

Eli Ben-Michael

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EDUCATION

University of California, Berkeley, Berkeley, CA December 2020
PhD in Statistics, Dissertation Committee: Avi Feller, Peng Ding, Jesse Rothstein, Bin Yu
Columbia University, Columbia College, New York, NY May 2016
Bachelor of Arts, *Summa Cum Laude*, Computer Science and Statistics

ACADEMIC APPOINTMENTS

Carnegie Mellon University, Pittsburgh, PA August 2022 -
Heinz College of Information Systems & Public Policy
Department of Statistics & Data Science
Assistant Professor
Harvard University, Cambridge, MA January 2021 - August 2022
Department of Statistics
Institute for Quantitative Social Science
Postdoctoral Fellow

FORTHCOMING AND PUBLISHED ARTICLES

- Lin, V., **E. Ben-Michael**, and L. P. Morency (2024). Optimizing Language Models for Human Preferences is a Causal Inference Problem. In *Conference on Uncertainty in Artificial Intelligence*. arXiv. arXiv:2402.14979
- Sun, L., **E. Ben-Michael**, and A. Feller (2024). Temporal Aggregation for the Synthetic Control Method. In *AEA Papers and Proceedings*, Volume 114, pp. 614–617
- Ben-Michael, E.**, L. Page, and L. Keele (2024). Approximate balancing weights for clustered observational study designs. *Statistics in Medicine* 43(12), 2332–2358
- Ben-Michael, E.**, K. Imai, and Z. Jiang (2024+). Policy Learning with Asymmetric Counterfactual Utilities. *Journal of the American Statistical Association*
- Ben-Michael, E.**, A. Feller, and E. Hartman (2024). Multilevel Calibration Weighting for Survey Data. *Political Analysis* 32(1), 65–83
- Lin, V., L. P. Morency, and **E. Ben-Michael** (2023). Text-Transport: Toward Learning Causal Effects of Natural Language. In *Conference on Empirical Methods in Natural Language Processing*
- Ben-Michael, E.** and L. Keele (2023). Using Balancing Weights to Target the Treatment Effect on the Treated when Overlap is Poor. *Epidemiology* 4(34), 637–644
- Soriano, D., **E. Ben-Michael**, P. J. Bickel, A. Feller, and S. D. Pimentel (2023). Interpretable Sensitivity Analysis for Balancing Weights. *Journal of the Royal Statistical Society, Series A: Statistics in Society*
- Ben-Michael, E.**, A. Feller, and J. Rothstein (2023). Varying Impacts of Letters of Recommendation on College Admissions. *The Annals of Applied Statistics* 17(4), 2843–2864
American Statistical Association Social Statistics Section Student Paper Award winner
- Lu, B., **E. Ben-Michael**, A. Feller, and L. Miratrix (2023). Is it who you are or where you are? Accounting for compositional differences in cross-site treatment variation. *Journal of Educational and Behavioral Statistics* 48(4), 420–453
American Statistical Association Editors Choice 2023
- Ben-Michael, E.**, D. Arbour, A. Feller, A. Franks, and S. Raphael (2023). Estimating the effects of a California gun control program with Multitask Gaussian Processes. *The Annals of Applied Statistics* 17(2), 985–1016
- Keele, L. J., **E. Ben-Michael**, A. Feller, R. Kelz, and L. Miratrix (2023). Hospital Quality Risk

Standardizations via Approximate Balancing Weights. *The Annals of Applied Statistics* 17(2), 901–928

Ben-Michael, E., A. Feller, and J. Rothstein (2022). Synthetic controls with staggered adoption. *Journal of the Royal Statistical Society. Series B: Statistical Methodology* 84(2), 351–381

