site selection framework for urban power substation at micro-scale using spatial optimization strategy and geospatial big data. Transactions in GIS (Cover Paper), doi: 10.1111/tgis.13093 *Featured as the sole cover article in TGIS, 2023

Yao, Y., Guo, Z., Dou, C., Jia, M., Hong, Y., Guan, Q., **Luo, P.*,** 2023. Predicting mobile users' next location using the semantically enriched geo-embedding model and multilayer attention mechanism. Computers, Environmnet and Urban System, doi:10.1016/j.compenvurbsys.2023.102009

Yao, Y., Lei, S., Guo., Li, Y., Ren, S., Liu, Z., Guan, Q., **Luo, P.*,** 2023. Fast urban logistics optimization based on hybrid sparrow search algorithm. International Journal of Geographical Information Science.1-29, doi:10.1080/13658816.2023.2190371

Zhang, Z., Song,Y., **Luo, P**., 2023. GeoComplexity explains spatial errors. International Journal of Geographical Information Science, doi:10.1080/13658816.2023.2203212

Cheng, T., Zhao, Y., Song, Y., Ma, L., Zhang, Z., **Luo, P.,** Gao, P., Zhang, M. and Zhao, C., 2023. Towards resilience effectiveness: Assessing its patterns and determinants to identify optimal geographic zones. Journal of Cleaner Production, 429, p.139596. doi:10.1016/j.jclepro.2023.139596

Zhang, Z., Song, Y., **Luo, P**., Wu, P., 2023. Spatial disparities of factors affecting air pollutant emissions in industrial regions on continental level. International journal of applied earth observation and geoinformation.117: 103221, doi:10.1016/j.jag.2023.103221. *Top-1 most read paper in IJGIS (2024)

2022 **Luo, P.,** Song, Y., Zhu, D., Cheng, J. and Meng, L., 2022. A Generalized Spatial Heterogeneity Model for Interpolation. International Journal of Geographical Information Science, 37(3), 634-659, doi:10.1080/13658816.2022.2147530. *Top-1 most read paper in IJGIS (2023); Top-2 most cited paper published in IJGIS (2022)

Luo, P., Song, Y., Huang, X., Ma, H., Liu, J., Yao, Y. and Meng, L. 2022. Identifying determinants of spatio-temporal disparities in soil moisture of the Northern Hemisphere using a geographically optimal zones-based heterogeneity model. ISPRS Journal of Photogrammetry and Remote Sensing, 185, pp.111-128. doi:10.1016/j.isprsjprs.2022.01.009

Yao, Y., Yan, X., **Luo, P.*,** Liang, Y., Ren, S., Hu, Y., Han, J. and Guan, Q., 2022. Classifying land-use patterns by integrating time-series electricity data and high-spatial resolution remote sensing imagery. International Journal of Applied Earth Observation and Geoinformation, 106, p.102664, doi: 10.1016/j.jag.2021.102664

Cheng, J., Zhang, X., Chen, X., Ren, M., Huang, J. and **Luo, P.,** 2022. Early Detection of Suspicious Behaviors for Safe Residence from Movement Trajectory Data. ISPRS International Journal of Geo-Information, 11(9), p.478, doi:10.3390/ijgi11090478

Cheng, J., Zhang, X., **Luo, P**., Huang, J., Huang J., 2022. An unsupervised approach for semantic place annotation of trajectories based on the prior probability. Information Sciences, 607, 1311-1327, doi:10.1016/j.ins.2022.06.034

2021 **Luo, P.,** Song, Y. and Wu, P. 2021. Spatial disparities in trade-offs: economic and environmental impacts of road infrastructure on continental level. GIScience and Remote Sensing, 58(5), pp.756-775, doi:10.1080/15481603.2021.1947624

Yang, W., Zhang, X. and **Luo, P**., 2021. Transferability of convolutional neural network models for identifying damaged buildings due to earthquake. Remote Sensing, 13(3), p.504, doi:10.3390/rs13030504

