Hongyu **Zhang**

Lecturer
100 Carlson Ave, Newton, MA 02459
(+1) 413-545-9365 honzhang@umass.edu https://hzhang.us hzhangic hzhangus Hongyu Zhang
Hongyu Zhang 0000-0002-5137-6177

Education

Ph.D. in Geography — **McGill University**
Place-Based Privacy: Understanding Attitudes and Behaviours Across China and Beyond — 2024

M.Sc. in Geography — **Western University**
Quality Assessment of the Canadian OpenStreetMap Road Networks — 2017

B.E.S. in Geomatics — **University of Waterloo**
— — 2015

Academic Appointments

- 2024-present: Faculty Lecturer, Department of Earth, Geographic, and Climate Sciences, University of Massachusetts Amherst
- 2023: Sessional Lecturer, Department of Geography, Planning and Environment, Concordia University
- 2022: Sessional Lecturer, Department of Geography, McGill University

Research Areas

Research Focus Data Ethics, GIScience, GeoAI

Publications

Work in Progress

- **Zhang, H.**, Lee, A. Under review. "Spatial Inequality in Young Adult Indebtedness in the United States." *Papers in Applied Geography*.
- Zhang, J., **Zhang, H.** Under review. "Beyond Boundaries: Integrating Mixed Methods for Cognitive Region and Place Representation." *Geography Compass*.
- Lin, Y., **Zhang, H.** Under review. "Privacy, Ethics, and Governance in Generative AI for Geography." *Generative AI in Geography*.

Refereed Journal Articles

- **Zhang, H.**, Brady, D. (in press). "Contesting Algorithmic Imaginaries at the Interface: 'Crying Poor' and User Resistance to Big Data-Enabled Price Discrimination in China's Platform Economy." *Global Media and China*.
- Lin, Y., Yeap, Q. F., **Zhang, H.** (2026). "Citizen Science and Geoprivacy: Empirical Analysis of Location Masking in Crowdsensing Networks." *The Professional Geographer*. https://doi.org/10.1080/00330124.2026.2656680
- **Zhang, H.**, McKenzie, G. (2026). "Polarized Geoprivacy Attitudes on Chinese Social Media: A Case Study of Weibo." *Digital Geography and Society*. https://doi.org/10.1016/j.diggeo.2026.100170
- **Zhang, H.**, McKenzie, G. (2024). "Geoprivacy Knowledge, Attitudes, and Behaviors in Contemporary China." *Geographical Review*. https://doi.org/10.1080/00167428.2024.2422873
- **Zhang, H.**, McKenzie, G. (2023). "Rehumanize Geoprivacy: From Disclosure Control to Human Perception." *GeoJournal*. https://doi.org/10.1007/s10708-022-10598-4
- McKenzie, G., Romm, D., **Zhang, H.**, Brunila, M. (2022). "PrivyTo: A Privacy-Preserving Location-Sharing Platform." *Transactions in GIS*. https://doi.org/10.1111/tgis.12924
- **Zhang, H.**, Malczewski, J. (2018). "Accuracy Evaluation of the Canadian OpenStreetMap Road Networks." *International Journal of Geospatial and Environmental Research*. https://ijger-ojs-txstate.tdl.org/ijger/article/view/69

Papers in Refereed Conference Proceedings

- McKenzie, G., **Zhang, H.** (2023). "Platial *k*-Anonymity: Improving Location Anonymity Through Temporal Popularity Signatures." *International Conference on Geographic Information Science (GIScience)*. **Best Full Paper Award.** https://doi.org/10.4230/LIPIcs.GIScience.2023.9

Book Chapters

- **Zhang, H.**, McKenzie, G., Kim, J. (2026). "Generative AI and the Future of GIScience Education." *Geography According to Foundation Models*. IOS Press. https://doi.org/10.3233/FAIA260479
- McKenzie, G., **Zhang, H.**, Gambs, S. (2023). "Privacy and Ethics in GeoAI." *Handbook of Geospatial Artificial Intelligence*. CRC Press. https://doi.org/10.1201/9781003308423
- **Zhang, H.**, Malczewski, J. (2017). "Quality Evaluation of Volunteered Geographic Information." *Volunteered Geographic Information and the Future of Geospatial Data*. IGI Global. https://doi.org/10.4018/978-1-5225-2446-5.ch002

