Avi Feller

Goldman School of Public Policy
University of California, Berkeley
2607 Hearst Avenue; Berkeley, CA 94720

☎ (510) 642-2067
✉ afeller@berkeley.edu
🌐 avifeller.com

Employment

Academic appointments

UC Berkeley, Goldman School of Public Policy and Department of Statistics

2021 –	Associate Professor
2015 – 2021	Assistant Professor

Other professional experience

2023 –	Adobe Research, Visiting Researcher
2022	Google Brain, Visiting Researcher
2016 –	EveryDay Labs, Co-Founder
2011 – 2017	Harvard Kennedy School Government Performance Lab
2010 – 2011	White House Office of Management and Budget, Special Assistant to the Director
2009 – 2010	Center on Budget and Policy Priorities, Research Associate

Education

2011 – 2015	Ph.D., Statistics, Harvard University
2007 – 2009	M.Sc., Applied Statistics, Oxford University
2003 – 2007	B.A., Applied Mathematics and Political Science, Yale University *(magna cum laude)*

Publications

Statistics and methodology (‡ indicates current/former research group student or postdoctoral fellow)

[47] Basse, G.‡, Ding, P., Feller, A., and P. Toulis (2023+). "Randomization tests for peer effects in group formation experiments." *Econometrica*, conditionally accepted.

[46] Ben-Michael, E.‡, Feller, A., and J. Rothstein (2023+). "Variation in impacts of letters of recommendation on college admissions decisions: Approximate balancing weights for treatment effect heterogeneity in observational studies." *Annals of Applied Statistics*, forthcoming.

⋆ Winner, JSM student paper competition, ASA sections on survey research, government statistics, and social statistics

[45] Soriano, D.‡, Ben-Michael, E.‡, Bickel, P., Feller, A., and S. Pimentel (2023+). "Interpretable sensitivity analysis for balancing weights." *Journal of the Royal Statistical Society, Series A,* forthcoming

[44] Lu, B.‡, Ben-Michael, E.‡, Feller, A., and L. Miratrix. (2023+) "Is it who you are or where you are? Accounting for compositional differences in cross-site treatment effect variation," *Journal of Educational and Behavioral Statistics*, forthcoming.

[43] Bruns-Smith, D.‡, Feller, A., and E. Nakamura (2023). "Using supervised learning to estimate inequality in the size and persistence of income shocks." *FAccT '23: 2023 ACM Conference on Fairness, Accountability, and Transparency.*

[42] Ben-Michael, E.‡, Feller, A., and E. Hartman (2023). "Multilevel calibration weighting for survey data." *Political Analysis*, 1-19.

[41] Cohn, E., Ben-Michael, E., Feller, A., and J. Zubizarreta (2023). "Balancing weights for causal inference," in *Handbook of Matching and Weighting Adjustments for Causal Inference* (Chapman & Hall / CRC).

[40] Ben-Michael, E.‡, Arbour, D., Feller, A., Franks, A., and S. Raphael (2023). "Estimating the effects of a California gun control program with Multitask Gaussian Processes," *Annals of Applied Statistics*, 17(2): 985–1016.

[39] Keele, L., Ben-Michael, E.‡, Feller, A., Kelz, R., and L. Miratrix (2023). "Hospital quality risk standardization via approximate balancing weights," *Annals of Applied Statistics*, 17(2): 901–928.

[38] Ho, N., Feller, A., Greif, E., Miratrix, L., and N. Pillai (2022). "Weak separation in principal stratification and finite mixture models," *AISTATS: The 25th International Conference on Artificial Intelligence and Statistics*.
⋆ Ten Have Award, Atlantic Causal Inference Conference, "for exceptionally creative or skillful research on causal inference"

[37] Bruns-Smith, D.‡ and A. Feller (2022). "Duality theory and outcome assumptions for balancing weights," *AISTATS: The 25th International Conference on Artificial Intelligence and Statistics*.