2020 Cheng, J., Zhang, X., Sun, M., **Luo, P.** and Yang, W., 2020. Random forest model for the estimation of fractional vegetation coverage based on a UAV-ground co-sampling strategy (In Chinese). Beijing Da Xue Xue Bao, 56(1), pp.143-154, doi: 10.13209/j.0479-8023.2019.110

2019 **Luo, P.,** Zhang, X., Cheng, J. and Sun, Q. 2019. Modeling population density using a new index derived from multi-sensor image data. Remote Sensing, 11(22), p.2620. doi:10.3390/rs11222620

Peer Reviewed Conference Proceedings

2025 Lou, X., **Luo, P.*.** 2025.. Towards the Uncertainty-aware Geospatial Artificial Intelligence. In Proceedings of the 8th ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery.

Lou, X., **Luo, P.*.** 2025. Uncertainty-aware geospatial visual analytics. Abstracts of the ICA, 10:1-2

2024 Li, H., Wang, J., Teuscher, B., **Luo, P.,** Werner, M., Mai, G. and Hong, D., GIMI: A Geographical Generalizable Image-To-Image Search Engine With Location-Explicit Contrastive Embedding. International Conference on Learning Representations (ICLR) 2024 workshop, Vienna, Austria

2023 **Luo, P.,** Song, Y, Meng, L. Revisiting the role of distance for spatial prediction. Abstracts of the ICA, 3, p.187.

Luo, P., Li Y. Explainable spatial heterogeneity model for association analysis. The 30th International Conference of Geoinformatics 2023, London, UK.

2022 **Luo, P.** and Zhu, D. Sensing overlapping geospatial communities from human movements using graph affiliation generation models. In Proceedings of the 5th ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery (pp. 1-9).

2021 **Luo, P.** and Song, Y., 2021. A spatial second-order non-stationary interpolation method for large area mapping. Abstracts of the ICA, 3, p.187.

2019 **Luo, P.** and Zhang, X., 2019. Gridded population density estimation based on multi-source remote sensing data and POI data. Joint EOEC-GiT4NDM 2019 Conference.

Book Chapter

2025 **Luo, P.,** Spatial Stratified Modeling, International Encyclopedia of Geography. Wiley-AAG

Publications Under Review (as leading author: 6)

Luo, P., Zhu, D., Duarte, F., Santi, S., Ratti, C., Spatial overlapping of communities explains urban mobility. Nature Computational Science (Under major revision)

Luo, P., Zhang, Y, Li, Z., Geospatial Local Interpretable Model-Agnostic Explanations. Remote Sensing of Environment.

Luo, P., Song, Y., Li, W., Meng, L., Pervasive impact of spatial dependence on predictability. Geographical Analysis

Luo, P., Lou, X., Zheng, Y., Zheng, Z., Ermon, S., GeoEvolve: Automating Geospatial Model Discovery via Multi-Agent Large Language Models. NeurIPS 2026

Lou, X., **Luo, P.*,** Weighted Bayesian Conformal Prediction. NeurIPS 2026

Lou, X., **Luo, P.*,** Meng, L., Toward Self-Evolving Geospatial Algorithms: An LLM-Driven Framework with a Case Study on Spatial Regime Discovery. Annals of the American Association of Geographers

AWARDS, GRANTS, AND SCHOLARSHIPS

External Grants

2022 German Research Foundation. Technical Lead (with PI Liqiu Meng). Grant #500249124. Project: *Dense and Deep Geographic Virtual Knowledge Graphs for Visual Analysis ($ 437,730).*

German Research Foundation. Research Assistant (with PI Liqiu Meng). Grant # 491363672. Project: *Guided Unlearning of Cognitive Pitfalls in Georeferenced Social Sensing ($ 403,200).*

Travel Grant, ACM, for the participation in the ACM SIGSPATIAL 2022. *($ 2,000).*

2021 German Research Foundation. Technical Lead (with PI Liqiu Meng). Grant #500249124. Project: *OpenStreetMap Boosting using Simulation-Based Remote Sensing Data Fusion ($ 460,350*).

