Geography, Environment and Society College of Liberal Art

DI ZHU

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University of Minnesota, Twin Cities	Cell: +1.612.206.6873
473 Social Science Building, 267, 19th Ave S	dizhu@umn.edu
Minneapolis, MN 55455, USA	https://cla.umn.edu/about/directory/profile/dizhu

Education	
Ph.D., Peking University. Cartology and Geographic Information Science	2020
Modelling and Analyzing Geospatial Distributions with Artificial Neural Networks	
B.S., Peking University. Geographic Information Systems	2014
An Incremental Map-Matching Method Based on Road Network Topology	
B.Ec., <i>Peking University</i> . Economics	2014
Positions/Employment	
University of Minnesota, Twin Cities	
Assistant Professor, Department of Geography, Environment and Society (GES) (Start date delayed to Sep. 1, 2021, due to the COVID-19 pandemic)	2020 - Present
Faculty Member, Minnesota Population Center	2021 - Present
Affiliated Faculty, Data Science Initiative, College of Science and Engineering	2022 - Present
University College London	
Visiting Lecturer; SpaceTimeLab, Civil Environmental & Geomatic Engineering	2018 - 2019
Peking University	
Research Assistant, School of Earth and Space Sciences	2016 - 2020
Research Assistant, Geosoft Lab	2017 - 2018
Teaching Assistant, School of Earth and Space Sciences:	2015 - 2018
Data Visualization Technician, Geosoft Lab	2013 - 2013
RS, GIS & GPS Practice Intern, School of Earth and Space Sciences:	2012
Beijing GeekArt Technology Co. Ltd.	
Chief Product Officer	2018-2020
Beijing LongRuan Technology Co. Ltd	
Software Engineer Intern	2015





RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

Publications

Asterisk(*) - indicates corresponding author <u>Sharp(*)</u> - indicates co-senior author <u>Underline</u> - indicates student author

Refereed Journal Articles

- <u>Ma, Z.</u>, & **Zhu, D.***. (2024) Collective flow evolution patterns reveal the mesoscopic structure in sequential spatial network snapshots. *International Journal of Geographical Information Science*, *1-32*.
- Zhang, Y., Yu, W., & **Zhu, D.** (2024). Next Track Point Prediction Using a Flexible Strategy of Subgraph Learning on Road Networks. *International Journal of Geographical Information Science* (under review)
- Luo, P., & **Zhu**, **D**.* (2024). Uncover the nature of overlapping community in cities. *arXiv preprint:* 2402.00222.
- Wang, Y., & Zhu, D.* (2024). A hypergraph-based hybrid graph convolutional network for intracity human activity intensity prediction and geographic relationship interpretation. *Information Fusion*, 104, 102149.
- Zhang, G., Gong, X., & Zhu, D. (2024). Geographic proximity and homophily effects drive social interactions within VGI communities: an example of iNaturalist. *International Journal of Digital Earth*, 17(1), 2297948.
- Liu, Y., Wang, K., Xing, X.,..., Zhu, D. (2023). On spatial effects in geographical analysis. ACTA GEOGRAPHICA SINICA, 78(3), 517-531.
- Chen, T., **Zhu, D.**, Cheng, T., Gao, X., & Chen, H. (2023). Sensing dynamic human activity zones using geo-tagged big data in Greater London, UK during the COVID-19 pandemic. *PloS one*, *18*(1), e0277913.
- Luo, P., Song, Y., Zhu, D., Cheng, J., Meng, L. (2023). A Generalized Heterogeneity Model for Spatial Interpolation. *International Journal of Geographical Information Science*, 1-26.
- Chen, T., Bowers, K., **Zhu, D.***, Gao, X., Cheng, T. (2022). Spatio-temporal stratified associations between urban human activities and crime patterns: a case study in San Francisco around the COVID-19 stay-at-home mandate. *Computational Urban Science*, 2(1), 1-12.
- Zhang, Y., Yu, W., & Zhu, D. (2022). Terrain feature-aware deep learning network for digital elevation model superresolution. *ISPRS Journal of Photogrammetry and Remote Sensing*, 189, 143-162.
- **Zhu, D.***, Liu, Y., Yao, X., & Fischer, M. M. (2021). Spatial regression graph convolutional neural networks: A deep learning paradigm for spatial multivariate distributions. *GeoInformatica*, 1--32.
- Huang, X., Zhu, D., Zhang, F., Liu, T., Li, X., & Zou, L. (2021). Sensing population distribution from satellite imagery via deep learning: Model selection, neighboring effects, and systematic biases. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 14, 5137--5151.
- **Zhu, D.***, Ye, X., & Manson, S. (2021). Revealing the spatial shifting pattern of COVID-19 pandemic in the United States. *Scientific reports*, *11*(1), 8396.
- Xing, X., Huang, Z., Cheng, X., **Zhu, D.**, Kang, C., Zhang, F., & Liu, Y. (2020). Mapping human activity volumes through remote sensing imagery. *IEEE Journal of Selected Topics in Applied*



