

# EVAN T. R. ROSENMAN

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## ACADEMIC APPOINTMENTS

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- Claremont McKenna College**, Cambridge, MA  
*Assistant Professor of Statistics, Mathematical Sciences Department* 2023 – Present
- Harvard Data Science Initiative**, Cambridge, MA  
*Postdoctoral Fellow* 2020 – 2023  
Advised by Luke Miratrix, Kosuke Imai, and Francesca Dominici.

## EDUCATION

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- Stanford University**, Stanford, CA 2015 – 2020  
Ph.D. in Statistics, advised by Art Owen and Mike Baiocchi.  
Dissertation: “Making Causal Conclusions from Heterogeneous Data Sources.”  
M.S. in Electrical Engineering (2019).
- Georgetown University**, Washington, DC 2013 – 2015  
M.S. in Math & Statistics.
- Harvard University**, Cambridge, MA 2008 – 2012  
A.B. *summa cum laude*, Applied Mathematics: Physics.

## PUBLICATIONS

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- Rosenman, E. T. R.** and Miratrix, L. (2023). Designing Experiments Toward Shrinkage Estimation. *Electronic Journal of Statistics*, 17(2), 3406-3442.
- Sarnquist, C., Friedberg, R., **Rosenman, E. T. R.**, Amuyunzu-Nyamongo, M., Nyairo, G., and Baiocchi, M. Sexual assault among young adolescents in informal settlements in Nairobi, Kenya: Findings from the IMPower and SOS cluster-randomized controlled trial. *Prevention Science*, 1-12.
- Rosenman, E. T. R.**, Olivella, S., & Imai, K. (2023). Race and ethnicity data for first, middle, and last names. *Nature: Scientific Data*, 10(1), 299.
- Rosenman, E. T. R.**, Friedberg, R. and Baiocchi, M. (2023). Robust Designs for Prospective Randomized Trials Surveying Sensitive Topics. *American Journal of Epidemiology*, 192(5), 812-820.
- Rosenman, E. T. R.**, Basse, G., Owen, A. B., & Baiocchi, M. (2023). Combining observational and experimental datasets using shrinkage estimators. *Biometrics*.
- Kenny, C. T., Kuriwaki, S., McCartan, C., **Rosenman, E. T. R.**, Simko, T., & Imai, K. (2023). Comment: The Essential Role of Policy Evaluation for the 2020 Census Disclosure Avoidance System. *Harvard Data Science Review*, (Special Issue 2).

Friedberg, R., Baiocchi, M., **Rosenman, E. T. R.**, Amuyunzu-Nyamongo, M., Nyairo, G., & Sarnquist, C. (2023). Mental health and gender-based violence: An exploration of depression, PTSD, and anxiety among adolescents in Kenyan informal settlements participating in an empowerment intervention. *PLOS ONE*, *18*(3), e0281800.

**Rosenman, E. T. R.**, McCartan, C., & Olivella, S. (2023). Recalibration of Predicted Probabilities Using the “Logit Shift”: Why Does It Work, and When Can It Be Expected to Work Well? *Political Analysis*, 1-11.

Imai, K., Olivella, S., & **Rosenman, E. T. R.** (2022). Addressing census data problems in race imputation via fully Bayesian Improved Surname Geocoding and name supplements. *Science Advances*, *8*(49), eadc9824.

**Rosenman, E. T. R.**, Owen, A. B., Baiocchi, M., & Banack, H. R. (2022). Propensity score methods for merging observational and experimental datasets. *Statistics in Medicine*, *41*(1), 65-86.

Kenny, C. T., Kuriwaki, S., McCartan, C., **Rosenman, E. T. R.**, Simko, T., & Imai, K. (2021). The use of differential privacy for census data and its impact on redistricting: The case of the 2020 US Census. *Science Advances*, *7*(41), eabk3283.

**Rosenman, E. T. R.**, & Owen, A. B. (2021). Designing experiments informed by observational studies. *Journal of Causal Inference*, *9*(1), 147-171.

**Rosenman, E. T. R.**, Sarnquist, C., Friedberg, R., Amuyunzu-Nyamongo, M., Oguda, G., Otieno, D., & Baiocchi, M. (2020). Empirical insights for improving sexual assault prevention: evidence from baseline data for a cluster-randomized trial of IMPower and Sources of Strength. *Violence Against Women*, *26*(15-16), 1855-1875.