[36] Haber, N., E. Clark-Deelder, Feller, A., et al. (2022). "Problems with evidence assessment in COVID-19 health policy impact evaluation: A systematic review of evidence strength," *BMJ Open*: 12(1), e053820.

[35] Puelz, D., Basse, G.‡, Feller, A., and P. Toulis (2022). "A Graph-theoretic approach to randomization tests of causal effects under general interference," *Journal of the Royal Statistical Society (Series B)*, 84: 174–204.
⋆ Best poster, Society for Political Methodology Annual Meeting

[34] Ben-Michael, E.‡, Feller, A., and J. Rothstein (2021). "Synthetic controls with staggered adoption," *Journal of the Royal Statistical Society (Series B)*. 84: 351–381.

[33] Feller, A. and E. Stuart (2021). "Challenges with evaluating education policy using panel data during and after the COVID-19 pandemic." *Journal of Research on Educational Effectiveness*, 14(3): 668–675.

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

[31] Haber, N., Clarke-Deelder E., Salomon, J., Feller, A., and E. Stuart (2021). "Impact Evaluation of Coronavirus Disease 2019 Policy: A Guide to Common Design Issues," *American Journal of Epidemiology*, 190(11): 2474–2486.
⋆ *American Journal of Epidemiology* Article of the Year

[30] Ben-Michael, E.‡, Feller, A., and E. Stuart (2021). "A Trial emulation approach for policy evaluations with group-level longitudinal data," *Epidemiology*, 32(4): 533–540.

[29] D'Amour, A.‡, Ding, P., Feller, A., Lei, L., and J. Sekhon (2021). "Overlap in observational studies with high-dimensional covariates," *Journal of Econometrics*, 221: 644–654.
⋆ Best early career research presentation, European Causal Inference Meeting

[28] Franks, A., D'Amour, A.‡, and A. Feller (2020). "Flexible sensitivity analysis for observational studies without observable implications," *Journal of the American Statistical Association*, 115(532): 1730–1746.

[27] Jung, J., Shroff, R., Feller, A., and S. Goel (2020). "Bayesian sensitivity analysis for offline policy evaluation," *AIES: AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society*.

[26] Carvalho, C., Feller, A., Murray, J., S. Woody, and D. Yeager (2019). "Assessing treatment effect variation in observational studies: Results from a data challenge," *Observational Studies*, 5: 21–35.

[25] Yuan, L.‡, Feller, A., and L. Miratrix (2019). "Identifying and estimating principal causal effects in a multi-site trial of Early College High Schools," *Annals of Applied Statistics*, 13(3): 1348–1369.
⋆ Ten Have Award, Atlantic Causal Inference Conference, "for exceptionally creative or skillful research on causal inference"

[24] Basse, G.‡, Feller, A., and P. Toulis (2019). "Exact conditional randomization tests for causal effects under interference," *Biometrika*, 106(2): 487–494.

[23] Ding, P., Feller, A., and L. Miratrix (2019). "Decomposing treatment effect variation," *Journal of the American Statistical Association*, 114(525): 304–317.

[22] Basse, G.‡ and A. Feller (2018). "Analyzing two-stage experiments in the presence of interference," *Journal of the American Statistical Association*, 113(521): 41–55.

[21] Miratrix, L., Furey, J., Feller, A., Grindal, T., and L. Page (2017). "Bounding, an accessible method for estimating principal causal effects, examined and explained," *Journal of Research on Educational Effectiveness*, 11(1): 133–162.

⋆ Outstanding paper award, *Journal of Research on Educational Effectiveness*

[20] Feller, A., Miratrix, L., and F. Mealli (2017) "Principal score methods: Assumptions, extensions, and practical considerations," *Journal of Educational and Behavioral Statistics*, 42(6): 726–758.

[19] Corbett-Davies, S., Pierson, E., Feller, A., Goel, S. and A. Huq (2017). "Algorithmic decision making and the cost of fairness," *KDD: Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*.