Earth Observations and Remote Sensing, 13, 5652--5668.

- Sari Aslam, N., Zhu, D., Cheng, T., Ibrahim, M. R., & Zhang, Y. (2020). Semantic enrichment of secondary activities using smart card data and point of interests: a case study in London. *Annals of GIS*, 27(1), 29--41.
- Yao, X., Gao, Y., Zhu, D., Manley, E., Wang, J., & Liu, Y. (2020). Spatial origin-destination flow imputation using graph convolutional networks. *IEEE Transactions on Intelligent Transportation Systems*, 22(12), 7474--7484.
- Wang, Y., **Zhu, D.**, Yin, G., Huang, Z., & Liu, Y. (2020). A unified spatial multigraph analysis for public transport performance. *Scientific Reports*, *10*(1), 1--9.
- Wu, L., Cheng, X., Kang, C., Zhu, D., Huang, Z., & Liu, Y. (2020). A framework for mixed-use decomposition based on temporal activity signatures extracted from big geo-data. *International Journal of Digital Earth*, 13(6), 708--726.
- Zhang, F., Zu, J., Hu, M., Zhu, D., Kang, Y., Gao, S., Zhang, Y., & Huang, Z. (2020). Uncovering inconspicuous places using social media check-ins and street view images. *Computers, Environment and Urban Systems, 81*, 101478.
- Zhu, D., Zhang, F., Wang, S., Wang, Y., Cheng, X., Huang, Z., & Liu, Y. (2020). Understanding place characteristics in geographic contexts through graph convolutional neural networks. *Annals of the American Association of Geographers*, 110(2), 408--420.
- Liu, Y., Yao, X., Gong, Y., Kang, C., Shi, X., Wang, F., ... Zhu, D., & Zhu, X. (2020). Analytical methods and applications of spatial interactions in the era of big data. *Acta Geographica Sinica*, 75(7), 1523-1538.
- Chen, L., Gao, Y., **Zhu, D.**, Yuan, Y., & Liu, Y. (2019). Quantifying the scale effect in geospatial big data using semi-variograms. *PloS one*, *14*(11), e0225139.
- Zhang, F., Wu, L., **Zhu, D.**, & Liu, Y. (2019). Social sensing from street-level imagery: A case study in learning spatio-temporal urban mobility patterns. *ISPRS Journal of Photogrammetry and Remote Sensing*, *153*, 48--58.
- **Zhu, D.**, Cheng, X., Zhang, F., Yao, X., Gao, Y., & Liu, Y. (2019). Spatial interpolation using conditional generative adversarial neural networks. *International Journal of Geographical Information Science*, *34*(4), 735-758.
- Yao, X., Wu, L., **Zhu, D.**, Gao, Y., & Liu, Y. (2019). Visualizing spatial interaction characteristics with direction-based pattern maps. *Journal of Visualization*, 1--15.
- Zhang, S., **Zhu, D.*#**, Yao, X., Cheng, X., He, H., & Liu, Y. (2018). The scale effect on spatial interaction patterns: An empirical study using taxi OD data of Beijing and Shanghai. *IEEE Access*, *6*, 51994--52003.
- **Zhu, D.***, & Liu, Y. (2018). Modelling irregular spatial patterns using graph convolutional neural networks. *arXiv preprint arXiv:1808.09802*.
- Yao, X., **Zhu, D.**, Gao, Y., Wu, L., Zhang, P., & Liu, Y. (2018). A stepwise spatio-temporal flow clustering method for discovering mobility trends. *IEEE Access*, *6*, 44666--44675.
- Zhu, D., Huang, Z., Shi, L., Wu, L., & Liu, Y. (2018). Inferring spatial interaction patterns from sequential snapshots of spatial distributions. *International Journal of Geographical Information Science*, 32(4), 783--805.
- Liu, Y., Zhan, Z., Zhu, D., Chai, Y., Ma, X., & Wu, L. (2018). Incorporating Multi-source Big Geo-data to Sense Spatial Heterogeneity Patterns in Urban Space. *GEOMATICS AND INFORMATION SCIENCE OF WUHAN UNIVERS*, 43(3), 327--335.

