

Weihua An

2023-09-06

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EMPLOYMENT

- 2017- **Emory University**, Departments of [Sociology](#) and [Quantitative Theory and Methods](#)
Associate Professor (tenured, 2019-); Assistant Professor (2017-19)
Affiliated Faculty, [The East Asian Studies Program](#)
Associated Faculty, [The Goizueta Business School](#)
Joint Faculty, [The Rollins School of Public Health](#)
- 2012-17 **Indiana University**, Assistant Professor of Sociology and Statistics
(One-year tenure clock pause for children care)
Affiliated Faculty, IU Network Science Institute
Affiliated Faculty, Data Science Academic Program, School of Informatics and Computing
- 2011-12 **Harvard University**, Lecturer, Department of Sociology
Postdoctoral Fellow, Kennedy School of Government (Working with Prof. Bruce Western)

OTHER POSITIONS

- 2018- Associate, The China Research Center, Atlanta, GA, USA
- 2016 Visiting Faculty, Institute for Quantitative Theory and Methods, Emory University
- 2015 Visiting Scholar, Institute for Quantitative Social Science, Harvard University

EDUCATION

- Harvard University, Ph.D. in [Sociology](#), 2011; A.M. in [Statistics](#), 2009 (Click see [coursework](#))
Dissertation: Peer Effects on Adolescent Smoking and Social Network-Based Interventions
Committee: Christopher Winship, Martin K. Whyte, and A. James O'Malley
Doctoral Fellow, HKS Multidisciplinary Program in Inequality and Social Policy, 2007-11
Graduate Associate, Institute for Quantitative Social Science, 2007-11
Graduate Student Associate, Fairbank Center for Chinese Studies, 2010-11
GIS Institute Certificate, Center for Geographic Analysis, 2009
- Claremont Graduate University, M.A. in Economics, 2005 (GPA: 3.94/4.0)
- Peking University, M.A. in Political Science, 2002 (Outstanding Graduate)
- Wuhan University, B.A. in Public Administration, 1999 (Outstanding Freshman and Graduate)

RESEARCH INTERESTS & EXPERTISE

- Methods: Network Analysis; Causal Inference; Bayesian Analysis
- Applications: Inequality and Social Policy; Health; Organizations
- Software of Proficiency: R, Stata, C, \LaTeX

PUBLICATIONS (* Student coauthor)

Edited Volumes

- 2022-23 **An, Weihua** and Shawn Bauldry. *Methodological Advances in Quantitative Social Science*. The *Social Science Research* 50th Anniversary Series (Volumes 107, 108, 109, and 110).
- 2021 **An, Weihua**. *New Quantitative Approaches to Studying Social Inequality*. *Sociological Methods and Research* 50(3).
- 2020 **An, Weihua**, Matthew Brashears, and Cathryn Johnson. *Social Networks and Social Psychology*. *Social Psychology Quarterly* 83(4).

Refereed Articles

- 2023 Browne, Irene, **Weihua An**, Daniel Auguste, and Natalie D. Deckard. "Race, State Surveillance, and Policy Spillover: Do Restrictive Immigration Policies Affect Citizen Earnings?" *Social Forces*. (Forthcoming)
- An, Weihua**. "A Tale of Twin-Dependence: A New Multivariate Regression Model and an FGLS Estimator for Analyzing Outcomes with Network Dependence." *Sociological Methods and Research*. (Scheduled in print November 2023)
- 2022 **An, Weihua**. "Comparing Egocentric and Sociocentric Centrality Measures in Directed Networks." *Sociological Methods and Research*. (Forthcoming)
- An, Weihua**, Roberson Beauville*, and Benjamin Rosche*. "Causal Network Analysis." *Annual Review of Sociology* 48: 23-41.
- An, Weihua** and Tyler J. VanderWeele. "Opening the Blackbox of Treatment Interference: Tracing Treatment Diffusion through Network Analysis." *Sociological Methods and Research* 51(1): 141-164.
- An, Weihua**. "You Said, They Said: A Framework on Informant Accuracy with Application to Studying Self-Reports and Peer-Reports." *Social Networks* 70: 187-197.
- An, Weihua**. "Friendship Network Formation in Chinese Middle Schools: Patterns of Inequality and Homophily." *Social Networks* 68: 218-228.
- 2021 **An, Weihua** and Adam Glynn. "Treatment Effect Deviation as an Alternative to Blinder-Oaxaca Decomposition for Studying Social Inequality." *Sociological Methods and Research* 50(3): 1006-1033.
- 2019 **An, Weihua** and Bruce Western. "Social Capital in the Creation of Cultural Capital: Family Structure, Neighborhood Cohesion, and Extracurricular Participation." *Social Science Research* 81: 192-208.
- 2018 **An, Weihua**. "Causal Inference with Networked Treatment Diffusion." *Sociological Methodology* 48: 152-181.
- An, Weihua** and Ying Ding. "The Landscape of Causal Inference: Perspective from Citation Network Analysis." *The American Statistician* 72(3): 265-277.

