Bing Zhou (he/him)

Department of Geography
College of Earth and Mineral Sciences
Penn State University

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Research Interests

- Disaster Management
- Responsible GIScience
- GeoAI and Deep Learning
- Resilience and Vulnerability
- Big Data Analysis and Visualization
- Computational Social Science

Teaching Interests

- Introduction to GIS/Spatial Data Science
- GIS Programming
- Remote Sensing and UAV
- Spatial Big Data Analytics
- Visualization in GIS
- GIS Online Certificate Program

Education

- 2021-Present   Ph.D. Candidate, Texas A&M University, Department of Geography, College Station, Texas.
  Research: GeoAI in Disaster Management; Responsible GIScience; Computational Mental Health Study; Cyberinfrastructure
  Dissertation: Step Toward Responsible GIScience: Paradigms, Challenges, and Applications.

- 2011-2014   M.E., Tongji University, School of Geodesy and Geoinformatics, Shanghai, China.
  Research: Multi-sensor integration and localization.
  Thesis: Realization of Mobile Mapping System and Data Collection.

- 2007-2011   B.E., Wuhan University, School of Geodesy and Geomatics, Wuhan, China.
  Research: GNSS positioning.
  Thesis: Research of Ionospheric Delay Interpolations and Their Performance Comparison.

Appointments

- 2024 – Present   Assistant Teaching Professor, Penn State University
- 2022 – 2024   Graduate Research Assistant, Texas A&M University
- 2021 – 2023   Graduate Teaching Assistant, Texas A&M University
- 2020 – 2021   Vice Deputy Director, Central Southern China Electric Design Institute, Wuhan
- 2015 – 2021   Software Development Engineer, Central Southern China Electric Design Institute, Wuhan
- 2015 – 2021   Certified UAV Pilot, Central Southern China Electric Design Institute, Wuhan
- 2014 – 2016   Survey Engineer, Central Southern China Electric Design Institute, Wuhan
- 2011 – 2014   Graduate Research Assistant, Tongji University, Shanghai
- 2011 – 2012   Software Development Engineer Intern, Leica Geosystem, Shanghai
- 2010 – 2011   Undergraduate Research Assistant, Wuhan University, Wuhan

Selected Honors and Awards

- 2024 Geography Graduate Student Excellence in Research Award. Department of Geography, Texas A&M University **($500)**
- 2024 Association of American Geographers (AAG) Spatial Analysis and Modeling Specialty Group Travel Award
- 2023 International Cartographic Association (ICA) Scholarship **($1500)**
- 2023 Association of American Geographers (AAG) Spatial Analysis and Modeling Specialty Group Travel Award (Co-author)
- 2022 AutoCarto Student Assistantship
- 2022 Association of American Geographers (AAG) Spatial Analysis and Modeling Specialty Group Travel Award (Co-author)
- 2021 Cartography and Geographic Information Society (CaGIS) Scholarship Award **($1500, 1-2 Awardees worldwide per year)**
- 2021 1st Place of AAG GISS Specialty Group Student Paper Competition
- 2021 Best Paper Award at the International Symposium on Geospatial Approaches to Combating COVID-19 (Co-author)
- 2019 2nd Prize of Award for Scientific and Technological Advancement of Electric Engineering
- 2018 2nd Prize of Award for Scientific and Technological Advancement of Electric Engineering
- 2018 1st Prize of Award for Scientific and Technological Advancement of Electric Engineering
- 2017 2nd Prize of Top UAV Pilots of China Electric Power Industry Contest (**0.01%**)
- 2015 1st Prize of Award for Scientific and Technological Advancement of Electric Engineering
- 2012 Outstanding Graduate Student of Tongji University
- 2011 Outstanding Undergraduates of Wuhan University
- 2009 Merit Student of Wuhan University
- 2009 Second-class Scholarship of Wuhan University
- 2008 Excellent Student of Wuhan University
- 2008 Second-class Scholarship of Wuhan University
- 2007 Excellent Student of Wuhan University
- 2007 QiongYa Student Scholarship of Wuhan University
- 2007 Second-class Scholarship of Wuhan University

Projects and Proposals

PI & Co-PI

2022 **Co-PI**. CaGIS Rising Grant, "Characterizing and Promoting Cartography and GIS Graduate Programs through Research Theme Discovery and Online Seminars". Student PI: Yuhao Kang. Student Co-PIs: Yanbing Chen, **Bing Zhou**, and Zhining Gu. Advisors: Song Gao, Lei Zou, and Wenwen Li.

