

Wenfei Xu

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Education

- 2022 Ph.D. Urban Planning, Columbia University
Dissertation: “Cycles of (Dis)-Investment: Federal Intervention and the Long-term Impacts of Heterogenous Development”
Committee: Lance Freeman, John Logan (Brown), Donald Davis, Jeffrey Lin (Federal Reserve Bank of Philadelphia), Malo Hutson (UVA)
- 2016 Master in City Planning and Masters of Architecture, MIT
- 2008 B.A. Economics, University of Chicago

Academic Appointments

- 2022 – Assistant Professor, Department of City and Regional Planning, College of Architecture, Art and Planning, Cornell University
Director, Urban Data Research Lab
Faculty Affiliate, Cornell Population Center
Faculty Affiliate, Center for the Study of Inequality, Cornell University
Research Lead, National Zoning Atlas
Fields: City and Regional Planning, Regional Science, Demography
- 2022 Postdoctoral Fellow, Mansueto Institute for Urban Innovation and Center for Spatial Data Science, University of Chicago

Peer-Reviewed Journal Articles

- 2023 **Xu, W.** Where Did Redlining Matter? Regional Heterogeneity and the Uneven Distribution of Advantage. *Annals of the American Association of Geographers*, 1-21.
<https://doi.org/10.1080/24694452.2023.2205514>
- Xu, W.**, Markley, S., Bronin, S., Drogaris, D. A National Zoning Atlas to Inform Housing Research, Policy, and Public Participation (accepted in *Cityscape*)
- 2022 **Xu, W.** Legacies of Institutionalized Redlining: A Comparison Between Speculative and Implemented Mortgage Risk Maps in Chicago, Illinois. *Housing policy debate*, 32(2), 249-274.
<https://doi.org/10.1080/10511482.2020.1858924> ([Data and code](#))
- Winner, IPUMS Annual Research Awards, Best Published Work in Spatial Data in 2022
- Xu, W.** The contingency of neighbourhood diversity: Variation of social context using mobile phone application data. *Urban Studies*, 59(4), 851-869.
<https://doi.org/10.1177/00420980211019637>. ([Code](#))
- Shortlisted, *Urban Studies* Best Article in 2022

- 2019 Organizers, Kang, W., Oshan, T., Wolf, L. J., Discussants, , Boeing, G., Frias-Martinez, V., Gao, S., Poorthuis, A., & **Xu, W.** (2019). A roundtable discussion: Defining urban data science. *Environment and Planning B: Urban Analytics and City Science*, 46(9), 1756-1768. <https://doi.org/10.1177/2399808319882826>
- Williams, S., **Xu, W.**, Tan, S. B., Foster, M. J., & Chen, C. Ghost cities of China: Identifying urban vacancy through social media data. *Cities*, 94, 275-285. <https://doi.org/10.1016/j.cities.2019.05.006>

Under Review and In Progress (Working paper available by request)

- Xu, W.** The Where and When of Diversity: How Space and Time Configures Social Networks (in review for 2023 Special Issue on Networks in the *Annals of the American Association of Geographers*)
- Xu, W.** New Methods for Old Questions: Predicting Historical Urban Renewal Areas in the United States (in review for *Environment and Planning B* Special Issue on Spatial Inequalities and Cities)
- Xu, W.**, Smart M., Nebiyu T., Dennis Z., Levinson D. Racializing Roads: Are Police Traffic Stops Racially Biased?
- Xu, W.**, Wang, Z., Attia Y., Attia N., Zong, T. A New Picture of Segregation: Experienced Racial Diversity in the United States
- Xu, W.** Urban Renewal's Uneven Outcomes: Spatial and Socioeconomic Conditions for Federal Intervention's Benefits

Book Chapters, Essays, and Other Publications

- 2022 **Xu, W.** Is "Regulation from Below" Possible? *Public Books*. <https://www.publicbooks.org/community-organizing-and-financialization-of-housing/>
- Tan, S. B., **Xu, W.**, Williams, S. "Spatial Distribution of High-End Housing in Chinese Private Resale Housing Markets", in *China Urbanizing: Impacts and Transitions*, University of Pennsylvania Press
- 2018 **Xu, W.** Urban explorations: Analysis of public park usage using mobile GPS data. *arXiv preprint arXiv:1801.01921*.
- Xu, W.** Review of *Scale: The universal laws of growth, innovation, sustainability, and the pace of life in organisms, cities, economies, and companies*, by Geoffrey West. *Environment and Planning B: Urban Analytics and City Science*, 45(3), 586–588. <https://doi.org/10.1177/2399808317735012>
- 2017 Giampieri, M. A., Williams, S., **Xu, W.**, Gunc, H., Langston, C. M., & Harvey, D. C. Benchmark: using sensors to study public space. In *Free and Open Source Software for Geospatial (FOSS4G) Conference Proceedings* (Vol. 17, No. 1, p. 22).
- 2016 Olascoaga, C. S., **Xu, W.**, & Flores, H. (2016). Crowd-Sourced Neighborhoods-User-Contextualized Neighborhood Ranking. http://papers.cumincad.org/cgi-bin/works/paper/ecaade2016_023

