

# 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

- Ben-Michael, E.**, L. Page, and L. Keele (2024+). Approximate Balancing Weights for Clustered Observational Study Designs. *Statistics in Medicine*. arXiv:2301.05275
- Ben-Michael, E.**, K. Imai, and Z. Jiang (2024+). Policy Learning with Asymmetric Counterfactual Utilities. *Journal of the American Statistical Association*
- 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
- Ben-Michael, E.**, A. Feller, and E. Hartman (2023). Multilevel calibration weighting for survey data. *Political Analysis*
- 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

**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

Lin, V., **E. Ben-Michael**, and L. P. Morency (2024). Optimizing Language Models for Human Preferences is a Causal Inference Problem. arXiv:2402.14979

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

## PRESENTATIONS

### Invited

2023

International Conference on Health Policy Statistics; Cowles Foundation Conference on Econo-

metrics; Joint Statistical Meetings; University of Pittsburgh

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

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**

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 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 &amp; 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**

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