Participation

2023-2026 National Academies of Sciences, Engineering, and Medicine (NASEM) Gulf Research Program (GRP), "Climate-LEAD: Climate effects on localized environmental health disparities in overburdened Texas communities along the Gulf Coast." PI: Lei Zou, $1,499,990.
My Role: Working as a Research Assistant; Conducting literature review; Prepare graphs and maps; Conducting preliminary analysis.

2023-2026 Institutional PI/Co-PI. National Science Foundation (NSF) Human Networks and Data Science

(HNDS), "Collaborative Research: HNDS-I: A Cyberinfrastructure for multiscale human dynamics and resilience (HDR) research," PI: Nina Lam, $1,096,902.
My Role: Working as a Research Assistant; Conducting literature review; Prepare graphs and maps; Conducting preliminary analysis; Generated 1 first-author publication.

2022-2023   AAG Summer Workshop Series, "Spatial data science for social media analytics", PI: Lei Zou, $1750.
My Role: Working as a Research Assistant; Preparing presentation slides; Conducting data collection.

2021-2023   NSF EAGER, "EAGER: SAI-E: synchronizing decision-support via human- and social-centered digital twin infrastructures for coastal communities," PI: Xinyue Ye, $298,982.
My Role: Conducting literature review; Report writing; Conducting data collection.

2019-2022   NSF Human, Disasters, and Built Environment (HDBE) Program, "Reducing the human impacts of flash floods: development of microdata and causal model to inform mitigation and preparedness", PI: Nasir Gharaibeh, $350,000.
My Role: Working as a Research Assistant; Conducting literature review; Prepare graphs and maps; Conducting data analysis; Generated 2 first-author publication.

2023-2024   TAMU TiCER Pilot Projects Program, "Geospatial modeling of climate change effects on environmental health resilience in southeast Texas communities," PI: Lei Zou, $50,000.
My Role: Working as a Research Assistant; Collecting data and making maps for reports.

2022-2024   PVAMU&TAMU Panther RISE Grant Program, "Leveraging geospatial big data and artificial intelligence (AI) to enhance disaster resilience in vulnerable communities," PI: Lei Zou, $40,000.
My Role: Working as a Research Assistant; Conducting literature review; Research and methodology design; Technological support.

2022-2023   TAMU Innovation [X] Program, "Big data fusion for the development of intelligent geospatial digital twin (IGDT)," PI: Paul Koola, $20,000.
My Role: Working as a Research Assistant; Conducting literature review; Prepare graphs and maps; Conducting data analysis; Generated 1 first-author publication.

2022-2023   TAMU Seed Funds for Collaboration among Three Merging Colleges, "Statistical machine learning meets high-dimensional spatiotemporal challenges – a case study of COVID-19 modeling and prediction," PI: Patricia Ning. $10,000.
My Role: Working as a Research Assistant; Preliminary data processing and analysis.

2022-2023   TAMIDS Course Development Grant Program, "Spatial data science: advances and applications," PI: Heng Cai, $15,000.
My Role: Developing syllabus and collecting teaching materials for the GeoAI section.

2021-2023   TAMU-T3 Grant, "Community resilience to technological disasters: an analysis of risks, preparedness, and mitigation," PI: Lei Zou, $32,000.
My Role: Working as a Research Assistant; Prepare graphs and maps; Conducting data analysis.

2020-2023   TAMU-X Grant, "Disaster city digital twin: integrating machine and human intelligence to augment flood resilience," PI: Ali Mostafavi, $1,000,000.
My Role: Conducting literature review; Prepare graphs and maps; Collecting presentation materials. Generated 1 first-author publication.

Proposal Experience

2023   National Academies of Sciences, Engineering, and Medicine (NASEM) Gulf Research Program (GRP), "Climate-LEAD: Climate effects on localized environmental health disparities in overburdened Texas communities along the Gulf Coast." PI: Lei Zou, $1,499,990.
My Role: Helping with literature review; Conducting preliminary data collection, processing, and analysis; Making figures and maps for proposal.

