

Tao Hu

Assistant Professor

Department of Geography

Oklahoma State University

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PROFESSIONAL APPOINTMENT

Aug 2021 – present	Assistant Professor, Department of Geography Oklahoma State University, OK 74078
Jul 2019 – Jun 2021	Postdoctoral Research Fellow, Center for Geographic Analysis Harvard University, Cambridge, MA 02138
Jun 2018 – Jun 2019	Postdoctoral Research Fellow, Department of Geography Kent State University, Kent, OH 44242
Sep 2016 – May 2018	Postdoctoral Research Fellow, School of Information Kent State University, Kent, OH 44242
Sep 2015 – Aug 2016	Research Associate, Collaborative Innovation Center of Geospatial Technology, Wuhan University, Wuhan 430072, China

EDUCATION

Sep 2009 – June 2015	Ph.D. in Cartography and Geographic Information System Wuhan University, Wuhan 430072, China
Sep 2005 – June 2009	B.S. in Spatial Information and Digital Technology Wuhan University, Wuhan 430072, China

RESEARCH INTERESTS

- Geospatial Big Data Analytics
- GeoHealth
- Location-based Social Media Analytics
- Human Mobility
- Geospatial AI
- Spatial Epidemiology

GRANTS

- 2024-2027 Collaborative Research: IHBEM: Beneath the Surface: Integrating Wastewater Surveillance and Human Behavior to Decode Epidemiological Patterns. National Science Foundation (NSF), Role: **PI** (Toal: \$114,990)
- 2024-2025 Leveraging Generative Artificial Intelligence (GAI) for Automated Climate Resilience Dashboard: A Case Study of Central Appalachian. Earth Science Information Partner (ESIP), Role: **co-PI** with PI Qian Huang (Toal: \$20,000)
- 2023-2024 Developing and Integrating Pathogen Monitoring Platform. US Department of Agriculture (USDA) - Subcontract, Role: **PI** (Total: \$233,405)
- 2023-2026 Using socioeconomic, behavioral and environmental data to understand disease dynamics: COVID-19 outcomes in Oklahoma. National Science Foundation (NSF), Role: **Co-PI** with PI Patrick Stephens (Total: \$499,999)
- 2023-2024 The Effect of Rural Hospital Closures on Community Health in Oklahoma. Advancing Undergraduate Research and Creative Activity (AURCA) program, Oklahoma State University, Role: **PI**.
- 2022-2024 Building Sustainable Rural Healthcare Services. Rural Renewal Initiative (RRI). Oklahoma State University, Role: **PI** (Total: \$99,978)
- 2022-2023 Understanding longitudinal mental well-being in the era of “post-pandemic” with a focus on social connectedness: a mixed method from the survey and big data. Oklahoma State University, Role: **PI** (Total: \$19,101)
- 2022-2023 Predicting the long-term behavior of COVID-19 in the United States: the role of human mobility, seasonal forces, and viral mutations shaping recurrent and resurgent outbreaks. Oklahoma State University, Role: **co-PI** with PI Lucas Stolerman (Total: ~\$20,000)
- 2022-2023 Looking back and moving forward: Designing for disease mitigation among Black American communities. Oklahoma State University, Role: **co-PI** with PI Merle Eisenberg (Total: ~\$20,000)
- 2022 OHDR an Open Health Data Repository to Strengthen Health Emergencies Preparedness in Oklahoma. College of Arts and Sciences Research (ASR) Program, Oklahoma State University, Role: **PI** (Total: \$8,334)
- 2021-2022 Disparities in Geographic Accessibility of COVID-19 Vaccine: A Case Study of Oklahoma. College of Arts and Sciences Tavel Program, Oklahoma State University, Role: **PI** (Total: \$1,200)

- 2020-2021 RAPID: Building a Spatiotemporal Platform for Rapid Response to COVID-19. NSF, Role: **Co-I** with PI Wendy Guan (Total: ~\$100k)
- 2019-2021 Developing an online spatial data sharing and management platform. National Science Foundation (NSF), Role: **Co-I** with PI Jason Ur (Total: ~\$100k)

SELECTED AWARDS AND HONORS

- 2023 The 1st Place Best Poster Award in the 24th the Southwest Division of the American Association of Geographers (SWAAG) Conference
- 2023 The 2nd Place Best Poster Award in the 24th the Southwest Division of the American Association of Geographers (SWAAG) Conference