- Zhu, D., Wang, N., Wu, L., & Liu, Y. (2017). Street as a big geo-data assembly and analysis unit in urban studies: A case study using Beijing taxi data. *Applied Geography*, *86*, 152--164.
- Zhu, D.*, & Liu, Y. (2017). An incremental map-matching method based on road network topology. *GEOMATICS AND INFORMATION SCIENCE OF WUHAN UNIVERS*, 42(1), 77--83.

Conference Proceedings & Abstracts

- Ma, Z., Zhu, D.* (2023). Collective Flow Evolution as a Mesoscopic Structure of Spatial Network, July. 20-22, London, United Kingdom (GeoInformatics 2023)
- **Zhu, D.*** (2023). *Learning Spatial Heterogeneity via Explainable Deep Spatial Regression*. Mar. 23-27, Denver, United States (AAG 2023)
- Ma, Z., Zhu, D.* (2023). Collective Flow Evolution Pattern: A mesoscopic exploration of spatial network dynamics, Mar. 23-27, Denver, United States (AAG 2023)) [2nd place in AAG 2023 Robert Raskin Student Competition]
- Hendrickson, R., Zhu, D.* (2023). Exploring the Scaling Relationships between Human Mobility and Air Pollutants in the Twin Cities, Mar. 23-27, Denver, United States (AAG 2023))
- Zhu, D.*, Gao, S., Cao, G. (2022) Towards the Intelligent Era of Spatial Analysis and Modeling. (Proceedings of The 5th ACMSIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery (GeoAI '22), Nov., Seattle, WA, United States)
- Luo, P., & Zhu, D.* (2022) Sensing overlapping geospatial communities from human movements using graph affiliation generation models. (Proceedings of The 5th ACMSIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery (GeoAI '22), Nov., Seattle, WA, United States)
- Wang, Y., & Zhu, D.* (2022) SHGCN: A hypergraph-based deep learning model for spatiotemporal traffic flow prediction. (Proceedings of The 5th ACMSIGSPATIAL International Workshop on AI for Geographic Knowledge Discovery (GeoAI '22), Nov., Seattle, WA, United States)
- Zhang, W., Ma, Y., Zhu, D., Dong, L., & Liu, Y. (2022) MetroGAN: Simulating Urban Morphology with Generative Adversarial Network. (Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2022), Aug., Washington DC, United States)
- Zhu, D.*, Liu, Y., Yao, X., & Fischer, M.M. (2022). *Spatial Regression Graph Neural Networks*. (American Association of Geographers Annual Meeting 2022, Feb. 26, Virtual (AAG 2022))
- Chen, T., & Zhu, D.* (2021) The Spatio-temporal stratified association between human activities and crime patterns during the COVID-19 stay-at-home mandate. (Proceedings of the 2021 ACM SIGSPATIAL China Annual Conference on Space Intelligence (SpatialDI 2021), Apr., Hangzhou, China) [Accepted.:2021]
- Chen, T., Cheng, T., & **Zhu, D.** (2021). *The exploration of human activity zones using geo-tagged big data during the COVID-19 first lockdown in London, UK*. (Proceedings of the 29th Conference on GIS Research UK, Apr. 13-16 2021, Cardiff University, United Kingdom)
- Soundararaj, B., & Zhu, D. (2019) Estimating pedestrian flow from footfall counts using Geo-propagation. (2019 Annual Conference on Complex Systems (CCS 2019), Sep. 30 - Oct.
 4, Singapore) [Accepted.:2019]
- Zhu, D.*, Zhang, F., Cheng, X., & Liu, Y. (2019). Spatial interpolation based on conditional generative adversarial neural networks. (American Association of Geographers Annual