2023   National Science Foundation (NSF) Human Networks and Data Science (HNDS), "Collaborative Research: HNDS-I: A Cyberinfrastructure for multiscale human dynamics and resilience (HDR) research," PI: Nina Lam, $1,096,902. Co-PI/TAMU PI: Lei Zou, other Co-PIs: Heng Cai, Yi Qiang (USF), Kenan Li (SLU), and Kisung Lee (LSU).
My Role: Helping with literature review; Conducting preliminary data collection, processing, and analysis; Making figures and maps for proposal; Helping with proposal writing based on finished work (TopoBERT & VictimFinder).

2023   TAMU TiCER Pilot Projects Program, "Geospatial modeling of climate change effects on environmental health resilience in southeast Texas communities," PI: Lei Zou, $50,000.
My Role: Helping with literature review; Conducting preliminary data collection, processing, and analysis; Making figures and maps for proposal.

2022   PVAMU&TAMU Panther RISE Grant Program, "Leveraging geospatial big data and artificial intelligence (AI) to enhance disaster resilience in vulnerable communities," PI: Lei Zou, $40,000.
My Role: Helping with literature review; Conducting preliminary data collection, processing, and analysis; Making figures and maps for proposal.

Publications

Intro   **21** journal articles; **2** book chapters. Manuscripts available upon request.

Peer Reviewed Journal Articles

2024   Tian, H., Cai, H., Hu, L., Qiang, Y., **Zhou, B.**, Yang, M., & Lin, B. (2024). Unveiling community adaptations to extreme heat events using mobile phone location data. Journal of Environmental Management, 366, 121665. https://doi.org/10.1016/j.jenvman.2024.121665

2024   Abedin, J., Zou, L., Yang, M., Rohli, R., Mandal, D., Qiang, Y., Akter, H., **Zhou, B.**, Lin, B., & Cai, H. (2024). Deciphering spatial-temporal dynamics of flood exposure in the United States. Sustainable Cities and Society, 108, 105444. https://doi.org/10.1016/j.scs.2024.105444

2024   Zhou, R. Z., Hu, Y., Zou, L., Cai, H., **Zhou, B.** (2024). Understanding the disparate impacts of the 2021 Texas winter storm and power outages through mobile phone location data and nighttime light images. International Journal of Disaster Risk Reduction, 103, 104339. https://doi.org/10.1016/j.ijdrr.2024.104339

2023   **Zhou, B.**, Zou, L., Yang, M., Lin, B., Mandal, D., Abedin, J. Overlooked Voices under Strict Lockdown: Mapping Humanitarian Needs in 2022 Shanghai COVID-19 Outbreak. Cartography and Geographic Information Science. DOI: 10.1080/15230406.2024.2314547

2023   Lin, B., Zou, L., Zhao, B., Huang, X., Cai, H., Yang, M., **Zhou, B.** Sensing the Pulse of the Pandemic: Geovisualizing the Demographic Disparities of Public Sentiment toward COVID-19 through Social Media. Cartography and Geographic Information Science. (Accepted; In Press)

2023   Mandal, D., Zou, L., Cai, H., Lin, B., **Zhou, B.**, Abedin, J., Yang, M. Algorithmic Uncertainties in Geolocating Social Media Data for Disaster Management. Cartography and Geographic Information Science. DOI: 10.1080/15230406.2023.2286385

2023   **Zhou, B.**, Zou, L., Hu, Y., Qiang, Y., Goldberg, D. (2023) TopoBERT: a plug and play toponym recognition module harnessing fine-tuned BERT, International Journal of Digital Earth, 16:1, 3045-3063, DOI: 10.1080/17538947.2023.2239794

2023   Wang, Y., Kang, Y., Liu, H., Hou, C., **Zhou, B.**, Ye, S., Liu, Y., Rao, J., Pei, Z., Ye, X., & Gao, S. (2023). Choosing GIS graduate programs from afar: Chinese students' perspectives. Transactions in GIS. https://doi.org/10.1111/tgis.13037

2022   Zou, L., Liao, D., Lam, N., Meyer, M., Gharaibeh, N., Cai, H., **Zhou, B.**, Li, D. Social media for emergency rescue: An analysis of rescue requests on Twitter during Hurricane Harvey, International Journal of Disaster Risk Reduction, Volume 85, 2023, 103513, ISSN 2212-4209, https://doi.org/10.1016/j.ijdrr.2022.103513.

2022   **Zhou, B.**, Zou, L., Mostafavi, A., Lin, B., Yang, M., Gharaibeh, N., Cai, H., Abedin, J., Mandal, D. VictimFinder: Harvesting rescue requests in disaster response from social media with BERT, Computers, Environment and Urban Systems, Volume 95, 2022, 101824, ISSN 0198-9715, https://doi.org/10.1016/j.compenvurbsys.2022.101824.