SF ASA Student Travel Award winner, Thomas R. Ten Have Poster Award runner up

Haber, N. A., E. Clarke-Deelder, A. Feller, E. R. Smith, J. A. Salomon, B. MacCormack-Gelles, E. M. Stone, C. Bolster-Foucault, J. R. Daw, L. A. Hatfield, C. E. Fry, C. B. Boyer, **E. Ben-Michael**, C. M. Joyce, B. S. Linas, I. Schmid, E. H. Au, S. E. Wieten, B. Jarrett, C. Axfors, V. T. Nguyen, B. A. Griffin, A. Bilinski, and E. A. Stuart (2022). Problems with evidence assessment in COVID-19 health policy impact evaluation: A systematic review of study design and evidence strength. *BMJ Open* 12(1)

Ben-Michael, E., A. Feller, and J. Rothstein (2021). The Augmented Synthetic Control Method. *Journal of the American Statistical Association* 116(536), 1789–1803

Ben-Michael, E., A. Feller, and E. Stuart (2021). A trial emulation approach for policy evaluations with group-level longitudinal data. *Epidemiology* 32, 533–540

Elser, H., **E. Ben-Michael**, D. Rehkopf, S. Modrek, E. A. Eisen, and M. R. Cullen (2019). Layoffs and the mental health and safety of remaining workers: a difference-in-differences analysis of the US aluminium industry. *Journal of Epidemiology and Community Health* 73, 1094–1100

PREPRINTS AND WORKING PAPERS

Levis, A. W., **E. Ben-Michael**, and E. H. Kennedy (2024). Intervention effects based on potential benefit. arXiv:2405.08727

Ben-Michael, E., M. L. Doucette, A. Feller, A. D. McCourt, and E. A. Stuart (2024). Statistical methods to estimate the impact of gun policy on gun violence. arXiv:2404.11506

Ben-Michael, E., D. J. Greiner, M. Huang, K. Imai, Z. Jiang, and S. Shin (2024). Does AI help humans make better decisions? A methodological framework for experimental evaluation. arXiv:2403.12108

Sun, L., **E. Ben-Michael**, and A. Feller (2023). Using Multiple Outcomes to Improve the Synthetic Control Method. arXiv:2311.16260

Jia, Z., **E. Ben-Michael**, and K. Imai (2023). Bayesian Safe Policy Learning with Chance Constrained Optimization: Application to Military Security Assessment during the Vietnam War. arXiv:2307.08840

Ben-Michael, E., A. Feller, R. Kelz, and L. Keele (2022). Estimating Racial Disparities in Emergency General Surgery. arXiv:2209.0431

Zhang, Y., **E. Ben-Michael**, and K. Imai (2022). Safe Policy Learning under Regression Discontinuity Designs with Multiple Cutoffs. arXiv:2208.13323

Yi Zhang: American Statistical Association Social Statistics Section Student Paper Award winner

Ben-Michael, E., D. A. Hirshberg, A. Feller, and J. Zubizarreta (2021). The Balancing Act in Causal Inference. arXiv:2110.14831

Ben-Michael, E., D. J. Greiner, K. Imai, and Z. Jiang (2021). Safe Policy Learning through Extrapolation: Application to Pre-trial Risk Assessment. arXiv:2109.11679

BOOK CHAPTERS

Cohn, E. R., **E. Ben-Michael**, A. Feller, and J. R. Zubizarreta (2023). Balancing Weights for Causal Inference. In J. R. Zubizarreta, E. A. Stuart, D. S. Small, and P. R. Rosenbaum (Eds.), *Handbook of Matching and Weighting Adjustments for Causal Inference* (1 ed.), Chapter 16, pp. 293–312. Boca Raton, FL: Chapman & Hall/CRC

OPEN SOURCE STATISTICAL SOFTWARE

augsynth: R implementation of the augmented synthetic control method

multical: R package for multilevel calibration weighting

balancer: R package for balancing weights in observational studies

PRESENTATIONS

Invited

- 2024
Boston University Department of Economics; Columbia University Department of Political Science; Banff International Research Station: Bridging Prediction and Intervention Problems in Social Systems
- 2023
International Conference on Health Policy Statistics; Cowles Foundation Conference on Econometrics; Joint Statistical Meetings; University of Pittsburgh Department of Epidemiology
- 2022
London School of Hygiene and Tropical Medicine, Centre for Statistical Methodology; Joint Statistical Meetings; LinkedIn; National Research Conference on Firearm Injury Prevention; IMS International Conference on Statistics and Data Science; International Conference on Computational and Methodological Statistics; Bank of England
- 2021
Johns Hopkins CICADAS Seminar; RAND Center for Causal Inference Symposium; Johns Hopkins Causal Inference Seminar; Harvard Applied Statistics Workshop; Berkeley Machine Learning and Science Forum
- 2020
Online Causal Inference Seminar