Refereed Short Papers

- **Zhang, H.** (2025). "Vector-Based Super-Resolution Mapping with the Population Dynamics Foundation Model." *Abstracts of the International Cartographic Conference*. https://doi.org/10.5194/ica-abs-10-321-2025
- **Zhang, H.**, McKenzie, G. (2025). "Evaluating Spatial Dependency in Regional Similarities of the Population Dynamics Foundation Model." *Association of Geographic Information Laboratories in Europe Conference (AGILE)*. https://doi.org/10.5281/zenodo.15335931
- **Zhang, H.** (2023). "Place-Based Privacy: A Humanistic Reflection on Solitude and Anonymity." *Conference on Spatial Knowledge and Information Canada*. https://osf.io/adfxv
- **Zhang, H.**, McKenzie, G. (2023). "Towards Place-Based Privacy: Challenges and Opportunities in the Smart World." *IEEE International Symposium on Technology and Society (ISTAS)*. https://doi.org/10.1109/ISTAS55053.2022.10227114
- Romm, D., **Zhang, H.**, Verma, P., McKenzie, G., Chen, E. (2021). "Data Horror: Mapping (Spatial) Data Privacy Violations onto a Cognitive Account of Horror." *Spatial Data Science Symposium (SDSS)*. https://doi.org/10.25436/E23S3T

Non-refereed Publications

Letters to the Editor

- **Zhang, H.** (2023). "Reimagining GIScience Education for Enhanced Employability." *Journal of Spatial Information Science*. https://doi.org/10.5311/JOSIS.2023.27.307

Reports

- **Zhang, H.**, McKenzie, G., Tomko, M., Egorova, E., Kim, J. (2022). "Report From the First Workshop on Cyber Ethics in Platial Research." *Proceedings of the 3rd International Symposium on Platial Information Science (PLATIAL)*. https://doi.org/10.5281/zenodo.6413003

News Articles

- **Zhang, H.** (2020). "With Coronavirus Containment Efforts, What Are the Privacy Rights of Patients?" *The Conversation*. https://theconversation.com/with-coronavirus-containment-effortswhat-are-the-privacy-rights-of-patients-131752

Book Reviews

- **Zhang, H.** (2026). "Artificial Intelligence and the City: Urbanistic Perspectives on AI Edited by Federico Cugurullo, Federico Caprotti, Matthew Cook, Andrew Karvonen, Pauline McGuirk, & Simon Marvin, New York: Routledge. 2024. 420 pages. $79.50. (paperback). ISBN: 9781032431468." *Canadian Geographies*. https://doi.org/10.1111/cag.70101
- **Zhang, H.** (2019). "Using Geodata & Geolocation in the Social Sciences: Mapping Our Connected World by David Abernathy, Sage Publishing, London, 2017, 327 pp., paper US$50.00 (ISBN 978-1473908185)." *The Canadian Geographer*. https://doi.org/10.1111/cag.12532

Internal Grants

University of Massachusetts Amherst

- **Zhang, H.** (PI). "Advanced Geographic Information Science." Open Education Initiative Grant, University Libraries. $6,250. 2026.
- **Zhang, H.** (Co-I). "Fostering a Geospatial Governance Group." Mutual Mentoring Grant, Office of Faculty Development. $5,998. 2026.
- **Zhang, H.** (PI). "Ethical GIS in the Algorithmic Society." Community, Democracy and Dialogue Grant, Office of Equity and Inclusion. $2,000. 2024.
- **Zhang, H.** (PI). "Sustainable GeoAI." Faculty Research Grant, Office of Research Development. $1,000. 2024-2025.
- **Zhang, H.** (PI). "Generative AI in GIScience Education." Flex Grant, Center for Teaching & Learning. $500. 2024-2025.

Awards & Honors

- 2024: **Outstanding Dissertation Award**, Digital Geographies Specialty Group, American Association of Geographers
- 2024: **First Place, Saarinen Paper Competition**, Environmental Perception and Behavioral Geography Specialty Group, American Association of Geographers
- 2024: **GREAT Travel Award**, McGill University
- 2023: **Best Full Paper Award**, GIScience'23