2019 Major Program of the National Natural Science Foundation of China. Student assistant (with PI Xianfeng Zhang) . Grant # 2017YFC1500902. Project: *The Key Technologies for Rapid Post-Earthquake Disaster Assessment Based on Satellite Images.*

Internal Grants

2025 MIT Undergraduate Research Opportunities Program. Co-PI. Project: *Uncovering the Spatial Structure of Informal Settlements in Rio Using XAI and GeoAI ($7,680).*

MIT Undergraduate Research Opportunities Program. Co-PI. Project: *XAI for risk analysis ($7,680).*

2023 International Exchange Grant, sponsored by the Graduate School of Technical University of Munich. PI. Funded project*: 6-months exchange to Department of Geography, University of Oxford (*$*4,000).*

Awards, Honors, and Fellowships

2020 Excellent Graduates, Peking University

2019 Outstanding Student Award, Peking University

2019 Academic Scholarship, Peking University. ($4500)

2018 Academic Scholarship, Peking University. ($4500)

2017 Academic Scholarship, Peking University. ($4500)

CONFERENCES

Oral Presentations

2025 **Luo,P.** *Towards the Uncertainty-aware Geospatial Artificial Intelligence. ACM SIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery, 2025.11, Minneapolis, USA.*

Luo,P. *GeoConformal Prediction: A model-agnostic framework for measuring the uncertainty of spatial prediction*. 2025 AAG Annual Meeting , 2025.03, Detroit, USA.

2023 **Luo, P**. *Location defined and redefined: the spectrum of spatial dependence*. International conferences for early career researchers and PhD students on urban studies, 2023.09, Online.

Luo, P. *Revisiting the role of distance for spatial prediction*. The 30th International Cartographic Conference (ICC), 2023.08, Capetown, South Africa.

Luo, P. *A generalized association model explains geo-nonlinear interaction*. CPGIS, 2023.07, London, UK.

2022 **Luo, P.** *Sensing overlapping geospatial communities from human movements using graph affiliation generation models*. The 30th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, 2022.11, Seattle, USA.

Luo, P. *Optimization for large scale logistics using the hybrid sparrow search algorithm*. The 17th International Conference on Location Based Services (LBS), 2022.09, Munich, Germany.

2021 **Luo, P.** *A spatial second-order non-stationary interpolation method for large area mapping*. The 30th International Cartographic Conference (ICC), 2021.12, Florence, Italy.

2019 **Luo, P.** *Gridded population density estimation based on multi-source remote sensing data and POI data*. EOEC 2019 and GiT4NDM, 2019.06, Chengdu, China.

INVITED TALK

2025 **Luo, P.** *Geo-Knowledge-Guided Spatial Modeling*. Wuhan University, Online. June 10.

Luo, P. *A model-agnostic framework for measuring the uncertainty of spatial prediction*. invited by Spatial Data Lab, Harvard University, Cambridge, May 15.

2024 **Luo, P.** *GeoAI or AI for Geo*? Center for Geographic Analysis, Harvard University, Online. July 17.

Luo, P. *From the nature of geospatial data to urban insights*. Tongji University, Shanghai, July 10.

2023 **Luo, P.** *Uncover the overlapping nature of cities*. Center for Spatial Information Science, The University of Tokyo, Online, October 10.

Luo, P. *Generalized spatial association modelling for intelligent spatial understanding*. Climate Change Institute, The University of Oxford, Oxford, May 5.

Luo, P. *Modeling Spatial Association for Intelligent Spatial Understanding*. Institute of Remote Sensing & Geographical Information System, Peking University, Online, April 19.

Luo, P. *Spatial association Modeling and Prediction. Spatial statistic, Chinese Academy of Sciences, Beijing, February 10.*

2022 **Luo, P.** *Generalized heterogeneity spatial analysis. State key laboratory of resources and environmental information system, Chinese Academy of Sciences, Beijing, November 5.*

2021 **Luo, P.** *A tree- based spatial stratified model. School of Design and the Built Environment,* Curtin University, Online, April 16.

GUEST LECTURE

2024 *Advanced Remote Sensing and Geospatial Techniques*. University of Geogria, Athens, GA, April 1.