Meeting 2019, Apr. 3-7, Washington, DC, United States (AAG 2019))

- Wang, Y., Zhu, D., Yin, G., Huang, Z., & Liu, Y. (2019). *Investigating local travel speed with spatial network structures and properties*. (Proceedings of the 2nd International Conference on Urban Informatics, June 24-26, Hong Kong, China (ICUI 2019))
- Zhu, D.*, Cheng, T., & Liu, Y. (2019). Geo-propagation from Incomplete Spatial Distribution Data: A Case Study of House Price Estimation. (Proceedings of the 27th Conference on GIS Research UK, Apr. 23-26, Newcastle upon Tyne, United Kingdom).
- Zhu, D.*, & Liu, Y. (2018). Modelling spatial patterns using graph convolutional networks. (Proceedings of the 10th International Conference on Geographic Information Science (GIScience 2018), Aug. 28-31, Melbourne, Australia)
- Xing, X., Zhu, D., Cheng, X., & Liu, Y. (2018). Population mapping based on deep features of remote sensing imagery. (Proceedings of the 26th International Conference on Geoinformatics, June 28-30, Kunming, China)
- Chen, L., Zhu, D., & Liu, Y. (2018). Quantify the scale effect in geospatial big data using semi-variograms. (Proceedings of the 26th International Conference on Geoinformatics, June 28-30, Kunming, China)
- Zhu, D., Shi, L., Wang, Y., Cheng, X., & Liu, Y. (2017). Infer spatial interaction patterns from spatial distributions. (Proceedings of the 25th International Conference on Geoinformatics, Aug. 2-4, Buffalo, United States)
- **Zhu, D.**, Wang, N., & Liu, Y. (2016). *Street perspective: a novel spatial unit in urban social sensing*. (Proceedings of the 17th International Symposium on Spatial Data Handling (SDH), Aug. 18-20, Beijing, China)
- Zhu, D., & Liu, Y. (2016). *The distance effect in spatial interaction and spatial similarity: a big data view of Tobler's First Law.* (Proceedings of the 33rd International Geographical Congress (IGC 2016), Aug. 21-23, Beijing, China)

Books and Book Chapters

- **Zhu, D.***, & Cao, G. (2024). Intelligent Spatial Prediction and Interpolation Methods. In *Handbook* of Geospatial Artificial Intelligence (GeoAI) edited by Song Gao, Yingjie Hu, and Wenwen Li. https://doi.org/10.1201/9781003308423-7
- Zhu, D. *, & Hu, Y. (2023). Artificial Intelligence. In Concise Encyclopedia of Human Geography edited by Loretta Lees and David Demeritt. 32-36. <u>https://www.e-elgar.com/shop/usd/concise-encyclopedia-of-human-geography-978180088348</u> 2.html

Invited Presentations, Posters, and Exhibits

Keynote/Plenary Address/Panelist

- **Zhu, D.** "Sensing the overlapping nature of mobility network using geospatial artificial intelligence", Symposium on Replicable Spatiotemporal Data Science, Spatial Data Lab, Center for Geographic Analysis, Harvard University. (Jul 15-16, 2023). *Invited*.
- Zhu, D. "Artificial Intelligence in Urban Science", Opening webinar on Urban Science, Swarma Club. (Jul 1, 2023) <u>https://swarma.org/?p=43120</u>. *Invited*.
- Zhu, D. "Intelligent spatial prediction: Rethinking geospatial modeling in the era of GeoAI,"

Annual Conference of Geomatics and GIScience Central South University, China. (Dec 26, 2020). *Invited*.

Guest Lecture

- **Zhu, D.** "Artificial Intelligence + Geospatial", GEOG 8001: Problems in Geographic Thought, UMN. (Nov 30, 2023). *Invited*
- **Zhu, D.** "Inferring national migration flows from sequential population snapshots," Geospatial Seminar Department of Civil Environmental & Geomatic Engineering, UCL. (Feb 21, 2019). *Invited*.
- Zhu, D. "Intelligent Sensing of Urban Space in Street Perspective," Intelligent Transportation Systems Course Institute of Remote Sensing and GIS, PKU. (Oct 17, 2017). *Invited*.

