# Xinyue Ye, Ph.D.

## Education

- Ph.D. in Geography, University of California, Santa Barbara, CA, 2010
- M.S. in GIS, Eastern Michigan University, Ypsilanti, MI, 2004
- M.A. in Human Geography, University of Wisconsin, Milwaukee, WI, 2002
- B.S. in Urban Planning, Zhejiang University, Hangzhou, China, 1996

## Short Biography

Dr. Xinyue Ye is the Harold Adams Endowed Professor in Urban Informatics and Stellar Faculty Provost Target Hire at Texas A&M University (TAMU). He serves as the Faculty Fellow (Strategic Initiatives and Partnerships) for The Division of Research at TAMU. His research integrates computational social science, urban data science, and geospatial artificial intelligence (GeoAI) to address issues ranging from infrastructure resilience and climate change to social justice and community perceptions, underscoring the dynamic interplay between technology, policy, and human behavior in shaping sustainable and livable cities. His current research is centered on urban digital twins and precision public health, emphasizing real-time 3D modeling and AI-enabled participatory planning, as well as urban climate science, with a focus on downscaling climate data to the built environment scale and its relevance to human mobility. According to the most recent Google Scholar Citation Global Ranking, Dr. Ye is ranked as 2nd in Urban Analytics, 5th in GeoAI, 7th in Spatial Data Science, 10th in Spatial Econometrics, and 20th in GIScience. He has been among the world's top 2% scientists by Stanford University since 2020. ScholarGPS lists him as #15 Highly Ranked Scholar in Geography in the world and #2 in the USA for prior five-year activity. Due to his innovative research integrating computer science, geography, and planning, Dr. Ye is the first scholar to be elected under the Early/Mid-Career category for a Fellow of the American Association of Geographers (AAG). Additionally, Dr. Ye is a Fellow of the Royal Geographical Society. Dr. Ye is the Director of the Center for Geospatial Sciences, Applications, and Technology (GeoSAT) established by the Texas A&M Board of Regents, with the aim of facilitating the convergence of computing and geospatial science. Dr. Ye promotes the vision of "urban informatics+" to integrate human-centered urban and regional science research across disciplines. He also leads the Urban Artificial Intelligence Lab, funded through the Texas A&M Institute of Data Science. This lab focuses on developing digital twins and virtual/augmented reality (VR/AR) for multi-scaled simulations and scenarios, enabling real-time analysis of built environments and testing sustainable growth and climate action scenarios.

## Select Relevant Publications

- Ye, X., Bai, W., Wang, W., & Huang, X. (2024). Enhancing population data granularity: A comprehensive approach using LiDAR, POI, and quadratic programming. Cities, 152, 105223.
- Ye, X., Li, S., Gao, G., Retchless, D., Cai, Z., Newman, G., ... & Duffield, N. (2024). 3D visualization of hurricane storm surge impact on urban infrastructure. Urban Informatics, 3(1), 1-14.
- Ye, X., Li, S., Das, S., & Du, J. (2024). Enhancing routes selection with real-time weather data integration in spatial decision support systems. Spatial Information Research, 32(4), 373-381.
- Ye, X., Du, J., Han, Y., Newman, G., Retchless, D., Zou, L., ... & Cai, Z. (2023). Developing human-centered urban digital twins for community infrastructure resilience: A research agenda. Journal of Planning Literature, 38(2), 187-199.

- Ye, X. & Niyogi, D. (2022). Resilience of human settlements to climate change needs the convergence of urban planning and urban climate science. Computational Urban Science. DOI: 10.1007/s43762-022-00035-0

## Select Relevant Presentations

- 2024 Ye, X. The Role of AI in Hazard Mitigation. NALEO (National Association of Latino Elected and Appointed Officials) Policy Institute on Emergency Preparedness. September.
- 2024 Ye, X. Generative AI and GIScience, Harvard CGA conference on GeoAI and Digital Twins. Harvard University. May.
- 2023 Ye, X. Unlocking the Secrets of Long-Term City Park Visitation: Insights from Smartphone User Mobility Data. Stanford Woods Institute for the Environment, Stanford University, May.
- 2022 Ye, X. Urban Informatics: Where Urban Planning Meets Computer Science, Department of Computer Science, University of Nevada, Las Vegas. February.
- 2022 Ye, X. An Intelligent Visual Discovery Mapping Platform for Massive Heterogeneous Datasets, Safe-D webinar series (Department of Transportation). January.

## Professional Experience

- 2023- Professor, Department of Landscape Architecture and Urban Planning (LAUP), TAMU
- 2021- Harold L. Adams Endowed Professorship, LAUP, TAMU
- 2020-2023 Associate Professor, LAUP, TAMU
- 2018-2020 Associate Professor, Department of Informatics, New Jersey Institute of Technology (NJIT)
- 2017-2018 Visiting Professor, Center for Geographical Analysis/Institute for Quantitative Social Science, Harvard University
- 2013-2018 Assistant/Associate Professor, Department of Geography, Kent State University
- 2010-2013 Assistant Professor, Center for Regional Development & School of Earth, Environment, and Society, Bowling Green State University

## Select Leadership Activities

- 2023- Faculty Fellow with the Associate Vice President for Research and Strategic Initiatives, TAMU
- 2023- President, Spatial Decision Support Consortium
- 2022- Director, Center for Geospatial Sciences, Applications and Technology, TAMU, established by the Texas A&M Board of Regents
- 2022- Founding Director, TAMIDS Urban Artificial Intelligence Lab, TAMU
- 2017-2019 Vice Chair, Research Committee, University Consortium for Geographic Information Science

## Achievements

- 2022- Fellow, American Association of Geographers (AAG)
- 2022- Fellow, Royal Geographical Society (with IBG)
- 2022- National Committee Member, "Foundational Research Gaps and Future Directions for Digital Twins", National Academies of Sciences, Engineering, and Medicine.
- 2022 Regional Development and Planning Distinguished Scholar Award, AAG
- 2019 Outstanding Achievement in Research Award (granted annually to a faculty member in the College of Computing, NJIT)