Reports

- 2023 Affiliated Scholar with ECONorthwest, “Redlining and Wealth Loss: Measuring the Historical Impacts of Racist Housing Practices in King County”, prepared for King County Wastewater Treatment Division, Jan 2023
- 2021 **Xu, W.**, Storey, N., “Street Homeless in New York City from 2016 - 2021: Who is Placed and Stays Placed?” Report prepared by the Street Homeless Solutions Lab for the NYC Department of Homeless Services, Dec 2021

Selected Presentations (* invited)

- 2023
- Georgia State University, Department of Geosciences, Atlanta, GA*
- 2022
- Spatial, Computational, and Real-time Analytic Methods (SCRAM) Working Group*
 - Association of Collegiate Schools of Planning Annual Conference
 - Technische Universität Berlin, Representing Infrastructure course, David Bauer, Prof. Dr. Elke Beyer, Prof. Anke Hagemann *
 - Center for Spatial Data Science, University of Chicago, Chicago, IL *
 - Urban Affairs Association, Washington, D.C.
 - Graduate School of Public and International Affairs, the Department of Economics, University of Pittsburgh, Pittsburgh, PA *
 - American Association of Geographers Annual Meeting
 - Mansueto Institute for Urban Innovation, University of Chicago, Chicago, IL *
 - Spatial Analysis + Data Seminar Series, Newcastle University, University of Bristol and The Alan Turing Institute *
- 2021
- Brown Bag Seminar Series, Geographic Data Science Lab, University of Liverpool *
 - Population Association of America Annual Meeting
- 2020
- Seminar in Applied Math, Chris Wiggins, Columbia University, New York *
 - Association of Collegiate Schools of Planning Annual Conference
 - Housing Lab Conversation Series, Columbia University GSAPP, New York, NY *
 - Predicting Neighborhood Change Using Big Data and Machine Learning Conference, University of California Berkeley, Berkeley, CA
- 2019
- Social Science History Association Annual Conference, Chicago, IL
 - Undergraduate Statistics Seminar, Ronald Neath, Columbia University, New York *
 - American Association of Geographers Annual Meeting, Washington, D.C.
 - American Association of Geographers Annual Meeting, Washington, D.C. *
 - STEM+Arts Panel, Rutgers University, Rutgers, NJ *
 - Open Data Week, New York, NY *

- Digital History for Public Historians Course, Molly Taylor-Polesky, Middle Tennessee University *
- Urbanisms + Algorithms course, Luc Wilson and Meli Harvey, Columbia GSAPP *

2018

- Open Data Science Conference Europe, London, UK *
- American Association of Geographers Annual Meeting, New Orleans LA.

2017

- New York City Department of Parks and Recreation, New York, NY *
- Big Data, Visualization, and Society course, Sarah Williams, MIT, Cambridge, MA *
- Bloomberg Data for Good Exchange, New York, NY
- North American Cartographic Information Society, Montreal, Canada
- International Conference on Computers in Urban Planning and Urban Management

2016

- North American Regional Science Council, Minnesota, MN
- Kenya Evidence Forum, World Bank, Nairobi, Kenya *

2014

- Media Architecture Biennale, Aarhus, Denmark *

Grants, Honors, and Fellowships

Grants

- NSF Global Centers (Co-PI with Alex Nading, Sarah Besky, Rusty Weaver, and Timur Dogan), 2023-25, \$250,000
- Washington Center for Equitable Growth (Co-PI with Jacob Faber, Kate Thomas, and Thomas Storrs), 2023-25, \$70,0000
- Cornell University Mui Ho Center for Cities (PI with Timur Dogan and Jesse LeCavalier), 2023-24, \$50,000
- Russell Sage Foundation (Co-PI with Jacob Faber), 2023-25, \$199,681
- Cornell–HKUST Global Strategic Collaboration Awards (PI with Fan Zhang), 2022-23, \$5,000
- Cornell Center for Social Sciences (PI), 2022-23 \$7,900
- American Association of Geographers Digital Geographies Specialty Group, 2020, \$200
- Gehl Institute (Senior Personnel with Sarah Williams and Hayretin Gunc), 2017, \$60,257
- Avalon Travel Grant Department of Architecture, MIT, 2014, \$600
- Square D Travel Grant for Bachelor of Arts Thesis, University of Chicago, 2008, \$5000

Fellowships

- Postdoctoral Fellowship, Mansueto Institute and Center for Spatial Data Science, 2022
- Fellowship, Columbia University Population Research Center, 2019-2022
- Doctoral Fellowship, Columbia University GSAPP, 2018-2022
- Tuition Fellowship, Department of Urban Planning and Department of Architecture, MIT, 2012-2016
- Stamen Fellow, Stamen Design, 2015

Honors

- Winner, IPUMS Annual Research Awards, Best Published Work in Spatial Data, 2022
- Winner Participatory Architecture and Urban Interaction, Media Architecture Biennale, 2014