PUBLICATIONS

Peer-reviewed Journal Articles (*corresponding author, _ graduate student)

- Una, Y., Hu, T.*, Liu, T., & Xiao, Y. (2024). Using smartphone user mobility to unveil actual travel time to healthcare: An example of mental health facilities. *Health & Place*, 90, 1353-8292.
- Foroutan, E., Hu, T.*, Zhang, F., & Yu, H. (2024). Assessing heat vulnerability in Philadelphia using geographically weighted principal component analysis (GWPCA): A geospatial big data-driven approach. *International Journal of Applied Earth Observation and Geoinformation*, 127, 103653.
- Wang, S., **Hu, T.***, Xiao, H., Li, Y., Zhang, C., Ning, H., Zhu, R., Li, Z., & Ye, X. (2024). GPT, large language models (LLMs) and generative artificial intelligence (GAI) models in geospatial science: a systematic review. *International Journal of Digital Earth*, 17(1), 2353122.
- Wang, P., Zhang, T., & **Hu, T.** (2024). Traffic condition estimation and data quality assessment for signalized road networks using massive vehicle trajectories. *Journal of Ambient Intelligence and Humanized Computing*, 15(1), 305-322.
- Wang, S., Huang, X., Liu, P., Zhang, M., Biljecki, F., **Hu, T.**, ... & Bao, S. (2024). Mapping the landscape and roadmap of geospatial artificial intelligence (GeoAI) in quantitative human geography: An extensive systematic review. *International Journal of Applied Earth Observation and Geoinformation*, 128, 103734.
- Huang, X., Wang, S., Yang, D., **Hu, T.**, Chen, M., Zhang, M., ... & Hohl, A. (2024). Crowdsourcing Geospatial Data for Earth and Human Observations: A Review. *Journal of Remote Sensing*, 4, 0105.

- Wang, P., Zhang, Y., **Hu, T.**, & Zhang, T. (2023). Urban traffic flow prediction: A dynamic temporal graph network considering missing values. *International Journal of Geographical Information Science*, 37(4), 885-912.
- Wang, S., Huang, X., **Hu, T.**, She, B., Zhang, M., Wang, R., ... & Bao, S. (2023). A global portrait of expressed mental health signals towards COVID-19 in social media space. *International Journal of Applied Earth Observation and Geoinformation*, 116, 103160.
- Mao, L., Chu, E., Gu, J., **Hu, T.**, Weiner, B. J., & Su, Y. (2023). A 4D Theoretical Framework for Measuring Topic-Specific Influence on Twitter: Development and Usability Study on Dietary Sodium Tweets. *Journal of Medical Internet Research*, 25, e45897.
- Gong, X., Lu, Y., Beene, D., Li, Z., **Hu, T.**, Morgan, M., & Lin, Y. (2023). Understanding public perspectives on fracking in the United States using social media big data. *Annals of GIS*, 29(1), 21-35.
- Wang, S., Ning, H., Huang, X., Xiao, Y., Zhang, M., Yang, E.F., Sadahiro, Y., Liu, Y., Li, Z., **Hu, T.** and Fu, X., Li, Z. & Zeng, Y. (2023). Public surveillance of social media for suicide using advanced deep learning models in Japan: time series study from 2012 to 2022. *Journal of medical internet research*, 25, e47225.
- Phan, T., Brozak, S., Pell, B., Oghuan, J., Gitter, A., **Hu, T.**, ... & Wu, F. (2023). Making waves: Integrating wastewater surveillance with dynamic modeling to track and predict viral outbreaks. *Water Research*, 243, 120372.
- Gitter, A., Oghuan, J., Godbole, A. R., Chavarria, C. A., Monserrat, C., **Hu, T.**, ... & Wu, F. (2023). Not a waste: Wastewater surveillance to enhance public health. *Frontiers in Chemical Engineering*, 4, 1112876.
- Wang, P., **Hu, T.***, Liu, H., & Zhu, X. (2022). Exploring the impact of under-reported cases on the COVID-19 spatiotemporal distributions using healthcare workers infection data. *Cities*, 123, 103593.
- Yue, H., **Hu, T.***, & Duan, L. (2022). Examining the effect of housing density and composition on residential burglary in Wuhan, China. *Journal of Housing and the Built Environment*, 1-19.
- Huang, X.*, Wang, S., Zhang, M., **Hu, T.***, Hohl, A., She, B., ... & Li, Z. (2022). Social media mining under the COVID-19 context: Progress, challenges, and opportunities. *International Journal of Applied Earth Observation and Geoinformation*, 113, 102967. **(Co-corresponding Author)**
- Wang, P., **Hu, T.**, Gao, F., Wu, R., Guo, W., & Zhu, X. (2022). A hybrid data-driven framework for spatiotemporal traffic flow data imputation. *IEEE Internet of Things Journal*, 9 (17),

