

ERIC AUERBACH
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Northwestern University
Department of Economics
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Academic Positions

Northwestern University, Department of Economics, Assistant Professor, 2017-Present

Education

2017 University of California, Berkeley, Ph.D. in Economics

Committee: James Powell, Bryan Graham, Demian Pouzo, Aditya Guntuboyina

2010 Cornell University, B.S. w/ Honors in Industrial and Labor Relations

Committee: Kevin Hallock, Ronald Ehrenberg

Research Interests

Econometric theory, identification, social and economic networks, causal inference, panel data methods, nonparametric and semiparametric estimation, computation

Working Papers

6. *Heterogeneous Treatment Effects for Networks, Panels, and other Outcome Matrices* with Yong Cai

5. *The Local Approach to Causal Inference under Network Interference* with Max Tabord-Meehan

4. *Digitization and Employment in the Pandemic: Evidence from Seventy Billion Emails* with Sida Peng, Peichun Wang, Hongwei Liang, and Andy Wu

3. *Recovering Network Structure from Aggregated Relational Data using Penalized Regression* with Hossein Alidaee and Michael Leung

Publications

2. Auerbach, E. (2022) *Testing for Differences in Stochastic Network Structure*. *Econometrica*, 90(3), 1205-1223

1. Auerbach, E. (2022). *Identification and Estimation of a Partially Linear Regression Model Using Network Data*. *Econometrica*, 90(1), 347-365.

Work in Progress

- *Identification and Estimation of a Partially Linear Regression Model Using Network Data: Inference and an Application to Network Peer Effects*
- *Network Quasi-experiments*
- *Recovering Large Networks from Short Panels*
- *Spectral Regression*
- *Statistical Treatment of Social Network Data* with Rui Du
- *An Introduction to Linear Regression Modeling in Economics (online textbook)*

Teaching Experience

Northwestern University

Econ 481-2: Graduate Econometric Theory (Winter 2018-2019; Spring 2020, Winter 2021-2023)

Math 386-2: Undergraduate Econometric Theory for MMSS (Winter 2018-2023)

Econ 381-1: Undergraduate Econometric Theory (Winter 2023)

Presentations: Seminars and Conferences

2017 *Cornell, University of North Carolina Chapel Hill, University of Michigan Ann Arbor, Stanford, Northwestern, Columbia, University of Wisconsin Madison, Boston University, University of Maryland (ARE), Network Science Conference at Washington University in St. Louis, Penn State, Princeton, Yale, University of California Davis, University of California Los Angeles, University of Southern California, Georgetown, University of Chicago, Bonn, Bologna, Southampton, University College London, Oxford University Nuffield, London School of Economics, Duke University*

2018 *Winter Meetings Econometric Society/ASSA, UIUC, UT Austin, Conference on Identification in Econometrics at Vanderbilt University, NetSci Paris, NBER Summer Institute Labor Economics, Toulouse School of Economics, IMT Lucca Networks in Economics and Finance Conference, Northwestern Interactions Conference, CFE Pisa*

2019 *Winter Meetings Econometric Society/ASSA, Harvard/MIT, Network Science Conference at University of Indiana Bloomington, CEME Conference UCLA, University of Indiana Bloomington, University of Wisconsin Milwaukee, Summer Meetings Econometric Society, California Econometrics Conference Davis, IPA Measurement Methodology Meeting Northwestern*

2020 *Stanford, Cornell, World Congress 2020 Meetings, Special Quarter on Inference and Data Science*

2021 *Winter Meetings Econometric Society/ASSA, Laval University, University of Rochester, University of Colorado Boulder, University College London, Oxford University, Summer Meetings Econometric Society, University of Wisconsin Madison, RINSE, Toulouse Conference on Games, Matching, and Networks, University of Glasgow, Cornell*

2022 *Powell retirement conference at UC Berkeley, California Econometrics Conference Stanford GSB, Cowles econometrics summer conference, Toulouse School of Economics Modern Data Structures conference, ASA joint meetings summer, University of Southern California, University of Pennsylvania, Boston College, Rice University, Princeton, Cambridge Janeway Institute Webinar*

Professional Activities

Referee, *Review of Economics and Statistics, Journal of Business and Economic Statistics, American Economic Review, Journal of Econometrics, Econometrica, Journal of Public Economics, Journal of Applied Econometrics, Review of Economic Studies, Quantitative Economics, Network Science, Quarterly Journal of Economics, Journal of Political Economy, Econometric Theory, Journal of the European Economic Association, American Economic Journal: Applied Economics, Economic Journal, Journal of Machine Learning Research*

Organizer, *Network Econometrics Juniors' Conference Fall 2019*

Organizer, *Northwestern Econometrics Seminar Fall 2018-2022*

Co-Organizer, *Special Quarter on Inference and Data Science on Networks Spring 2020*

Co-Organizer, *IDEAL Workshop on Estimation of Network Processes and Information Diffusion Spring 2020*

Member, *Center for Econometrics at Northwestern University, Econometric Society, American Economic Association, American Statistical Association*

Co-PI, *Institute for Data, Econometrics, Algorithms, and Learning (IDEAL)*

Scientific Committee, *IAAE: Networks, Spatial, and High-Dimensional Data 2019-2023*

Scientific Committee, *ACM Conference on Economics and Computation, 2023*

Scientific Committee, *ESEM: Econometrics, 2023*

Curriculum Development, *Introduction to Network Econometrics*

Student Advising, Economics Graduate, Dissertation Committee Member: *Ryan Lee (Bates White 2021), Joe Hardwick (University of Chicago 2021), Isaac Loh (NC State 2022), Yong Cai*, Advisor: *Hossein Alidaee, Ahnaf Al Rafi, Jason Premo, Deborah Kim, Bruno Fava, Kenneth Fu, Shuyen Huang*

Student Advising, Economics/MMSS Undergraduate, *Kenneth Fu (Northwestern University Economics), Ryan Broll (Stanford SIEPR), Tianyu Luo (Columbia University Economics), Rui Du (Stanford Marketing), Ji Sung You, Ziqiao Zhang, Roger Wu, Jake Lyons, Jonathan Cao, Kenneth Ryu, Emilyya Ershtein, Satvic Garg*

Visiting Positions

Cornell University, Department of Economics, Summer 2021

University of Chicago, Department of Economics, Spring 2022

Fellowships, Awards, and Honors

2022 National Science Foundation Standard Grant 2149422. Title: Collaborative Research: New Techniques for High-Dimensional and Incomplete Network Data. PI. Joint with Max Tabord-Meehan. Award amount: \$291,152.

2020 Northwestern OER Library Grant. Title: Introduction to Linear Regression Modeling in Economics. Amount \$5,000.

2019 National Science Foundation TRIPODS (Transdisciplinary Research in Principles of Data Science) grant HDR 1934931. Co-PI. Title: Institute for Data, Econometrics, Algorithms, and Learning (IDEAL) in collaboration with computer science, statistics, economics, electrical engineering, and operations research at Northwestern University, Toyota Technical Institute at Chicago, and the University of Chicago.

2017 Restud Tour