EXDIGIT GeoAI Seminar, University of Salzburg, Salzbury, Austria, April 16.

TEACHING EXPERIENCE

Technical University of Munich

Spatial Visual Analytics, Lecturer, M.Sc, 2023 Summer

Geovisulization and Geostatistics, Lecturer, M.Sc, 2022 Winter

Geo-Information, Lecturer, M.Sc, 2020 Winter

Cartography Seminar, Student tutor, M.Sc, 2022 Winter

Geodetic Seminar, Student tutor, M. Sc, 2022 Winter

Peking University

Introduction to Earth Sciences, Teaching Assistant, B.S, 2019 Winter

OPEN SOURCE GEOSPATIAL PACKAGE / SOFTWARE

GeoEvolve

LLM-based automatic spatial model development

Website, *Github*

GeoCP

Model-agnostic uncertainty quantification for any spatial predicton model

Python Package (geoconformal), Github

GeoXCP

Model-agnostic uncertainty quantification for spatial explainable AI models

Python Package (GeoXCP), Github

GOZH

Quantifying the spatial relationships between geographical variables

Github

GPI

Measuring spatially varying effects driven by interactions among spatial patterns

Codes

LSEH

Quantifying the interaction effects between geographical variables

R package

STUDENT MENTORING

Ph.D. Thesis Mentoring

Yuhan Jiang	Official mentor (with Prof. Liqiu Meng) *Topic: Spatial Momory of LLMs*	Technical University of Munich 2025- now
Chuan Chen	Official mentor (with Prof. Liqiu Meng) *Topic: Explainable AI and Visual Analytics*	Technical University of Munich 2024- now
Xiayin Lou	Official mentor (with Prof. Liqiu Meng) *Topic: Uncertainty of Spatial Modeling*	Technical University of Munich 2024- now
Hongyi Luo	Official mentor (with Prof. Liqiu Meng) *Topic: Spatial Stratified Modeling*	Technical University of Munich 2024- now

Master Thesis Mentoring

Chih-Chi Wang	ESPACE Program *Topic: SLUM mapping*	Technical University of Munich 2025- now
Ruyu Yan	ESPACE Program *Spatial Transfer Learning*	Technical University of Munich 2025- now
Yiqi Zhang	ESPACE Program *Topic: Spatial Explainable AI*	Technical University of Munich 2023- 2025 Now PhD student at NTU
Chengyu Song	Geodesy and Geoinformation Program *Topic: Travel Behaviour Analysis for E-scooter*	Technical University of Munich 2022- 2024 Now PhD student at The University of Alabama
Yagiz Kara	Cartography Program *Topic: Dynamic Community Detection*	Technical University of Munich 2021- 2023 Now Geodata Manager at the University of Bayreuth
Tao Wu	Geodesy and Geoinformation Program *Topic: Building age prediction from images*	Technical University of Munich 2021- 2023 Now Senior Algorithm Engineer at Tencent
Lingjun Wang	ESPACE Program *Topic: Bird Species Mapping*	Technical University of Munich 2021- 2023
Zhuo Yang	Cartography Program *Topic: Population distribution mapping*	Technical University of Munich 2020- 2022 Now Project Coordinator at Mercedes-Benz AG

Undergraduate Student Mentoring

Victor Dominguez	Undergraduate Research Program	MIT
	Topic: Spatial Layout of Informal Setelement	2024- 2025
Rena Wang	Undergraduate Research Program *Topic: XAI for risk analysis*	MIT 2025-now
Rojina Adhikari	Undergraduate Research Program	MIT
	Topic: Reliable Spatial Partitioning	2024- 2025
Jada Ogueh	Undergraduate Research Program *Topic: Bus accessibility at Rio's Slums*	MIT 2024- 2025
Reese Long	Undergraduate Research Program *Topic: Distributional shift of spatial data*	MIT 2024- 2025
Anfal Hosen	Undergraduate Research Program *Topic: Geo-foundation models*	MIT 2024- 2025
Maggie Zhang	Undergraduate Research Program *Topic: Uncertainty quantification*	MIT 2024- 2025
Michelle Li	Undergraduate Research Program *Topic: MAUP in GeoXAI*	MIT 2024- 2025
Robert Romani	Undergraduate Research Program *Topic: Pitfalls of GeoXAI*	MIT 2024- 2025
Jiayi Li	Undergraduate Research Program *Topic: Spatial transfer learning*	MIT 2024- 2025

