



*Geography, Environment and Society  
College of Liberal Art*

## DI ZHU

Department of Geography, Environment and Society  
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### 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.A., **Peking University**. *Economics* 2014

### Positions/Employment

#### **University of Minnesota, Twin Cities**

- Assistant Professor*, Department of Geography, Environment and Society (GES) 2020 - Present  
(Start date delayed to Sep. 1, 2021, due to the COVID-19 pandemic)
- 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

Sharp(#) - indicates co-senior author

Underline - indicates student author

### Refereed Journal Articles

- Ma, Z., & **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. <https://www.e-elgar.com/shop/usd/concise-encyclopedia-of-human-geography-9781800883482.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, Swarna Club. (Jul 1, 2023) <https://swarna.org/?p=43120>. *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, Swarna Club. (Aug 5, 2023) [https://pattern.swarna.org/study\\_group\\_issue/500](https://pattern.swarna.org/study_group_issue/500). *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 Research, 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

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

*Teaching Assistant*



01235080: Geo-mathematical Models 2015  
*Teaching Assistant*

**University College London**

CEGE 0097: Spatial Analysis and Geocomputation 2019  
*Guest Lecturer, Tutor*

**ADVISING AND MENTORING**

**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 and Engineering (CISE), Information & Intelligent Systems (IIS)	Panel Reviewer	2023
National Science Foundation, Human-Environment and Geographical Sciences Program (HEGS)	Reviewer	2023
National Science Foundation, Environmental Sustainability Program	Reviewer	2023

***Organization of Conferences, Workshops, Panels, Symposia***

The 7th International Workshop on AI for Geographic Knowledge Discovery (GeoAI'24)	Program Chair	2024
The 30th International Conference on GeoInformatics (GeoInformatics'23)	Program Committee Member	2023
The 2nd International Workshop on Geospatial Knowledge Graphs and GeoAI: Methods, Models, and Resources (GeoKG & GeoAI 2023)	Program Committee Member	2023
I-GUIDE (Institute for Geospatial Understanding through an Integrative Discovery Environment) Forum 2023	Program Committee Member	2023
AAG 2022 Symposium on Data-Intensive Geospatial Understanding the Era of AI and CyberGIS: GeoAI - Intelligent Geospatial Analytics	Session Chair	2022
The 28th Geographical Information Science Research UK Conference (GISRUK'20)	Session Chair	2020
The 5th International Workshop on AI for Geographic Knowledge Discovery (GeoAI'22)	Program Committee Member	2022
The 4th International Workshop on AI for Geographic Knowledge Discovery (GeoAI'21)	Program Committee Member	2021
The 3th International Workshop on AI for Geographic Knowledge Discovery (GeoAI'19)	Program Committee Member	2019

**Service to the University/College/Department**

***Department***

Member, Admissions Committee, Department of GES, UMN	2021 - 2023
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Member, Awards Committee, Department of GES, UMN	2021 - 2023
Member, Graduate Education Policy Committee, Department of GES, UMN	2022 - 2023
Member, Coffee Hour Committee, Department of GES, UMN	2022 - 2023
Member, Undergraduate Education Policy Committee, Department of GES, UMN	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 Information Sciences (CPGIS)	2023-Present
Member, ACM Special Interest Group on Spatial Information (SIGSPATIAL)	2022 - Present
Member, Career Development Committee, International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)	2022 - Present
Member, Association of American Geographers (AAG)	2019 - Present
Member, International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)	2017 - Present