Invited Talk

- **Zhu, D.** "Geospatial Data Intelligence for Social Sensing", Coffee Hour Lecture Series, Department of Geography, Environment and Society, University of Minnesota, Twin Cities. (Nov 9, 2023) *Invited*.
- Zhu, D. "Geospatial Artificial Intelligence", Series webinar on Urban Science, Swarma Club. (Aug 5, 2023) <u>https://pattern.swarma.org/study_group_issue/500</u>. *Invited*
- Zhu, D. "The overlapping community structure and collective flow evolution pattern in urban mobility networks", Department of Intelligent Engineering, Sun Yat-Sen University. (Jul 4, 2023). *Invited*
- Zhu, D. "The overlapping community structure and collective flow evolution pattern in urban mobility networks", Department of Geography, Northeast Normal University. (Jun 30, 2023). *Invited*
- **Zhu, D.** "The overlapping community structure and collective flow evolution pattern in urban mobility networks", Department of Geography, Beijing Normal University. (Jun 28, 2023). *Invited*
- Zhu, D. "The overlapping community structure and collective flow evolution pattern in urban mobility networks", School of Earth and Space Science, Peking University. (Jun 27, 2023). *Invited*
- **Zhu, D.** "The overlapping community structure and collective flow evolution pattern in urban mobility networks", Institute of Geographic Sciences and Natural Resource Researchs, Chinese Academy of Science. (Jun 26, 2023). *Invited*
- **Zhu, D.** "The overlapping community structure and collective flow evolution pattern in urban mobility networks", Department of Geoscience and Information Physics, Central South University. (Jun 25, 2023). *Invited*
- Zhu, D. "How human movements drive complex and dynamic community structures within the Twin Cities Metro", Minnesota Compass, Amherst H. Wilder Foundation. (Apr 5, 2023). *Invited*.
- **Zhu, D.** "Revealing the flow patterns underlying spatial distribution snapshots", Humanistic GIS Lab, Department of Geography, University of Washington, Seattle. (Oct 31, 2022). *Invited*.
- Zhu, D. "Network-based GeoAI analytics," Research Seminar at the Chair of Cartography and Visual Analytics, School of Engineering and Design/Department of Aerospace and Geodesy, Technical University Munich. (Jul 21, 2022). *Invited*.
- **Zhu, D.** "Intelligent spatial prediction in incomplete-data scenarios," GeoAI Research Seminar Discussion Knowledge Computing Lab, Department of Computer Science & Engineering,



University of Minnesota. (Dec 16, 2021). Invited.

- **Zhu, D.** "Inferring spatial interaction pattern from spatial distribution snapshots," China Data Lab 2021 Workflow Webinar Wuhan University & Harvard University. (Jun 18, 2021). *Invited*.
- **Zhu, D.** "Intelligent spatial understanding: representation, modeling and prediction," CPGIS 2021 GeoAI Seminar Series China University of Geosciences. (May 9, 2021). *Invited*.
- **Zhu, D.** "Linkages between Spatial Regression and Graph Neural Networks," The 5th GIScience Symposium Peking University, Beijing Normal University, and Chinese Academy of Science. (Apr 17, 2021). *Invited*.
- **Zhu, D.** "Spatial prediction using black-box models," SpaceTimeLab Research Discussion SpaceTimeLab, University College London. (Oct 12, 2018). *Invited*.

Posters or Exhibitions

- **Zhu, D.** "About spatial heterogeneity patterns," Poster Presentation in Academic Star Competition, School of Earth and Space Sciences, Peking University, Beijing, China. (Feb 26, 2017)
- **Zhu, D.** "A map visualization of the air quality index in china," ChinaVis Data Challenge at the 3rd China Visualization and Visual Analytics Conference (ChinaVis 2016), Changsha, China (Jul 23, 2016)

Grants, Awards, Gifts, or Endowment Earnings (Internal Sources)

Quantifying Carbon Emission Efficiency through the Lens of Human Mobility *PI*; DSI Medium/Large Seed Grant 2023, Data Science Initiatives, University of Minnesota January 1, 2024 - December 31, 2024

Rural Mobility and Access: Leveraging Big Data Analytics and Context-Aware Computing

co-PI; CTS Scholars Seed Research, Center for Transportation Studies, University of Minnesota