16343-16352.

- Chen, L., Liu, X., **Hu, T.**, Bao, S., Ye, X., Ma, N., & Zhou, X. (2022). Measurement of contagion spatial spread probability in public places: A case study on COVID-19. *Applied Geography*, 143, 102700.
- Wang, S., Huang, X., **Hu, T.**, Zhang, M., Li, Z., Ning, H., ... & Li, X. (2022). The times, they are a-changin': tracking shifts in mental health signals from early phase to later phase of the COVID-19 pandemic in Australia. *BMJ global health*, 7(1), e007081.
- Wang, P., Zhang, T., Zheng, Y., & **Hu, T.** (2022). A multi-view bidirectional spatiotemporal graph network for urban traffic flow imputation. *International Journal of Geographical Information Science*, 36(6), 1231-1257.
- Zhang, M., Wang, S., **Hu, T.**, Fu, X., Wang, X., Hu, Y., ... & Bao, S. (2022). Human mobility and COVID-19 transmission: a systematic review and future directions. *Annals of GIS*, 1-14.
- Wang, S., Zhang, M., Huang, X., **Hu, T.**, Sun, Q. C., Corcoran, J., & Liu, Y. (2022). Urban-rural disparity of social vulnerability to natural hazards in Australia. *Scientific reports*, 12(1), 1-15.
- Wang, S., Zhang, M., Huang, X., **Hu, T.**, Li, Z., Sun, Q. C., & Liu, Y. (2022). Urban-regional disparities in mental health signals in Australia during the COVID-19 pandemic: a study via Twitter data and machine learning models. *Cambridge Journal of Regions, Economy and Society*, 15(3), 663-682.
- Wang, Q., Liu, X., Zhang, F., & **Hu, T.** (2022). Subways and the Diffusion of Knowledge: Evidence from China. *China & World Economy*, 30(4), 60-99.
- Hu, T.**, Wang, S., ..., and Li, Z. (2021) Human Mobility Data in the COVID-19 Pandemic: Characteristics, Applications, and Challenges. *International Journal of Digital Earth*, 14:9, 1126-1147, DOI: 10.1080/17538947.2021.1952324
- Hu, T.**, Wang, S., ... & Li, Z. (2021). Revealing public opinion towards COVID-19 vaccines using Twitter data in the United States: a spatiotemporal perspective. *Journal of Medical Internet Research*.
- Yue, H., & **Hu, T.*** (2021). Geographical detector-based spatial modeling of the COVID-19 mortality rate in the continental United States. *International Journal of Environmental Research and Public Health*, 18(13), 6832.
- Liu, L., **Hu, T.**, Bao, S., Wu, H., Peng, Z., & Wang, R. (2021). The Spatiotemporal Interaction Effect of COVID-19 Transmission in the United States. *ISPRS International Journal of Geo-Information*, 10(6), 387.