2022   Lin, B., Zou, L., Duffield, N., Mostafavi, A., Cai, H., **Zhou, B.**, Tao, J., Yang, M., Mandal, D., Abedin, J.(2022) Revealing the linguistic and geographical disparities of public awareness to Covid-19 outbreak through social media, International Journal of Digital Earth, 15:1, 868-889, DOI: 10.1080/17538947.2022.2070677

2022   Yang, M., Zou, L., Cai, H., Qiang, Y., Lin, B., **Zhou, B.**, Abedin, J., Mandal, D. 2022. "Spatial–Temporal Land Loss Modeling and Simulation in a Vulnerable Coast: A Case Study in Coastal Louisiana" Remote Sensing 14, no. 4: 896. https://doi.org/10.3390/rs14040896

2021   Hu, Y., He, X., Xu, H., **Zhou, B.**, Wang, L. 2021. "Application of RTK UVA in Intertidal Zone Survey" Geospatial Information, 19(4), 41-43, DOI: 10.3969/j.issn.1672-4623.2021.04.010

2020   Chen, G., Cheng, Z., Yao, Y., Xu, H., Wang, L., **Zhou, B**., Wang, X. 2020. "3D Digital Survey and Design of Distribution Line Based on Internet+, GIS, and Typical Design Library" Electric Power Survey and Design, z1, 211-215, DOI: 10.13500/j.dlkcsj.issn1671-9913.2020.S1.039

2017   Cheng, Z., Hu, J., Lu, S., Xu, N., Zhang, J., **Zhou, B**. 2017. "The Stability Monitoring of UHV Convertor Station Using High Resolution InSAR Dataset" Electric Power Survey and Design, 6, 5-8.

2017   Cheng, Z., Lu, S., **Zhou, B**., Chen, G., Xu, N. 2017. "Application of InSAR in Electric Power Transmission Line Projects" Electric Power Survey and Design, s1, 100-104, DOI: 10.13500/j.cnki.11-4908/tk.2017.s1.022

2017   **Zhou, B**., Xu, H., Cheng, Z., Pei, L. 2016. "Development of Mobile Data Collecting System Based on Windows Mobile" Chinese Journal of Engineering Geophysics, 13(5), 684-688, DOI: 10.3969/j.issn.1672-7940.2016.05.021

2017   **Zhou, B**., Liu, J., Wu, X. 2017. "Application and Accuracy Analysis of Control Point Free UAV in Topological Survey of Power Plants" Bulletin of Surveying and Mapping, S1, 188-191.

2015   Wang, Z., Yao, L., **Zhou, B**. 2015. "Research on the Critical Techniques for the Design of Mobile Mapping Systems" Bulletin of Surveying and Mapping, S1, 4, 231-234, DOI: 10.13474/j.cnki.11-2246.2015.0666

2013   **Zhou, B**., Yao, L., Xie, Y., Bian, S. 2013. "Development and Implementation of Realtime Piling Ship Monitoring System Based on Android" Bulletin of Surveying and Mapping, 12, 97-100.

2012   **Zhou, B**., Xiao, J. 2012. "Research on New Technologies in Engineering Survey" Geomatics Spatial Information Technology, 35(2), 221-222. DOI: 10.3969/j.issn.1672-5867.2012.02.068

Book Chapters

2023   Zou, L., Mostafavi, A., **Zhou, B.**, Lin, B., Mandal, D., Yang, M. Empowering Smart Disaster Response with GeoAI. In: Gao, S., Hu, Y., & Li, W. (Eds.). (2023). Handbook of Geospatial Artificial Intelligence (1st ed.). CRC Press. https://doi.org/10.1201/9781003308423

2014   Yao, L., **Zhou, B.** (2014). Development and Tests of Low Cost MMS. In: Liu, C. (eds) Principle and Application Progress in Location-Based Services. Lecture Notes in Geoinformation and Cartography. Springer, Cham. https://doi.org/10.1007/978-3-319-04028-8_12

Manuscripts in Review

Resubmit   **Zhou, B.**, Zou, L., Yang, M., Lin, B., Mandal, D., Abedin, J., Cai, H., Ji, S., Klein, A., Gharaibeh, N. Real-Time Disaster Response with Social Media and Pretrained Language Models.

