

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. arXiv:2402.14979
- 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 (2024). Temporal Aggregation for the Synthetic Control Method. arXiv:2401.12084

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
- 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

- 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

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| 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: 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