- Wang, S., Zhang, M., **Hu, T.**, Fu, X., Gao, Z., Halloran, B., & Liu, Y. (2021). A Bibliometric Analysis and Network Visualization of Human Mobility Studies from 1990 to 2020: Emerging Trends and Future Research Directions. *Sustainability*, 13(10), 5372.
- Peng, Z., Ao, S., Liu, L., Bao, S., **Hu, T.**, Wu, H., & Wang, R. (2021). Estimating Unreported COVID-19 Cases with a Time-Varying SIR Regression Model. *International Journal of Environmental Research and Public Health*, 18(3), 1090.
- Hu, T.**, Yue, H., ..., Zhu, X., & Bao, S. (2020) Racial segregation, testing sites access, and COVID-19 incidence rate in Massachusetts, USA. *International Journal of Environmental Health and Public Health*, 17(24), 9528.
- Hu, T.**, Guan, W. W., Zhu, X., Shao, Y., ... & Bao, S. (2020). Building an Open Resources Repository for COVID-19 Research. *Data and Information Management*, 4(3), 130-147.
- Hu, T.**, & Zhang, Y. (2020). A spatial-temporal network analysis of patent transfers from US universities to firms. *Scientometrics*, 1-28.
- Wang, S., Liu, Y., & **Hu, T.** (2020). Examining the Change of Human Mobility Adherent to Social Restriction Policies and Its Effect on COVID-19 Cases in Australia. *International journal of environmental research and public health*, 17(21), 7930.
- Yan, W., Zhang, Y., **Hu, T.**, & Kudva, S. (2020). How does scholarly use of academic social networking sites differ by academic discipline? A case study using ResearchGate. *Information Processing & Management*, 58(1), 102430.
- Yang, C., Sha, D., Liu, Q., Li, Y., Lan, H., Guan, W. W., **Hu, T.**, ... & Wang, Z. (2020). Taking the pulse of COVID-19: A spatiotemporal perspective. *International Journal of Digital Earth*, 13:10, 1186-1211.
- Liu, Q., Sha, D., Liu, W., Houser, P., Zhang, L., Hou, R., ... **Hu, T.**, & Yang, C. (2020). Spatiotemporal Patterns of COVID-19 Impact on Human Activities and Environment in Mainland China Using Nighttime Light and Air Quality Data. *Remote Sensing*, 12(10), 1576.
- Hu, T.**, She, B., Duan, L., Yue, H., & Clunis, J. (2019). A Systematic Spatial and Temporal Sentiment Analysis on Geo-Tweets. *IEEE Access*, 8, 8658-8667.
- Hu, T.**, Zhu, X., Wang, S., & Duan, L. (2019). Human interaction recognition using spatial-temporal salient feature. *Multimedia Tools and Applications*, 78(20), 28715-28735.
- Hu, T.**, Zhu, X., Guo, W., Wang, S., & Zhu, J. (2019). Human action recognition based on scene semantics. *Multimedia Tools and Applications*, 78(20), 28515-28536.

- Zhu, X., **Hu, T.***, Ye, X., Guo, W., Huang, L., Xiong, H., ... & Duan, L. (2019). Development and implementation of a dynamic and 4D GIS based on semantic location model. *Geo-Spatial Information Science*, 22(3), 193-213.
- She, B., **Hu, T.**, Zhu, X., & Bao, S. (2019). Bridging open source tools and Geoportals for interactive spatial data analytics. *Geo-spatial Information Science*, 22(3), 185-192.
- Hu, T.**, Zhu, X., Duan, L., & Guo, W. (2018). Urban crime prediction based on spatio-temporal Bayesian model. *PloS one*, 13(10), e0206215.
- Hu, T.**, Zhang, H., Zhu, X., Clunis, J., & Yang, G. (2018). Depth sensor based human detection for indoor surveillance. *Future Generation Computer Systems*, 88, 540-551.
- Yue, H., Zhu, X., Ye, X., **Hu, T.**, & Kudva, S. (2018). Modelling the effects of street permeability on burglary in Wuhan, China. *Applied geography*, 98, 177-183.
- Duan, L., Ye, X., **Hu, T.***, & Zhu, X. (2017). Prediction of suspect location based on spatiotemporal semantics. *ISPRS International Journal of Geo-Information*, 6(7), 185.
- Zhang, F., Zhu, X., **Hu, T.***, Guo, W., Chen, C., & Liu, L. (2016). Urban link travel time prediction based on a gradient boosting method considering spatiotemporal correlations. *ISPRS International Journal of Geo-Information*, 5(11), 201.
- Zhang, F., Zhu, X., Guo, W., Ye, X., **Hu, T.**, & Huang, L. (2016). Analyzing urban human mobility patterns through a thematic model at a finer scale. *ISPRS International Journal of Geo-Information*, 5(6), 78.
- Hu, T.**, Zhu, X., Guo, W., & Su, K. (2013). Efficient interaction recognition through positive action representation. *Mathematical Problems in Engineering*, 2013.
- Guo, W., Zhu, X., **Hu, T.**, & Fan, L. (2012). A Multi-granularity Parallel Model for Unified Remote Sensing Image Processing Web Services. *Transactions in GIS*, 16(6), 845-866.