- 2023: **Science Education Conference Award**, McGill University
- 2023: **Science Graduate Student Travel Award**, McGill University
- 2023: **McGill–Glasgow Travel Award**, McGill University
- 2022: **CDSI Graduate Award**, Computational and Data Systems Initiative, McGill University
- 2021: **GIC Graduate Award**, Geographic Information Centre, McGill University
- 2021: **Doctoral Research Scholarship**, Fonds de Recherche du Québec (FRQSC)
- 2019: **Rathlyn GIS Award**, McGill University
- 2019: **Graduate Excellence Award**, McGill University
- 2017: **Academic Achievement Scholarship**, PSAC Local 610
- 2017: **Travel Subsidy**, Western University
- 2017: **Graduate Research Awards Fund**, Western University
- 2017: **Student Travel Award**, Spatial Analysis and Modeling Specialty Group, American Association of Geographers
- 2016: **Best Master's Paper**, Canadian Association of Geographers Ontario Division (CAGONT)
- 2015: **Western Graduate Research Scholarship**, Western University
- 2015: **Dean's Honours**, University of Waterloo
- 2013: **Undergraduate Writing Award**, Renison University College
- 2012: **President's Scholarship**, University of Waterloo
- 2012: **Entrance Scholarship**, University of Waterloo

Teaching

Courses at UMass Amherst

- GEOGRAPH 590A: Advanced Geographic Information Science (Spring 2027)
- ECO 637: Spatial Data Analysis in R (Fall 2026)
- GEOGRAPH 696: Independent Study (Fall 2026)
- GEOGRAPH 585: Introduction to GIS (Summer 2025)
- GEOGRAPH 592B: GIS Seminar (Spring 2026)
- NRC 440/ECO 640: Python for ArcGIS (Spring 2027, Spring 2026, Spring 2025)
- NRC 588/GEOGRAPH 588: Web GIS (Spring 2027, Spring 2026, Spring 2025)
- GEOGRAPH 482/682: GIS Programming (Fall 2026, Fall 2025, Fall 2024)
- GEOGRAPH 452/652: Cartography and Geovisualization (Fall 2026, Fall 2025, Fall 2024)

Courses at Concordia University

- GEOG 264: Programming for Environmental Sciences (with R) (Fall 2023)

Courses at McGill University

- GEOG 202: Statistics and Spatial Analysis (Fall 2022)

Mentoring

Current Students

- Weijia Wang: M.S.: Ethical GeoAI

Talks

Invited Talks

- "Challenges of Integrating Generative AI into GIScience Education." *Workshop on GeoAI for Autonomous Spatial Analysis*, University of Maryland. College Park, MD. June 2026.
- "Understanding Geoprivacy Attitudes and Behaviors in China and the United States." *GIS Day*, McGill University. Montreal, QC. November 2025.
- "Towards place-based privacy: Challenges and opportunities in the *smart* world." *GIS Day*, McGill University. Montreal, QC. November 2022.

Conference Presentations

- "Spatial Inequality in Young Adult Indebtedness in the United States." *American Association of Geographers Annual Meeting*. San Francisco, CA. March 2026.

- "Vector-Based Super-Resolution Mapping with the Population Dynamics Foundation Model." *International Cartographic Conference (ICC)*. Vancouver, BC. August 2025.
- "Evaluating Spatial Dependency in Regional Similarities of the Population Dynamics Foundation Model." *Association of Geographic Information Laboratories in Europe Conference (AGILE) Conference*. Dresden, Germany. June 2025.
- "Generative AI and the Future of GIScience Education." *American Association of Geographers Annual Meeting*. Detroit, MI. March 2025.
- "Location privacy knowledge, attitudes, and behaviours in contemporary China." *American Association of Geographers Annual Meeting*. Honolulu, HI. April 2024.
- "A spatial-temporal public opinion analysis of IP location disclosure on Chinese social media platforms using Weibo data." *American Association of Geographers Annual Meeting*. Denver, CO. March 2023.
- "Place-based privacy: A humanistic reflection on solitude and anonymity." *Conference on Spatial Knowledge and Information Canada*. Banff, AB. February 2023.
- "Towards Place-Based Privacy: Challenges and Opportunities in the Smart World." *IEEE International Symposium on Technology and Society (ISTAS)*. Hong Kong SAR, China. November 2022.
- "Cyber Ethics in Platial Research." *International Symposium on Platial Information Science*. Online. December 2021.
- "Exploring the Intrinsic Quality Assessment Method of OpenStreetMap." *Canadian Association of Geographers Annual Meeting*. Toronto, ON. May 2017.
- "Evaluating the Quality of the Canadian OpenStreetMap Road Networks." *American Association of Geographers Annual Meeting*. Boston, MA. April 2017.
- "Quality Evaluation of Volunteered Geographic Information." *Canadian Association of Geographers Ontario Division Annual Meeting*. Waterloo, ON. October 2016. **Best Master's Paper.**

Workshop Hosts

- "Python for Data Analysis." McGill GIC Workshop. April 2021.
- "Data Visualization in Python." McGill GIC Workshop. April 2021.
- "Introduction to Git." McGill GIC & CDSI Workshop. October 2020 – February 2022.
- "Introduction to Python." McGill GIC & CDSI Workshop. October 2020 – February 2022.
- "Introduction to PostgreSQL." McGill GIC & CDSI Workshop. October 2020 – February 2022.