Professional Experience

2020-21 Data Scientist, Department of Homeless Services, New York, NY
 2017-19 Spatial Data Scientist, CARTO, New York, NY
 2016-17 Research Associate, MIT Civic Data Design Lab, Cambridge, MA
 2015 Research Assistant, MIT Senseable Cities Lab, Cambridge, MA
 2015 Stamen Fellow, Stamen Design, San Francisco, CA
 2014 Graph Network Analyst, Inter-American Development Bank
 2011 Assistant to the COO, Planned Parenthood Federation of America, New York, NY
 2008-11 Associate, Asset-Backed Securities, Deutsche Bank Global Markets, New York, NY

Teaching and Advising

Teaching

2023 Introduction to Urban Data Science, Cornell University CRP, Spring
 2022 Mapping and Countermapping, Cornell University CRP, Fall
 2021 Teaching Fellow, Urban Economics, Columbia University GSAPP, Spring
 2019,20 Instructor of Record, Data Metrics and Visualization I, Design for Social Innovation, School of Visual Arts, Fall
 2019 Instructor of Record, Data Metrics and Visualization II, Design for Social Innovation, School of Visual Arts, Spring
 2020,21 Teaching Fellow, Quantitative Methods, Columbia University GSAPP, Spring and Fall
 2019 Teaching Fellow, History and Theory of Planning, Columbia University GSAPP, Fall
 2014 Teaching Assistant, Thesis Research Design Seminar, MIT DUSP, Fall

Advising

- Zoe Wang (Ph.D in Regional Science, CRP, Reader, Dissertation and Exam committees, 2023)
- Wenjie Zhang (Masters in Regional Planning, CRP, Reader, Exit Project, 2023)
- Qiancheng Yu (Masters in Regional Planning, CRP, Reader, Exit Project, ongoing)
- Lang Jiang (Masters in Regional Planning, CRP, Reader, Exit Project, ongoing)
- Lancelot Comrie (Masters in Regional Planning, CRP, Reader, Exit Project, ongoing)
- Houpu Li (Masters in Regional Planning, CRP, Reader, Exit Project, ongoing)
- Dingning Du (Masters in Regional Planning, CRP, Reader, Exit Project, ongoing)
- Divine Maduakolam (Masters in Regional Planning, CRP, Reader, Exit Project, ongoing)

Service and Memberships

Conference Sessions Organizing

- “Whiteness, Anti-Blackness and Urban Development: I and II.”, with Taylor Shelton and Scott Markley. American Association of Geographers. 2022

Organizing

- Student Director-at-Large, Board of Directors, North American Cartographic Information Society (NACIS), 2020

- Primary Organizer, Lectures in Planning Series, Columbia University GSAPP, New York, NY, 2019
 - Co-Organizer, Data x Design, Open Data Week, New York, NY, 2018, 2019
 - Primary Organizer, Spatial Data Science Conference, CARTO, New York, NY, 2017, 2018

Memberships

- 2016- American Association of Geographers
- 2017- Association of Collegiate Schools of Planning
- 2018- American Sociological Association
- 2018-21 Population Association of America
- 2019-21 Social Science History Association
- 2020- Urban Affairs Association
- 2020- American Planning Association

Peer Reviewer: *American Sociological Review*, *Environment and Planning B*, *Journal of Spatial Information Science*, *Urban Affairs Review*, *Spatial Economic Analysis*, *Journal of Transport Geography*, *Journal of Urban Affairs*, *Geographic Analysis*, *Social Problems*, *Housing Policy Debate*, *Social Science Research*, *Urban Studies*

Media and Exhibitions

- 2019 Bovolaneas, B., **Xu, W.**, Lynn PhD, S., Anderson, D., Batson PhD, J., ... & Dodds, P. (Speaker). (2019). How to Work in Data Science: Background & Skills [Video]. SAGE Research Methods Video: Data Science, Big Data Analytics, and Digital Methods <https://www.doi.org/10.4135/9781526495488>
- Lynn, S., **Xu, W.**, & Ferzoco, J. (Speaker). (2019). Understanding Usage of NYC Public Parks with Spatial Data Science: CARTO [Video]. SAGE Research Methods Video: Data Science, Big Data Analytics, and Digital Methods <https://www.doi.org/10.4135/9781526493309>
- Lynn, S., Fan, D., **Xu, W.**, & Eschbacher, A. (Speaker). (2019). Using Spatial Data Science to Improve Food Truck Sales: CARTO [Video]. SAGE Research Methods Video: Data Science, Big Data Analytics, and Digital Methods <https://www.doi.org/10.4135/9781526493231>
- 2018- Co-organizer and curator, Data x Design, New York, NY
- 2017 “Ghost Cities of China”, Seoul Biennale of Architecture and Urbanism, Seoul, South Korea
- 2015 “AFRICA architecture, culture and identity”, Louisiana Museum of Modern Art, Humblebaek, Denmark
- 2014 “Mapmaker Manifesto: YOU ARE HERE AND SO AM I”, Istanbul Architecture Biennial, Istanbul, Turkey

Media mentions include: Wired, The Economist, NPR, Audi Urban Future Initiative, The Guardian, Atlantic Cities, ArchDaily