Articles Under Review or In Preparation (*corresponding author, _graduate student)

- Hu, T.***, Liu, T., & Jarugumalli, V. (2024) FAIR Principles in Workflows: A GIScience Workflow Management System for Reproducible and Replicable Studies. *International Journal of Applied Earth Observation and Geoinformation*. **(Under Review)**
- Foroutan, E., Hu, T.***, Li, Z. (2024). Revealing Key Factors of Heat-related Illnesses using Geospatial Explainable AI (GeoXAI) Model. *Sustainable cities and society*. **(Under Review)**
- Hu, T.***, Huang, X., Li, Y., & Fu, X. (2024) Harnessing the Power of Multi-source Media Platforms for Public Perception Analysis: Insights from the Ohio Train Derailment. *Annals of GIS*. **(Major Revision)**

Hu, T.*, & Wang, C. Examining Inequality in the Travel Time of Health Services: An Analysis of Open Mobility Data. *Journal of Transport and Health*. **(In Preparation)**

Wang, S. *, **Hu, T. ***, Lu, H., Chan, A., Nichol, M. & Struppa D. Assessing Buprenorphine Treatment Utilization and DATA Waiver Distribution in 2021: A Real-World Analysis in California. *JAMA Network Open*. **(In Preparation)**

Book Chapters

Hu, T., Huang, X., & Wang, S. (2023). Actionable Environmental Science Through Social Media Platforms. In *Actionable Science of Global Environment Change: From Big Data to Practical Research* (pp. 355-371). Cham: Springer International Publishing.

Yankey, O., **Hu, T.**, Yue, H., Wang, P., & Xu, X. (2023). Spatiotemporal Bayesian Regression. In *Spatiotemporal Analytics* (pp. 175-206). CRC Press.

Conference Presentations(_graduate student)

Hu, T., Liu, T., and Jarugumalli, V. FAIR Principles in Workflows: A GIScience Workflow Management System for Reproducible and Replicable Studies. Oral presentation at the International Symposium on Spatiotemporal Data Science. Fairfax, VA. July 22-24, 2024.

Hu, T., and Yu, U. Using Smartphone Mobility Data to Unveil Actual Travel Time. Oral presentation at the 2023 American Association of Geographers (AAG) Annual Meeting. Honolulu, Hawaii. April 16-20, 2024.

Foroutan, E., **Hu, T.**, and Yu, H. Assessing Heat Vulnerability in Philadelphia using Geographically Weighted Principal Component Analysis (GWPCA): A Big Data-driven Approach. Poster presentation at the 2023 Southwest Division of the American Association of Geographers (SWAAG) Annual Meeting. Laredo, TX, November 2-3, 2023. (1st place winner in poster presentation)

Yu, L., **Hu, T.**, and Liu, T. Beyond Conventional Proximity Metrics: Using Smartphone Mobility Data to Unveil Health Access Disparities. Poster presentation at the 2023 Southwest Division of the American Association of Geographers (SWAAG) Annual Meeting. Laredo, TX, November 2-3, 2023. (2nd place winner in poster presentation)

Chen, X., Njoroge, R., Liu, T., & **Hu, T.** Identify healthcare barriers and needs of rural Oklahoma residents: An interview study among local community. Oral presentation at the 2023 Rural Renewal Symposium. Lone Wolf, Oklahoma, November 2-3, 2023.