Baiocchi, M., Friedberg, R., **Rosenman, E. T. R.**, Amuyunzu-Nyamongo, M., Oguda, G., Otieno, D., & Sarnquist, C. (2019). Prevalence and risk factors for sexual assault among class 6 female students in unplanned settlements of Nairobi, Kenya: Baseline analysis from the IMPower & Sources of Strength cluster randomized controlled trial. *PLOS ONE*, *14*(6), e0213359.

## OTHER WORKING PAPERS

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**Rosenman, E. T. R.**, Dominici, F., and Miratrix, L. (2023). Empirical Bayes Double Shrinkage for Combining Biased and Unbiased Causal Estimates. *arXiv:2309.06727*.

**Rosenman E. T. R.**, Rajkumar, K., Gauriot, R., & Slonim, R. (2021). Optimized partial identification bounds for regression discontinuity designs with manipulation. *arXiv:1910.02170*.

Kravitz, J. and **Rosenman, E. T. R.** (2021). Scaling Relational Organizing on Jon Ossoff’s Campaign for U.S. Senate: Analysis of Program Impact and Key Takeaways. White paper at the *Analyst Group*.

**Rosenman, E. T. R.** (2019). Some new results for Poisson binomial models. *arXiv:1907.09053*.

**Rosenman, E. T. R.**, & Viswanathan, N. (2018). Using Poisson binomial GLMs to reveal voter preferences. *arXiv:1802.01053*.

## SELECTED PRESENTATIONS

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- “Shrinkage Estimation for Causal Inference and Experimental Design”
  - Pacific Causal Inference Conference – *September 2023* (invited)

- New England Statistics Symposium – *June 2023* (invited)
- European Causal Inference Meeting – *April 2023*
- American Causal Inference Conference – *May 2022*
- Johns Hopkins Causal Inference Seminar – *May 2022* (invited)
- Conference on Digital Experimentation – *November 2021*
- “Recalibration of Predicted Probabilities Using the “Logit Shift”: Why Does It Work, and When Can It Be Expected to Work Well?”
  - Claremont Colleges Applied Math Seminar – *October 2023*
  - PolMeth XL – *July 2023* (poster)
  - Southern Political Science Association Conference – *January 2023*
  - UW Madison Models, Experiments, and Data Workshop – *December 2022* (invited)
- “Robust Designs for Prospective Randomized Trials Surveying Sensitive Topics”
  - Society for Research on Educational Effectiveness Conference – *September 2022*
  - Joint Statistical Meetings – *August 2022*
- “Analytics at Biden for President”
  - California State University, Long Beach Mathematics Colloquium – *December 2023*
  - Claremont McKenna Department of Mathematical Science Series – *September 2023*
  - Harvard Statistics Colloquium – *March 2021* (invited)
- “Addressing Census data problems in race imputation via fully Bayesian Improved Surname Geocoding,” Politics and Computational Social Science Conference – *June 2022*
- “Optimized Partial Identification Bounds for RD Designs with Manipulation.”
  - Joint Statistical Meetings – *August 2020*
  - SAMSI Causal Inference Opening Workshop – *December 2019* (poster)
- “Designing Experiments to Complement Observational Studies”
  - Design and Analysis of Experiments (DAE) Conference – *October 2019* (invited)
  - Joint Statistical Meetings – *July 2019* (invited)
  - WNAR – *June 2019* (invited)
- “Empirical Insights for Improving Sexual Assault Prevention”
  - 2020 Global Health Research Convening – *January 2020* (poster)
  - 16th Hawai‘i International Summit, IVAT – *April 2019*
- “Propensity Score Methods for Merging Observational and Experimental Datasets.”
  - WNAR – *June 2019*
  - Georgetown Math/Stats Colloquium – *October 2018*
- “Using Poisson Binomial GLMs to Reveal Voter Preferences.”
  - PolMeth XXXVII – *July 2020* (poster)
  - Conference on Statistical Practice – *February 2020* (poster)
  - Stanford Industrial Affiliates Conference – *February 2018*

## TEACHING

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- **Sole Instructor**
  - Math 151: Probability (Claremont McKenna)
  - Statistics 195: Introduction to R (Stanford)
- **Teaching Assistant** (at Stanford)
  - Management Science and Engineering 327: Topics in Causal Inference
  - Stats 305a: Linear Models
  - Stats 200: Introduction to Statistical Inference
  - CS 229: Machine Learning
  - Stats 216: Introduction to Statistical Learning
  - Stats 202: Data Mining and Analysis