Revision   Gu, Z., Li, W., **Zhou B.**, Wang, Y., Chen Y., Ye, S., Wang K., Gu, H., Kang, Y. GISphere Knowledge Graph (GISphere-KG) for Geography Education: Recommending Research-based Graduate Programs. Transactions in GIS.

Revision   Lin, B., Zou, L., Yang, M., **Zhou, B.**, Mandal, D., Abedin, J. Cai, H., and Ning, N. 2024. Understanding Human-COVID-19 Dynamics using Geospatial Big Data: A Systematic Literature Review. Annals of GIS. Under Review.

Presentations

Invited Talks

2022   Improving Disaster Management with Social Media and AI. Texas Sea Grant Community Outreach. 2022, Weslaco, Texas.

Invited Panelist

2022   **Bing Zhou**, Ensheng Dong, Hoeyun Kwon. Student Success in Empowering Social Goods with Cartography and GIScience. AutoCarto 2022, Panel Session.

Guest Lectures

2024   **Bing Zhou**, Capstones in GeoAI. In GEOG 695 Frontiers in GIScience. Department of Geography, Texas A&M University.

2023   **Bing Zhou**, GeoAI in Natural Disaster Management and Application of Geodatabase. In GEOG 659 Geodatabase. Department of Geography, Texas A&M University.

2022   **Bing Zhou**, Spatial Thinking Matters. In GEOG 695 Frontiers in Geographic Information Science. Department of Geography, Texas A&M University.

2022   **Bing Zhou**, Application of Geospatial Data Science and Social Media for Disaster Management. AAG Workshop on Natural Disasters.

Conference Presentations

2024   Lin, B., Zou, L., Yang, M., **Zhou, B.**, Mandal, D., Abedin, J. Understanding human-COVID-19 dynamics using Geospatial Big Data: a systematic literature review. AAG 2024 Annual Meeting, Honolulu, Hawaii.

2024   **Zhou, B.**, Zou, L. STEP toward responsible GIScience: paradigms, purposes, and challenges.AAG 2024 Annual Meeting, Honolulu, Hawaii. *SAM Student Travel Award.*

2024   Yang, M., Zou, L., Li, W., Cai, H., Lin, B., **Zhou, B.** Sleepless cities under social isolation:geographically and temporally revealing circadian rhythm disorders through social media. AAG 2024 Annual Meeting, Honolulu, Hawaii. *John Odland SAM student paper competition finalist.*

2024   Mandal, D., Zou, L., Abedin, J., **Zhou, B.**, Cai, H., Baig, F. Enhancing disaster resilience in the cyberinfrastructure era: CyberGIS for customizable resilience measurement and improvement. AAG 2024 Annual Meeting, Honolulu, Hawaii. *Jeanne X. Kasperson Student Paper Award.*

2024   Abedin, J., Zou, L., Mandal, D., Yang, M., Akter, H., **Zhou, B.**, Lin, B. Deciphering the dynamics of flood risks: a comprehensive geospatial and temporal assessment in the contiguous

2023   Mandal, D., Zou, L., Wilkho, R.S., Abedin, J., **Zhou, B.** A CyberGIS platform for resilience inference measurement and enhancement. AGU Fall Meeting 2023. San Francisco, California. (Poster)

2023   Zou, L., **Zhou, B.**, Lin, B., Mandal, D., Yang, M., Abedin, J., Cai, H. Smart disaster response with GeoAI and Big Data. AGU Fall Meeting 2023. San Francisco, California.

2023   Abedin, J., Zou, L., Yang, M., **Zhou, B.**, Lin, B. Exploring the spatiotemporal trends of flood exposure in the Contiguous United States. Urban Climate Solutions Workshop. College Station, Texas.

2023   **Zhou, B.**, Zou, L. Enhancing urban resilience to climatic hazards using social media and GeoAI. Urban Climate Solutions Workshop. College Station, Texas.