- Hu, T.** Examining Inequality in the Travel Time of Health Services: An Analysis of Open Mobility Data. Oral presentation at the 2023 American Association of Geographers (AAG) Annual Meeting. Denver, CO, March 23 – 27, 2023.
- Hu, T.** Geographic Disparity in access to COVID-19 Vaccine: A case study of Oklahoma. Oral presentation at the 2021 Southwest Division of the American Association of Geographers (SWAAG) Annual Meeting. United States, October 14-16, 2021.
- Hu, T.,** Bao, S., Guan, W. Rapid response to global health pandemic: data, tools and Applications. Oral presentation at the 28th International Conference on Geoinformatics CPGIS Annual Conference, Aug 5-10, 2021
- Hu, T.,** Wang, S., She, B., Zhang M., et al. Mobility Data Applications and Challenges in the COVID-19 Pandemic. Oral presentation at the 2021 American Association of Geographers (AAG) Annual Meeting. United States, April 07 – 11, 2021.
- She, B., **Hu, T.,** et al. Exploring Human Mobility Patterns during COVID-19 using Social Media and Land Use Data. Oral presentation at the 2021 American Association of Geographers (AAG) Annual Meeting. United States, April 07 – 11, 2021.
- Hu, T.,** & Zhang, Y. Patent transfers between universities and firms: a network and spatial-Temporal Analysis. Poster presentation at the 6th International Conference on Innovation and Entrepreneurship 2018. Washington DC, United States, March 05 – 06, 2018.
- Hu, T.,** Zeng, M., & Zhang, Y. Spatial-temporal variation-based innovation history visualization. Poster presentation at Digital Humanities 2017. Montreal, Canada, August 8-11, 2017.
- Hu, T.,** Ye, X., & Duan, L. Integrating near repeat and social network approaches to analyze crime patterns. Oral presentation at the 25th IEEE International Conference on Geoinformatics. Buffalo, NY, USA, August 2-4, 2017.
- Lian D., & **Hu, T.** Deep convolutional neural networks for spatiotemporal crime prediction. Oral presentation at the 16th Int'l Conf. on Information and Knowledge Engineering. Las Vegas, Nevada, USA, July 17-20, 2017.
- Hu, T.** A vehicle tracing approach based on video and road network. Oral presentation at the Computational Intelligence and Design (ISCID), 2012 Fifth International Symposium on. Hangzhou, China, 2:376-380, 2012.
- Du, T., Guo, W., & **Hu, T.** Kinect-based real-time RGB-D image fusion method. Oral presentation at the International archives of the photogrammetry, remote sensing and spatial information sciences. Melbourne, Australia. 25 Aug - 1 Sep, 2012.
- Hu, T.,** & Zhu, X. Collection and remote management of disaster information with mobile positioning terminals. Oral presentation at the Geoinformatics, 2011 19th International Conference on, pp. 1-5. IEEE, 2011.

Invited Talks & Presentations

- 2024 FAIR Principles in Workflows: A GIScience Workflow Management System for Reproducible and Replicable Studies. 2024 South Central Arc User Group Meeting. Stillwater, OK, November 7, 2024.
- 2024 Geospatial Big Data in Public Health, Seminar in the Department of Natural Resource Ecology & Management (NREM) at OSU, October 25, 2024.
- 2024 Mapping Healthcare Access in Rural Oklahoma: A GIS-based Approach, The 3rd Rural Renewal Initiative (RRI) Symposium, October 9-11, 2024.
- 2023 Social Media Data Applications and Challenges in Public Health, The 5th International Conference on Big Earth Data, November 12-13, 2023.
- 2022 Social Media Data Applications and Challenges in Public Health, China University of Mining and Technology, December 15, 2022.
- 2020 Workflow-based Intelligent Analysis on Spatiotemporal Data. 67th Annual North American Meetings of the Regional Science Association International. November 9-13, 2020.
- 2020 GIS: from Data to Knowledge for Economic Research and Business Applications. Invited by the Chinese Economic Society. August 13, 2020
- 2020 The Data Review for COVID-19 Modeling. Invited by China Data Institute, and China Health Policy and Management Policy. July 30, 2020
- 2019 Introduction to Spatial Data Lab (SDL). Invited by Harvard-Yenching Library, Cambridge, MA. Apr 20, 2019.

TEACHING & MENTORING EXPERIENCE

Instructor

- GEOG 4383/5383 Introduction to GIS Programming (Fall 2022 & Fall 2023 & Fall 2024, Oklahoma State University)
- GEOG 4663/5663 Web GIS: Principles, Applications and Trends (Spring 2023 & Spring 2024, Oklahoma State University)
- GEOG 3373 Health and Maps (Spring 2022 & Fall 2022 & Spring 2023 & Fall 2023 & Spring 2024 & Fall 2024, Oklahoma State University)
- GEOG 4373/5510 GIS in Public Health (Spring 2022, Oklahoma State University)

Guest Lecturer

Space-time Visualization. Harvard GIS Institute. Spring, 2021.