- **Invited Guest Lectures**

- Harvard, API-205: Politics and Policies: What Can Data Tell Us?
- Berkeley, Statistics 158: The Design and Analysis of Experiments

## AWARDS AND HONORS

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### Fellowships

- Google Scholarship (2019 – 2020)
- National Defense Science and Engineering Graduate (NDSEG) Fellowship (2016 – 2019)

### Academic Recognition

- Ingram Olkin Interdisciplinary Dissertation Award (2020), recognizing exceptional achievement in the area of interdisciplinary statistics
- ASA Business and Economic Statistics Section Best Student Paper Award (2020)
- Stanford Bio-X Interdisciplinary Initiatives Seed Grants Symposium Poster Award (2019)
- WNAR Most Outstanding Student Oral Paper Award (2019)

### Research grants and travel awards

- IMS New Researchers Travel Award (2023)
- National Science Foundation Travel Grant, American Causal Inference Conference (2022)
- Stanford Center on Global Poverty and Development Exploratory Award (2018)

## PROFESSIONAL EXPERIENCE

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### Civis Analytics

*Data Science Consultant*

October 2021 – November 2022

- Oversaw a team of engineers and data scientists in building nationwide turnout model predicting every United States voter's likelihood of casting a ballot. Model was used for weighting and projections by Democratic Senatorial Campaign Committee (DSCC) in 2022 midterm elections.
- Crafted development roadmap and spearheaded analytic research, including proposing algorithms for projecting midterm registration patterns and adjusting for changes in political environment.

### Biden for President, Philadelphia, PA (remote)

*Data Scientist*

June 2020 – November 2020

- Led voter turnout modeling for the 2020 general election. Designed custom models to predict turnout probabilities for every voter in each of 17 battleground states (100MM+ voters).
- Developed and refined projections for voter registration trends in the final months of the presidential election season.
- Collaborated with a remote team of 11 data scientists and engineers to maintain codebase, automate quality control of scores, project electoral outcomes, and deploy scores to state Democratic parties for voter targeting and outreach.

### Change Research, Palo Alto, CA

*Data Science Intern*

Summer 2019

Change Research is an online-only polling firm offering surveys for down-ballot progressive candidates.

### Microsoft, Redmond, WA

*Data Scientist Intern, AI + Research Group*

Summer 2017

### Applied Predictive Technologies (APT), Arlington, VA

*Associate Product Manager (2012-14), Product Manager (2014-15)* 2012 – 2015

APT's software is used by corporations to measure impact of pricing, marketing, and capital initiatives.

## SOFTWARE

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wru: *Who are You? Bayesian Prediction of Racial Category Using Surname and Geolocation*. R package.  
<https://github.com/kosukeimai/wru>

## PROFESSIONAL SERVICE

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- **Panelist:** Data Science Panel, Mathematical Association of America Southern California-Nevada Section, Fall 2023  
**Reviews:** *Political Science Research and Methods, American Journal of Epidemiology, Journal of Causal Inference, Biometrika, Biostatistics, Biometrics, Epidemiology, and Harvard Data Science Review.*
- **Program Committees:** Black in AI Workshop at NeurIPS (2018, 2019), Mechanism Design for Social Good (2020), Practical Machine Learning for Developing Countries (2021, 2022), Harvard Data Science Initiative Postdoc Research Fund (2021)
- **Black in AI:** Graduate mentor: assisted two undergraduate students through the graduate school application process, including selecting schools and reviewing submission materials.

## VOLUNTEER EXPERIENCE & ACCOMPLISHMENTS

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- **Black Voters Matter Fund** (2018 – 2022): Assisted in analysis, data visualization, and county targeting for BVM, whose goal is to increase Black voters' political power in the South.
- **Patents**
  - U.S. Patent No. 10,354,213: Natural Experiment Finder System and Method, filed May 23, 2014, issued July 16, 2019.
  - U.S. Patent No. 10,776,738: Natural Experiment Finder, filed May 10, 2019, issued September 15, 2020.
  - U.S. Patent No. 10,878,357: Natural Experiment Finder System and Method, filed December 27, 2011, issued December 29, 2020.