2023   **Zhou, B.**, Zou, L., Lin, B., Yang, M., Mandal D., Abedin, J., Cai, H. Social Media Reactions Reveals Spatial and Temporal Discrepancies during Hurricanes. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

2023   Abedin, J., Zou, L., Cai, H., Yang, M., Akter, H., Mandal, D., Lin, B., **Zhou, B.** Deciphering Spatial-Temporal Dynamics of Flood Exposure in the United States. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

2023   Mandal, D., Abedin, J., Zou, L., Yang, M., **Zhou, B.** Evolving Geographical Disparities of Community Disaster Resilience in the United States. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

2023   Lin, B., Zou, L., Cai, H., Yang, M., **Zhou, B.** Sensing the Pulse of the Pandemic: Demographic Disparities of Public Sentiment toward Covid-19 through Social Media. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

2023   Yang, M., Zou, L., Abedin, J., Lin, B., **Zhou, B.** Simulating Coastal Land Losses and Gains Using Neighborhood Effect Optimized Convolutional Neural Networks (NeoCNN) and Cellular Automata. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

2023   Zhou, Z., Hu, Y., Zou, L., Cai, H., **Zhou, B.** Understanding community resilience in the 2021 Texas Winter Storm through Home-dwelling Time Records Derived from Mobile Phone Location Data. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

2022   Abedin, J., Zou, L., Cai, H., Yang, M., Akter, H., Mandal, D., Lin, B., **Zhou, B.** Spatial-Temporal Changes of Flood Exposure in the United States. AGU Fall Meeting 2022.

2022   Mandal, D., Zou, L., Cai, H., Lin, B., **Zhou, B.**, Abedin, J., Yang, M. Uncertainties in Geolocating Social Media Data for Disaster Research. AGU Fall Meeting 2022.

2022   Mandal, D., Zou, L., Cai, H., Abedin, J., Yang, M., Lin, B., **Zhou, B.** Evolving Geographical Disparities of Community Disaster Resilience in the United States. AGU Fall Meeting 2022.

2022   Lin, B., Zou, L., Yang, M., **Zhou, B.** Multi-Granular Geovisualizations of Public Perceptions of COVID-19 through the Lens of Twitter. AutoCarto 2022.

2022   Mandal, D., Zou, L., Cai, H., Lin, B., **Zhou, B.**, Abedin, J., Yang, M. Uncertainties in Geolocating Social Media Data for Disaster Research. AutoCarto 2022.

2022   Zou, L., **Zhou, B.**, Gharaibeh, N., Meyer, M., Cai, H., Lin, B., Mandal, D. VictimFinder: harvesting disaster rescue requests from social media with AI. 2nd Disaster PRIMR Conference, Danton, TX.

2022   Zou, L., Lam, N.S.N., Cai, H., **Zhou, B.** Social media for emergency rescue: analysis of rescue requests on Twitter during Hurricane Harvey. AAG 2022 Annual Meeting, Virtual.

2022   Abedin, J., Zou, L., Cai, H., Mandal, D., Lin, B., Yang, M., **Zhou, B.**, Brown, T. Spatial-temporal changes of flood risk in the United States. AAG 2022 Annual Meeting, Virtual.

2022   Yang, M., Zou, L., Lin, B., **Zhou, B.**, Abedin, J., Mandal, D. Simulating land loss and land gain by integrating neighborhood effect and deep learning with cellular automata. AAG 2022 Annual Meeting, Virtual.

2022   Lin, B., Zou, L., Cai, H., **Zhou, B.**, Yang, M., Mandal, D., Abedin, J. Revealing the linguistic and geographic disparities of public awareness to Covid-19 outbreak through social media. AAG 2022 Annual Meeting, Virtual.

2022   Cai, H., Lin, B., Zou, L., Mandal, D., **Zhou, B.** Community awareness and sentiment inequalities during Winter Storm Uri. AAG 2022 Annual Meeting, Virtual.