- 2017 **An, Weihua** and Maoliang Ye. "Mind the Gap: Disparity in Redistributive Preference between Political Elites and the Public in China." *European Journal of Political Economy* 50: 75-91.
- An, Weihua** and Yesola Kweon*. "Do Higher Government Wages Induce Less Corruption? Cross-Country Panel Evidence." *Journal of Policy Modeling* 39(5): 809-826.
- An, Weihua** and Christopher Winship. "Causal Inference in Panel Data with Application to Estimating Race-of-Interviewer Effects in the General Social Survey." *Sociological Methods and Research* 46(1): 68-102. (Special issue on General Social Survey, edited by Michael Hout)
- Yuan, Yue* and **Weihua An**. "Context, Network, and Adolescent Perceived Risk." *Social Science Research* 62: 378-393.
- 2016 **An, Weihua**. "Fitting ERGMs on Big Networks." *Social Science Research* 59: 107-119. (Special issue on Big Data in the Social Sciences)
- An, Weihua**. "On the Directionality Test of Peer Effects in Social Networks." *Sociological Methods and Research* 45(4): 635-650.
- An, Weihua** and Xuefu Wang*. "LARF: Instrumental Variable Estimation of Causal Effects through Local Average Response Functions." *Journal of Statistical Software* 71(1): 1-13.
- An, Weihua** and Yu-Hsin Liu*. "keyplayer: An R Package for Locating Key Players in Social Networks." *The R Journal* 8(1): 257-268.
- 2015 **An, Weihua**. "Instrumental Variables Estimates of Peer Effects in Social Networks." *Social Science Research* 50: 382-394.
- An, Weihua**. "Multilevel Meta Network Analysis with Application to Studying Network Dynamics of Network Interventions." *Social Networks* 43: 48-56.
- An, Weihua** and Long Doan*. "Health Surveillance through Social Networks." *Social Networks* 42: 8-17.
- An, Weihua** and Sam Schramski*. "Analysis of Contested Reports in Exchange Networks Based on Actors' Credibility." *Social Networks* 40: 25-33.
- An, Weihua** and William McConnell*. "The Origins of Asymmetric Ties in Friendship Networks: From Status Differential to Self-perceived Centrality." *Network Science* 3(2): 269-292.
- Desmond, Matthew and **Weihua An**. "Neighborhood and Network Disadvantage among Urban Renters." *Sociological Science* 2: 329-350.
- 2013 Desmond, Matthew, **Weihua An**, Richelle Winkler, and Thomas Ferriss. "Evicting Children." *Social Forces* 92(1): 303-327.
- VanderWeele, Tyler J. and **Weihua An**. "Social Networks and Causal Inference." Pp. 353-374 in *Handbook of Causal Analysis for Social Research*, edited by Stephen Morgan. New York: Springer. (Invited Paper, Editor-Reviewed)

- 2011 **An, Weihua.** “[Models and Methods to Identify Peer Effects.](#)” Pp. 514-532 in *The Sage Handbook of Social Network Analysis*, edited by John Scott and Peter J. Carrington. London: The Sage Publications. (Invited Paper, Editor-Reviewed)
- 2010 **An, Weihua.** “[Bayesian Propensity Score Estimators: Incorporating Uncertainties in Propensity Scores into Causal Inference.](#)” *Sociological Methodology* 40: 151-189. (The Clifford Clogg Award from the American Sociological Association for best graduate student paper in methodology)