Introduction to Public Health. Peking University, China. Spring, 2020

Introduction to Spatial Statistics and Applications. Wuhan University, China. Spring, 2020.

Graduate Students Advised

Venkat Sai Divyacharan Jarugumalli (09/2023 – *present*), Master, Oklahoma State University

Sai Karthik Nakka (09/2023 – *present*), Master, Oklahoma State University

Taiping Liu (06/2023 – *present*), Master, Oklahoma State University

Ehsan Foroutan (09/2022 - *present*), PhD, Oklahoma State University

Una Yu (09/2022 - *present*), PhD, Oklahoma State University

Graduate Students Committee Served

Image Bhattarai (2023 – *present*), PhD, Computer Science, Oklahoma State University

Sadia Kamal (2023 – *present*), PhD, Computer Science, Oklahoma State University

Bashar Bashar (2022), Master, Geography, Oklahoma State University

Fernanda Ramirez Saenz (2022 – *present*), PhD, Geography, Oklahoma State University

Ofuje Blessing Amune (2021 – *present*), PhD, Geography, Oklahoma State University

Laura Lartey (2021 – 2023), PhD, Statistics, Oklahoma State University

Undergraduate Students Supervised

Jacob Mote (Spring 2024), Senior Capstone Project, Oklahoma State University

Alexis Moran (Spring 2024), Senior Capstone Project, Oklahoma State University

Holly Huckleby (Fall 2023), Senior Capstone Project, Oklahoma State University

Beatrice Kim (Fall 2023 – Spring 2024), AURCA (Advancing Undergraduate Research and Creative Activity) Program, Oklahoma State University

Harvard Coronavirus Visualization Team (2020-2021)

SERVICES

Guest Editor

2021-2022 “Spatial Analytics for COVID-19 Studies”, *International Journal of Environmental Research and Public Health*

2021-2022 “Application of GIS and Spatial Data Analytics in Studies of COVID-19”,
Sustainability

2020-2021 “Recent Distributed Analytics and Deep Learning algorithm for Big Health Care data”, *Health Informatics Journal*

2019-2020 “Research on methods of multimodal information fusion in emotion recognition”,
Personal and Ubiquitous Computing

Reviewer for peer-reviewed Journal

Annals of the American Association of Geographers, Applied Geography, International Journal of Geographical Information Science, International Journal of Applied Earth Observation and Geoinformation, GIScience & Remote Sensing, Sustainable Cities and Society, GeoHealth, Annals of GIS, Cities, Transactions in GIS, International Journal of Digital Earth, IEEE Transactions on Intelligent Transportation, International Journal of Intelligent Systems, American Journal of Public Health, American Journal of Preventive Medicine, Water Research, PLOS One, Scientific Reports, China Economic Review, International Journal of Environmental Research and Public Health, Geo-spatial Information Science, Complexity, Applied Sciences, Land, ISPRS International Journal of Geo-Information, Computational Urban Science, and Frontiers in Environmental Science.

Conference Sessions Chaired

2024, Session Chair, Geospatial Big Data in Public Health, 2024 American Association of Geographers (AAG) Annual Meeting. Honolulu, Hawaii, Mar 25-Mar 27, 2024.

2023, Session Chair, Geospatial Big Data in Public Health, 2023 American Association of Geographers (AAG) Annual Meeting. Denver, CO, Mar 25-Mar 27, 2023.

2023, Session Co-Chair, Actionable Research for Global Environment Change, 2023 American Association of Geographers (AAG) Annual Meeting. Denver, CO, Mar 25-Mar 27, 2023.

2022, Session Co-Chair, Actionable Research for Global Environment Change, 2023 American Association of Geographers (AAG) Annual Meeting. 2022.

2021, Session Chair, Mobility Data: Applications and Challenges, 2021 American Association of Geographers (AAG) Annual Meeting.

Professional Associations

- 2020- Member, University Consortium for Geographic Information Science (UCGIS)
- 2019- Member, American Association of Geographers (AAG)
- 2017- Member, Chinese Professional in Geographic Information Systems (CPGIS)