2022	Mandal, D., Zou, L., Cai, H., Lin, B., **Zhou, B.**, Yang, M., Abedin, J. A modular machine learning platform for resilience inference measurement and enhancement (PRIME). AAG 2022 Annual Meeting, Virtual.
2022	Zou, L., Lin, B., Yang, M., **Zhou, B.**, Cai, H. Revealing the geographical disparities of global Covid-19 awareness and its health effects through social media. International Symposium on Geospatial Approaches to Combating Covid-19, Virtual/Florence, Italy. ***Best Paper Award.***
2022	**Zhou, B.**, Zou, L., Yang, M., Lin, B., Mandal, D. Overlooked Voices under Strict Lockdown: Mapping Humanitarian Needs in 2022 Shanghai COVID-19 Outbreak. AutoCarto 2022.
2022	**Zhou, B.**, Zou, L., Lin, B., Yang, M. Analysis of linguistic and geographic disparities across hurricane related rescue request social media data. AAG 2022 Annual Meeting, Virtual.
2021	**Zhou, B.**, Zou, L., Lin, B., Yang, M. VictimFinder: Harvesting rescue requests in disaster response from social media with BERT. AAG 2021 Annual Meeting, Virtual. ***1st Place in the GISS Student Paper Competition***.
2021	Zou, L., **Zhou, B.**, Lin, B., Lam, N.S.N., Mihunov, V. Analyzing rescue requests on social media to enhance disaster response and resilience. The 28th International Conference on Geoinformatics (CPGIS 2021), Virtual.
2021	Lin, B., Zou, L., Yang, M., **Zhou, B.** Revealing the long-term global awareness of Covid-19 and its effects on public health through the lens of social media. AAG 2021 Annual Meeting, Virtual. ***SAM Student Travel Award.***
2021	Yang, M., Zou, L., Lin, B., **Zhou, B.** Modeling the spatial dynamics of land loss in the Louisiana Coastal Zone. AAG 2021 Annual Meeting, Virtual. ***SAM Student Travel Award.***
2013	Yao, L., **Zhou, B.** Development and Tests of Low Cost MMS. LBS 2013, Shanghai, China.

Professional Activities and Service

Journal Reviews

Reviewer of > 15 manuscripts for publication in the following journals:

Computational Urban Science.
International Journal of Applied Earth Observation and Geoinformation.
Transactions in GIS.
Annals of GIS.
IEEE Access.
Scientific Reports.
Geoinformatics.
International Journal of Disaster Risk Reduction.
Computers, Environment and Urban Systems.
Information Processing and Management.
Network: Computation in Neural Systems.

Conference Reviews

Reviewer of > 2 manuscripts and abstracts for publication in the following meetings:

TRB Annual Meeting.
University Consortium for Geographic Information Science.

Organized Conference Sessions and Symposiums

2024	Chair. GeoAI and Deep Learning Symposium: GeoAI for Disaster Resilience. Organizers: Bing Zhou, Lei Zou, Yingjie Hu, Qunying Huang, Manzhu Yu, Yi Qiang, Marcela Suarez, Morteza Karimzadeh. 2024 Annual Meeting of American Association of Geographers, Honolulu, HI, April 16-20.

2024   Chair. GISphere: Facilitating Global Connections in Geographic Information Science (GIScience) Education, Research, and Practice. Organizers: Armita Kar, Yuhao Kang, Hoeyun Kwon, Bing Zhou, Kejin Wang, Yanbing Chen, Heng Cai. 2024 Annual Meeting of American Association of Geographers, Honolulu, HI, April 16-20.

2023   Chair. GeoAI and Deep Learning Symposium: GeoAI for Disaster Resilience. Organizers: Bing Zhou, Lei Zou, Yingjie Hu, Marcela Suarez. 2023 Annual Meeting of American Association of Geographers, Denver, CO, March 23-27.

Services

2021-Present   Chair and BOD member of GISphere Project (A non-profit organization aiming at empowering GIS-related education. Website: https://gisphere.info/).
Duty: Coordination of the whole organization; Seeking external collaboration and funding; Organizing regular BOD member meeting; Research collaboration; Advertising.

2023-Present   BOD member of AAG Spatial Analysis and Modeling Specialty Group.
Duty: Attending regular BOD member meeting; Organizing Student Travel Award; Help with website updates.

▬▬ Teaching

Teaching Assistant & Lab Instructor

- GEOG 659 Geodatabase
- GEOG 475 Advanced GIS
- GEOG 392 GIS Programming
- GEOG 477 Geomorphometry

Assistant Teaching Professor

- GEOG 480 Introduction to Remote Sensing
- GEOG 589 Emerging Trends in Remote Sensing

▬▬ Mentorship

2023   Mentor of TAMU undergraduate research assistants: Jeffery Pike.

2023   Mentor of Edward Zhao for the University Consortium of Geographic Information Science (UCGIS) high school research competition. Project name: Digital Footprints of the 2023 Turkey Earthquake: Evidence from Social Media. Edward Zhao is a high school student who won 2nd prize in this competition.

2023   Mentor of Geodatabase course project: spatial-temporal analysis and optimization of campus bus routes in Texas A&M. Undergraduate students: Shubh Mamtora, Javier Camarillo, Jeffery Pike, Dryden Castilleja.