Essays

- 2023 **An, Weihua** and Shawn Bauldry. “[Methodological Advances in Quantitative Social Science: In Celebration of the *Social Science Research* 50th Anniversary.](#)” *Social Science Research* 110: 102843.
- 2021 **An, Weihua.** “[Fear Not Scarcity but Inequality, Not Poverty but Instability.](#)” *Sociological Methods and Research* 50(3): 939-943.
- 2020 **An, Weihua**, Matthew Brashears, and Cathryn Johnson. “[The Nearness between Us, and the Space within Ourselves.](#)” *Social Psychology Quarterly* 83(4): 315–318.

Software and Code (> 135K Downloads)

- 2023 **An, Weihua.** “[DIDMatch: Combing Difference-in-Difference and Matching for Robust Causal Inference in Panel Data Analysis.](#)” *Stata Code*. [[Reference Paper](#)] (Forthcoming)
- 2021 **An, Weihua.** “[fglsnet: A Feasible Generalized Least Squares Estimator for Regression Analysis of Outcomes with Network Dependence.](#)” An R package available on CRAN. [[Reference Paper](#)] [[7K Downloads](#)]
- 2015 **An, Weihua** and Yu-Hsin Liu*. “[keyplayer: Locating Key Players in Social Networks.](#)” An R package available on CRAN. [[Reference Paper](#)] [[29K Downloads](#)]
- 2014 **An, Weihua.** “[Credibility: Addressing Contested Reports in Exchange Networks Based on Actors’ Credibility.](#)” R code to implement the methods proposed in [An and Schramski \(2015\)](#).
- 2013 **An, Weihua** and Xuefu Wang*. “[LARF: Local Average Response Functions for Instrumental Variable Estimation of Treatment Effects.](#)” An R package available on CRAN. [[Reference Paper](#)] [[65K Downloads](#)]
- An, Weihua**, Huizi Xu*, and Zhida Zheng*. “[IUPS: Incorporating Uncertainties in Propensity Scores.](#)” An R package available on CRAN. [[Reference Paper](#)] [[33K Downloads](#)]

RECENT GRANTS (> \$8.5M)

- 2023-27 Co-Investigator. “Comparing Direct and Indirect Methods for Cascade Screening in Familial Hypercholesterolemia (FH) and Long QT Syndrome (LQTS).” NIH/NHLBI (\$3,117,880, PI: Amber Beitelshees, Department of Medicine, University of Maryland)
- 2023-26 Co-PI. “Race, Inequality, and the Impact of Restrictive Immigration Policies on U.S. Citizens.” Racial Justice/Racial Equity Seed Funding, **Office of the Provost, Emory University** (\$103,153, PI: Irene Browne, Sociology)
- 2021-24 Co-PI. “Hyperlocal Risk Monitoring and Pandemic Preparedness through Privacy-Enhanced Mobility and Social Interactions Analysis.” NSF (\$750,000, PI: Li Xiong, Computer Science)

- 2020-25 Key Personnel. “Training in Advanced Data Analytics and Computational Sciences to End Drug-Related Harms.” NIH/NIDA (\$2,203,417, PIs: Hannah Cooper and Lance Waller, Rollins School of Public Health)
- 2020-24 Co-Investigator. “Testing a Low Cost Population- and Theory-Based Outreach Intervention to Engage Ovarian Cancer Survivors and their Close Relatives to Consider Genetic Services.” **National Institute of Health** (\$2,256,212, PI: Colleen McBride, Rollins School of Public Health)
- 2021-22 Co-PI. “Privacy-Enhanced Data-Driven Health Monitoring for Smart and Connected Senior Communities.” **National Science Foundation** (\$75,000, PI: Li Xiong, Computer Science)
- 2019 Co-PI. “The Labor Market Effects of Immigration Policy on Self-employed Latinos.” Atlanta Research Data Center (ARDC) of the **U.S. Census Bureau** (\$9,050, PI: Irene Browne, Sociology)