Contributed

- 2024
Annual Meeting of the Society for Political Methodology
- 2023
American Causal Inference Conference
- 2022
American Causal Inference Conference
- 2021
Asian Political Methodology Meetings; ENAR Spring Meeting; Annual Meeting of the Society for Political Methodology; Joint Statistical Meetings (ASA Social Statistics Section Student Paper Award Winner)
- 2020
Annual Meeting of the Society for Political Methodology; Joint Statistical Meetings (SFASA Student Travel Award winner); Econometric Society World Congress; Association for Public Policy Analysis & Management Fall Research Conference; BigSurv20
- 2019
Society for Research on Educational Effectiveness; Atlantic Causal Inference Conference (Thomas R. Ten Have Poster Award runner up); Berkeley-Stanford Econometrics Jamboree
- 2018
7th Causal Inference Workshop at UAI; European Winter Meeting of the Econometric Society

AWARDS AND HONORS

American Causal Inference Conference Travel Award	2022
American Statistical Association Social Statistics Section Student Paper Award	2021
American Statistical Association, San Francisco Bay Area Chapter, Student Travel Award	2020
Department fellowship, Department of Statistics, U.C. Berkeley	2018
Two years of funding through RTG grant: Advancing Machine Learning - Causality and Interpretability	
Phi Beta Kappa, Columbia University	2016
Computer Science Department Award, Columbia University	2016
Given to the top two graduating seniors each year	

TEACHING

Carnegie Mellon University

90-739: Systems Synthesis	Spring 2024
90-777: Intermediate Statistics	Fall 2023
36-490/36-497 Statistics Research (and Corporate) Capstones	Fall 2023
36-402: Advanced Data Analysis	Spring 2023

U.C. Berkeley Department of Statistics *Graduate Student Instructor*

Stat 232: Experimental Design with Sam Pimentel	Fall 2018
Stat 159/259: Reproducible and Collaborative Data Science with Fernando Perez	Fall 2017

INSTITUTIONAL SERVICE

Joint Statistics and Public Policy PhD admissions committee, CMU	Winter 2022 -
PhD admissions committee, Department of Statistics, UC Berkeley	Spring 2020
Co-president of the Berkeley Statistics Graduate Student Association	Fall 2018 - Spring 2019
Reviewer for <i>American Economic Review</i> , <i>Insights</i> , <i>American Journal of Epidemiology</i> , <i>Annals of Applied Statistics</i> , <i>Biometrical Journal</i> , <i>Biometrics</i> , <i>Biometrika</i> , <i>Econometrica</i> , <i>Epidemiology</i> , <i>INFORMS Journal on Data Science</i> , <i>Journal of the American Statistical Association</i> , <i>Journal of Applied Econometrics</i> , <i>Journal of Business & Economic Statistics</i> , <i>Journal of Causal Inference</i> , <i>Journal of Econometrics</i> , <i>Journal of Educational and Behavioral Statistics</i> , <i>Journal of Quantitative Criminology</i> , <i>Journal of the Royal Statistical Society, Series A, B, and C</i> , <i>Management Science</i> , <i>Political Analysis</i> , <i>Population Health Metrics</i> , <i>Quantitative Economics</i> , <i>Statistics in Medicine</i> , and <i>Statistics and Public Policy</i>	

WORK EXPERIENCE

Uber , New York, NY <i>Data Science Intern</i>	Summer 2019
Walmart Labs , Sunnyvale, CA <i>Machine Learning Scientist Intern</i>	Summer 2017
Knewton , New York, NY <i>Data Science Intern</i>	Summer 2016