Services

Departmental Services

- 2024-present: Curriculum Committee Member, Department of Earth, Geographic, and Climate Sciences, UMass Amherst

Professional Services

- 2026-present: Research Committee Member, University Consortium for Geographic Information Science (UCGIS)
- 2026-present: At-Large Board Member, Digital Geographies Specialty Group
- 2025-present: Academic Director, Environmental Perception and Behavioral Geography Specialty Group

Editorial Activities

- 2026-present: Early Career Editorial Board Member, *Digital Geography and Society*

Conference Activities

Conference Organizers

- 2027: GIScience for Human Experience and Responsibility (GISER), Symposium at AAG 2027, New York City, NY
- 2026: Spatio-temporal Data Sciences for Urban Transportation Systems and Behavioral Modeling, ISSDS 2026, Alexandria, VA
- 2026: GIScience for Human Experience and Responsibility (GISER), Symposium at AAG 2026, San Francisco, CA
- 2026: AI Ethics and Spatial Equity (paper); Ethics in GIScience (panel); AI & Ethics in GIS Education (paper), AAG 2026, San Francisco, CA
- 2025: Ethical GIS in the Algorithmic Society, Workshop, Amherst, MA
- 2025: Spatial Analysis for Social Good (virtual); Spatial Data Science and GeoAI Ethics: Bridging Research and Education (hybrid), AAG 2025, Detroit, MI
- 2025: Locatio Privacy in the Digital Society, SDSS 2025, Online
- 2024: Geoprivacy Challenges and Solutions in the Digital Society, SDSS 2024, Online
- 2024: Responsible GeoAI I: Privacy and Fairness; Responsible GeoAI II: Justice and Accuracy, AAG 2024, Honolulu, HI
- 2023: Geoprivacy and Ethics in Geospatial Data and GeoAI, AAG 2023, Denver, CO
- 2021: Cyber Ethics in Platial Research, Platial'21, Online
- 2021: Geospatial Data Science, CAG 2021, Online

Program Committee Members

- 2026: Spring Northeast Arc Users Group (NEARC) Conference, Amherst, MA
- 2026: AAAI ICWSM International Workshop on Cyber Social Threats (CySoc'26), Los Angeles, CA
- 2025: The Sixth Spatial Data Science Symposium (SDSS 2025), Online
- 2025: ACM SIGSPATIAL Workshop on Human-Centered Geospatial Computing (GeoHCC'25), Minneapolis, MN
- 2025: AAAI ICWSM International Workshop on Cyber Social Threats (CySoc'25), Copenhagen, Denmark
- 2024: ACM SIGSPATIAL Workshop on Location-based Recommendations, Geosocial Networks and Geoadvertising (LocalRec'24), Atlanta, GA
- 2024: The Fifth Spatial Data Science Symposium (SDSS 2024), Online

Peer Review Activities

- 2026: *Journal of Geography in Higher Education*, Taylor & Francis
- 2026: *Scientific Reports*, Nature
- 2026: *Transactions in GIS*, Wiley
- 2026: *Humanities and Social Sciences Communications*, Springer Nature
- 2025: *Urban Informatics*, Springer Nature
- 2025: *Scientific Reports*, Nature
- 2025: *International Conference on Geographic Information Science (GIScience'25)*, —
- 2024: *Scientific Data*, Nature
- 2024: *International Journal of Geographical Information Science*, Taylor & Francis
- 2023: *Transactions in GIS*, Wiley
- 2023: *International Symposium on Platial Information Science*, —
- 2023: *Area*, Wiley
- 2023: *Digital Society*, Springer Nature
- 2019: *Big Earth Data*, Taylor & Francis
- 2018: *International Symposium on Open Collaboration (OpenSym'18)*, ACM

Memberships

- American Association of Geographers (AAG)
- Canadian Association of Geographers (CAG)
- North American Cartographic Information Society (NACIS)