INVITED PRESENTATIONS

- 2023 **Centers for Disease Control and Prevention**, The R Users Group Meeting
[Georgia State University](#), The 8th Workshop on Biostatistics and Bioinformatics
[University of Hong Kong](#), The Population and Health Seminar
Chinese University of Hong Kong, The Computational Social Science Seminar
- 2022 **University of Georgia**, Department of Statistics Colloquium
The New England Statistics Symposium
Renmin University of China, School of Public Management
- 2021 **Peking University**, School of Government, The 20th Anniversary Seminar Series
University of Chinese Academy of Social Sciences, School of Government
South China Normal University, School of Political Science and Public Management
University of Washington, Center for Statistics and the Social Sciences
Princeton University, The China Workshop
Facebook, The Computational Social Science Group
Penn State University, Center for Social Data Analytics
- 2020 **Harvard University**, The Applied Statistics Workshop
[Yale University](#), Department of Biostatistics
[Emory University](#), The China Colloquium
Renmin University of China, The Institute of Statistics and Big Data Seminar
Southwestern University of Finance and Economics (China), School of Social Development
- 2019 **Emory University**, The Summer Institute on Empirical Implications of Theoretical Models
[Emory University](#), The China Colloquium
[Emory University](#), GROW (Global Research for Women) Seminar Series
[The Carter Center and Emory University](#), The International Symposium
- 2018 **Emory University**, Department of Biostatistics and Bioinformatics Seminar
[Emory University](#), The China Colloquium

- Emory University, Department of Biostatistics and Bioinformatics Seminar
 University of Georgia, Sociology Colloquium and Workgroup on Computational Social Science
 University of Georgia, School of Public and International Affairs
- 2017 University of Georgia, Department of Statistics
 Duke Network Analysis Center, Social Networks and Health Workshop
 Indiana University, Department of Sociology, Politics, Economics, and Culture Workshop
- 2016 Emory University, Department of Sociology and Institute for Quantitative Theory and Methods
 Purdue University, Social Science Methodology Symposium
 University of Louisville, Department of Bioinformatics and Biostatistics Colloquium
 Emory University, Institute for Quantitative Theory and Methods
 University of Chicago, Department of Sociology Colloquium
 Indiana University, School of Informatics and Computing
 University of Chicago, Booth School of Business, Econometrics and Statistics Workshop
- 2015 Harvard University, Department of Biostatistics, Seminar on Statistical Methods in Epidemiology
 Harvard University, Workshop in Economics of Science and Engineering
 The Harvard-MIT-BU Chinese Politics Research Workshop
 Harvard University, Department of Biostatistics, Big Data Seminar
 Harvard University, Department of Sociology, The Urban Social Processes Workshop
 New England Symposium on Statistics in Sports at Harvard University.
 Harvard University, Department of Sociology, Quantitative Methods in Sociology Workshop
 Harvard University, Department of Economics, The China Economy Seminar
 Indiana University, Department of Psychology, Social Psychology Seminar
- 2014 Duke University, Seminar of the Duke Network Analysis Center
 Duke University, Department of Sociology Colloquium
 Indiana University, Department of Information and Library Science Colloquium
 Indiana University, Workshop in Methods
- 2013 Indiana University, Themester Social Science Network Workshop
 Indiana University, Department of Sociology, Politics, Economics, and Culture Workshop
 National Opinion Research Center, Workshop on General Social Survey
 Indiana University, The Ostrom Workshop in Political Theory and Policy Analysis
- 2011 Indiana University, Departments of Sociology and Statistics
 Harvard University, Institute for Quantitative Social Science, Applied Statistics Workshop
 Harvard School of Public Health, Department of Global Health and Population
 University of Massachusetts at Boston, Department of Public Policy and Public Affairs
 Harvard University, Chinese Politics Research Workshop
 Duke University, Department of Sociology
- 2009 Harvard University, The Applied Statistics Workshop

TEACHING (Graduate courses marked in bold)