FY 24-25

A GeoAI-based Model for Human Mobility Flow Generation

PI; Seed Grants for Social Sciences Research, OFAA, College of Liberal Arts Mar 1, 2023 – June 1, 2024

Sensing Geospatial Communities in Mobility Networks: How Human Movements Drive Dynamic Community Structures within the Twin Cities Metro Area

PI; Faculty Interactive Research Program, Center for Urban & Regional Affairs (CURA) July 1, 2022 – July 1, 2023

Intelligent Spatial Models and Analytical Methods

PI; Start-up Fund; College of Liberal Arts, University of Minnesota September 1, 2021 – Present

Grants, Contract, Awards (External Sources)

Modelling spatial heterogeneity and spatial interactions from the big geo-data perspective: 201806010077

PI; China Scholarship Council (CSC) Funding

October 1, 2018 - October 1, 2019

Geo-spatial models and analytical methods: 41625003

RA; National Natural Science Fund for Distinguished Young Scholars

January 2017 - July 2020



Theoretical and analytical methods of spatial interaction networks in geospatial big data: 41830645 *RA*; The Major Program of the National Natural Science Foundation of China January 2019 - January 2021
Multi-sensing of urban locations with big geo-data: 2017YFB0503602 *RA*; National Key Research and Development Program of China July 2017 - July 2020
Investigating human mobility pattern based on massive spatio-temporal data: 41271386 *RA*; National Natural Science Foundation of China January 2013 - December 2016

Honors and Scholarships

Teaching Assistant

Top 20 2022 Global Young Scientist Award, World Geospatial Developers Conference 2022 Distinction of Doctoral Thesis, Peking University 2020 Excellent Graduates, Peking University 2020 China National Scholarship, Ministry of Education, P. R. China 2019 Early Career Scholarship, GIS Research UK 2019 Travel Award AAG, Applied Geography Speciality Group 2019 Presidential Fellowship, Peking University 2018 Rising Star Award, College GIS Forum (CGF), China 2018 Tang Lixin Scholarship, Peking University 2017 Founder Scholarship, Peking University 2012 54 Scholarship, Peking University 2011

TEACHING AND CURRICULUM DEVELOPMENT

University of Minnesota	
GEOG 5533 Advanced Spatial Analysis	2024 - Present
Chief Instructor	
GIS 5555 Basic Spatial Analysis	2023 - Present
Chief Instructor	
GEOG 3531/5531 Numerical Spatial Analysis	2021 - Present
Chief Instructor	
GEOG 8980 Topics in Geography - Seminar in Geospatial Artificial Intelligence	2022 - Present
Chief Instructor	
GIS 8990 Research Problems in GIS	2022 - Present
Chief Instructor	
Peking University	
04831410: Introduction to Computation	2016 - 2018
Teaching Assistant	
01213660: Intelligent Transportation Systems	2017
Guest Lecturer	
01213610: GIS Algorithms and Applications	2016 - 2017



01235080: Geo-mathematical Models2015Teaching Assistant2015University College London2019CEGE 0097: Spatial Analysis and Geocomputation2019Guest Lecturer, Tutor2019ADVISING AND MENTORING2019

Graduate Student Activities

Jacob Harris, Geography MA	Advisor	2024 - Present
Meicheng Xiong, PhD	Advisor	2023 - Present
Sheng Wang, PhD	Advisor	2023 - Present
Zhongfu Ma, PhD	Advisor	2022 - Present
Gene (Ziying) Cheng, MGIS	Advisor	Graduated 2022
Xiaohuan Zeng, Geography MA	Committee member	2022 - Present
Tianyi Li, Civil, Environmental, and Geo-Engineering PhD	Committee member	2023 - Present
Zekun Li, Computer Science PhD	Committee member	2021 - Present
Mohsen Ahmadkhani, Geography PhD	Committee member	2021 - Present

SERVICE AND PUBLIC OUTREACH

Service to the Discipline/Profession/Interdisciplinary Area(s)

Editorship/Guest Editorship

Editorial Board Member	Computational Urban Science	2023-Present
Guest Editor	Frontiers in Environmental Science	2022
Guest Editor	Remote Sensing	2022