Media Coverage

2025 Article titled " GeoEvolve: Automating Geospatial Model Discovery via Multi-Agent Large Language Models.":

- ***36 Kr:*** *The AlphaEvolve of geography? MIT and Stanford enable AI to self-evolve, understand geography, and comprehend the world, https://eu.36kr.com/en/p/3528153441918086*

SERVICE

Organized Conference Sessions and Symposiums

2025 Chair, *Methodologies IV (Digital Twin Modeling and Simulation)—The Symposium on Spatiotemporal Data Science*, Harvard University, Cambridge, MA, May 22-24.

Co-chair*, Section II, Australian Workshop on Spatial Methods 2025*, International Society for Spatial Methods, Online, April 14.

Chair, *UrbanAI for Sustainable, Climate-Resilient Environments,* 2025 Annual Meeting of American Association of Geographers, Detroit, MI, March 24-28.

Co-chair*, GeoAI for Spatial Analytics and Modeling,* 2025 Annual Meeting of American Association of Geographers, Detroit, MI, March 24-28.

2023 Chair, Session II (Geospatial big data and AI), *International Conference for Early Career Researchers on Urban Studies, Perth, Australia, September 8-10.*

Organized Journal Special Issues

2025 *International Journal of Applied Earth Observation and Geoinformation*: Urban Digital Twins: Innovative geospatial solutions, Applications, and Future Trends

Geomatica: Urban Digital Twins: Innovative geospatial solutions, Applications, and Future Trends (joint special issue with JAG)

2024

Computational Urban Science: Revisiting Spatiotemporal Modeling in the Era of GeoAI

Journal Reviews (Times)

2025-: Cities (1)
2025-: Computers, Environment and Urban Systems (2)
2025-: Nature Humanities and Social Sciences (1)
2025-: Annals of American Association of Geographers (1)
2025-: ISPRS Journal of Photogrammetry and Remote Sensing (1)
2025-: Environment and Planning B: Urban Analytics and City Science (1)
2025-: IEEE Transactions on Geoscience and Remote Sensing (5)
2024-: Information fusion (1)
2024-: iScience (1)
2024-: International Journal of Geographical Information Science (12)
2024-: Discover Cities (1)
2024-: Theoretical and Applied Climatology (1)
2024-: Journal of Spatial Science (1)
2024-: Resources, Conservation & Recycling (1)
2023-: Urban Climate (3)
2023-: Accident Analysis and Prevention (1)
2023-: Geo-spatial Information Science (1)
2022-: Transaction in GIS (5)
2022-: International Journal of Digital Earth (2)
2022-: Sustainable Cities and Society (2)
2022- : Land (1)
2022- : International Journal of Applied Earth Observation and Geoinformation (11)
2022- : Aerosol and Air Quality Research (1)
2021- : Nature Scientific Reports (1)
2021- : Buildings (1)
2021- : PLOS ONE (2)
2021- : ISPRS International Joursnal of Geo-Information (3)
2021- : Forests (1)
2021- : Remote Sensing (5)
2021- : Sustainability (2)
2021- : IEEE Sensors Journal (1)

Conference Reviews

The Fortieth Annual Conference on Neural Information Processing Systems (NeurIPS) 2026 (4)

International Conference on Machine Learning (ICML) 2026 (6)

2025 Spatial Analysis and Modeling, Student Paper Competition at Annual Meeting of American Association of Geographers

GeoAI'24 (The 7th International Workshop on AI for Geographic Knowledge Discovery)

GeoAI'22 (The 5th International Workshop on AI for Geographic Knowledge Discovery)

Book Reviews (Year)

Geography in the Age of Generative AI (2025)

Scholarly/Professional Organizations

American Association of Geographers (AAG) member (2024-present).