Emory University

QTM 220: Regression Analysis (Required course for QTM majors)

QTM 385/SOC 508: Advanced Network Analysis

SOC 201: Organizations and Society (Foundational course for sociology majors)

BSHES 760R: Training in Advanced Data Analytics (An NIDA funded multidisciplinary doctoral seminar)

Indiana University

Statistics 681/Sociology 651: Social Network Analysis

Statistics 681: Statistical Methods for Causal Inference

Statistics 501: Statistical Methods I: Linear Regressions

Statistics 481: Statistics and Networks

Sociology 210: Economy, Organizations, and Work

Harvard University

2012 Introduction to Sociology of Organizations, Lecturer

2011 Social Network Analysis: Theory, Methods and Applications, Lecturer

2010 **Qualifying Paper Seminar**, Teaching Fellow for Robert Sampson

Political Sociology, Teaching Fellow for Matthew Baggetta

2009 **Advanced Quantitative Methods**, Teaching Fellow for Christopher Winship

2008-09 Medicine and Disease in Social Context, Teaching Fellow for Nicholas Christakis

2008 Leadership and Organizations, Teaching Fellow for David Ager

ADVISING

Dissertation Committees

Current: Mickey Fitzpatrick, Sociology; Sara Kaplan, Business; Joni Webster, Sociology; Jiaxuan Yu, Sociology; Jingsong Zhao, Public Health

2023 Alexandra Manta, Economics

2022 Brian Kim, Business

Tricia Lewis, Sociology

Iris Shao, Public Health

Dimitri Zaras, Sociology

2021 Caitlin Allen, Public Health

John Pothan, Sociology

2020 Ju Hyun Park, Sociology

Allison Roberts, Sociology

2019 Wynand Kastart, Political Science, IU (Department Outstanding Dissertation Award)

Yeon Hak Kim, Public Policy, Georgia Tech

Trent Ryan, Sociology

2018 Alexander Antony, Political Science, IU

- 2017 Hyesong Ha, Public Affairs, IU
 Jian Li, Education, IU
 HuiGuo Liu, Sociology, IU
 Onur Varol, Informatics, IU (IU Distinguished Dissertation Award)
 Juha Yoon, Public Health, IU
- 2016 Josef Woldense, Political Science, IU
 Yue Yuan, Criminology, IU
- 2015 Tait Medina, Sociology, IU

Undergraduate Honors Thesis Committees (* Chaired or Co-chaired)

- 2023 Leng Seong Che*, QSS/Sociology, Highest Honors
 Joyce Wang, QSS/Psychology, Highest Honors
- 2022 Nicholas Skelley, Economics, Highest Honors
- 2021 Cayleigh Jackson, International Studies, Highest Honors
 Olivia Song*, QSS/Informatics, Highest Honors
 Yuwei Wu, Applied Math and Statistics, Highest Honors
- 2020 Mia Jin, QSS/Psychology, Highest Honors

EDITORIAL WORK

- 2021- *Sociological Methodology*, Editorial Board
- 2020- *Journal of Machine Learning Research*, Editorial Board
- 2019- *Social Science Research*, Editorial Board
- 2017- *Sociological Methods and Research*, Editorial Board
- 2017-20 *American Sociological Review*, Editorial Board

REVIEW WORK

Methodological Journals: *American Statistician; Annual of Statistics; Field Methods; Journal of the American Statistical Association; Journal of Computational and Graphical Statistics; Journal of Machine Learning Research; Sociological Methodology; Sociological Methods and Research; Statistics in Medicine; Statistica Sinica; Journal of Statistical Software; Survey Research Methods*

Substantive Journals: *American Journal of Sociology; American Political Science Review; American Sociological Review; Demography; Epidemiology; Journal of Adolescent Health; PLOS ONE; PNAS; Public Administration Review; Science Advances; Social Forces; Social Networks; Social Problems; Social Science and Medicine; Social Science Research; Sociological Spectrum; Sociological Studies (In Chinese); Socius*

Books: Cambridge University Press (Two); CHAPMAN & HALL/CRC; SAGE (Five); Springer.