Journal Reviewing

Environment and Planning B: Urban Analytics and City Science	2023 - Present
Geographical Analysis	2023 - Present
Transactions in GIS	2022 - Present
Journal of Transport and Land Use	2022 - Present
IEEE Geoscience and Remote Sensing Letters	2022 - Present
Artificial Intelligence in Geosciences	2022 - Present
ISPRS Journal of Photogrammetry and Remote Sensing	2022 - Present
Cartography and Geographic Information Science	2021 - Present
CRC Press - Taylor & Francis Group	2021 - Present
Geomatics and Information Science of Wuhan University	2021 - Present
Humanities and Social Sciences Communications	2021 - Present
International Journal of Applied Earth Observation and Geoinformation	2021 - Present
International Journal of Digital Earth	2021 - Present
ISPRS International Journal of Geo-Information	2021 - Present
Journal of Planning Education and Research	2021 - Present
Stochastic Environmental Research and Risk Assessment	2021 - Present
Annals of the American Association of Geographers	2020 - Present



Cities	2020 -	Present
Computational Urban Science	2020 -	Present
Geo-spatial Information Science	2020 -	Present
Nature Scientific Reports	2020 -	Present
Transactions on Spatial Algorithms and Systems	2020 -	Present
Applied Geography	2018 -	Present
IEEE ACCESS	2018 -	Present
IEEE Transactions on Industrial Informatics	2018 -	Present
International Journal of Geographical Information Science	2018 -	Present
PLOS ONE	2018 -	Present
Acta Geodaetica et Cartographica Sinica	2017 -	Present
Computers, Environment and Urban Systems	2017 -	Present
Spatial Statistics	2016 -	Present
Review panels for external funding agencies, foundations, etc		
National Science Foundation, Computer and Information Science an Engineering (CISE), Information & Intelligent Systems (IIS)	d Panel Reviewer	2023
National Science Foundation, Human-Environment and Geographics Sciences Program (HEGS)	al Reviewer	2023
National Science Foundation, Environmental Sustainability Program	n Reviewer	2023
Organization of Conferences, Workships, Panels, Symposia		
The 7th International Workshop on AI for Geographic	Program Chair	2024
Knowledge Discovery (GeoAI'24)	r togram Chan	2021
The 30th International Conference on GeoInformatics (GeoInformatics'23)	Program Committee Member	2023
The 2nd International Workshop on Geospatial Knowledge	Program Committee	2023
Graphs and GeoAI: Methods, Models, and Resources (GeoKG & GeoAI 2023)	Member	
I-GUIDE (Institute for Geospatial Understanding through	Program Committee	2023
an Integrative Discovery Environment) Forum 2023	Member	
AAG 2022 Symposium on Data-Intensive Geospatial	Session Chair	2022
Understanding the Era of AI and CyberGIS: GeoAI -		
Intelligent Geospatial Analytics		
The 28th Geographical Information Science Research UK	Session Chair	2020
Conference (GISRUK'20)		
The 5th International Workshop on AI for Geographic	Program Committee	2022
Knowledge Discovery (GeoAI'22)	Member	
The 4th International Workshop on AI for Geographic	Program Committee	2021
Knowledge Discovery (GeoAI'21)	Member	
The 3th International Workshop on AI for Geographic	Program Committee	2019
Knowledge Discovery (GeoAl'19)	Member	

Service to the University/College/Department

Department		
Member, Admissions Committee, Department of GES, UMN	2021 - 2	2023



Member, Awards Committee, Department of GES, UMN Member, Graduate Education Policy Committee, Department of GES, UMN Member, Coffee Hour Committee, Department of GES, UMN Member, Undergraduate Education Policy Committee, Department of GES, UMN	2021 - 2023 2022 - 2023 2022 - 2023 2021 - 2022
University	
Member, Executive Committee, Master of GIS (MGIS) Program, UMN	2022 - Present
Member, Minnesota Population Center (MPC), UMN	2021 - Present
Service to the Professional Organizations	
BOD Member, International Association of Chinese Professionals in Geographic	2023-Present
Information Sciences (CPGIS)	
Member, ACM Special Interest Group on Spatial Information (SIGSPATIAL)	2022 - Present
Member, Career Development Committee, International Association of Chinese	2022 - Present
Professionals in Geographic Information Sciences (CPGIS)	
Member, Association of American Geographers (AAG)	2019 - Present
Member, International Association of Chinese Professionals in Geographic	2017 - Present
Information Sciences (CPGIS)	