[18] Feller, A., Grindal, T., Miratrix, L., and L. Page (2016). "Compared to what? Variation in the impact of early childhood education by alternative care type," *Annals of Applied Statistics*, 110(3): 1245–1285.

⋆ AERA award for outstanding publication in "Advances in Methodology"

[17] Ding, P., Feller, A., and L. Miratrix (2016). "Randomization inference for treatment effect variation," *Journal of the Royal Statistical Society, Series B*, 78(3): 655–671.

⋆ Winner, JSM student paper competition, ASA sections on survey research, government statistics, and social statistics

[16] Page, L., Feller, A., Miratrix, L., and M.-A. Somers (2015). "Principal stratification: A tool for understanding variation in program effects across endogenous subgroups," *American Journal of Evaluation*, 36(4): 514–531.

[15] Feller, A. and A. Gelman (2014). "Hierarchical models for causal effects," in *Emerging Trends in the Social and Behavioral Sciences*, ed. R. Scott and S. Kosslyn (Thousand Oaks, CA: Sage).

Applications to policy and the social sciences

[14] Feller, A., Connors, M., Weiland, C., Easton, J., Loewe, S. E., Francis, J., Kabourek, S., Levya, D. Shapiro, A., and G. Yeomans-Maldonado (2023+). "Addressing Missing Data Due to COVID-19: Two Early Childhood Case Studies." *Journal of Research on Educational Effectiveness*, accepted.

[13] Rogers, T. and A. Feller (2023). "Reducing student absenteeism by scaling behavioral research," in *What Works, What Doesn't (And When)*, Ed. D. Soman.

[12] Rogers, T. and A. Feller (2018). "Reducing student absences at scale by targeting parents' misbeliefs," *Nature Human Behavior*, 2(5): 335–342.

[11] Mitchell, S., Gelman, A., Ross, R., Chen, J., Bari, S., Huynh, U. K., Harris, M. Sachs, S., Stuart, E., Feller, A., Makela, S., Zaslavsky, A., McClellan, L., Ohemeng-Dapaah, S., Namakula, P., Palm, S., and J. Sachs (2018). "The Millennium Villages Project: the end-line evaluation," *Lancet Global Health*, 6(5): e500–e513.

[10] Morris, P., Connors, M., Friedman-Krauss, A., McCoy, D., Weiland, C., Feller, A., Page, L., Bloom, H., and H. Yoshikawa (2018). "New Findings on Impact Variation from the Head Start Impact Study: Informing the Scale-up of Early Childhood Programs," *AERA Open*, 4(2): 1–16.

[9] Barnes, L., Feller, A., Haselswerdt, J., and E. Porter (2018). "Information, Knowledge and Attitudes: An Evaluation of the Taxpayer Receipt," *Journal of Politics*, 80(2): 701–706.

[8] Rogers, T. and A. Feller (2016). "Discouraged by peer excellence: Exposure to exemplary peer performance causes quitting," *Psychological Science*, 27(3): 365–374.

[7] Feller, A., Gelman, A., and B. Shor (2012). "Red state/blue state divisions in the 2012 election," *The Forum*, 10(4): 127–131.

⋆ Companion publication in the *New York Times*: "Red versus Blue in a New Light," Nov. 12, 2012. with A. Gelman

Applications to biology

[6] Lemieux, J., Kyes, S., Otto, T., Feller, A., Eastman, R., Pinches, R., Berriman, M., Su, X.-Z., and C. Newbold (2013). "Genome-wide profiling of chromosome interactions in *Plasmodium falciparum* characterizes nuclear architecture and reconfigurations associated with antigenic variation," *Molecular Microbiology*, 90(3): 519–537.

[5] Mwai, L., Diriye, A., Masseno, V., Muriithi, S., Feltwell, T., Musyoki, J., Lemieux, J., Feller, A., Mair, Gunnar, Marsh, K., Newbold, C., Nzila, A., and C. Carret (2012). "Genome wide adaptations of *Plasmodium falciparum* in response to Lumefantrine selective drug pressure," *PLoS One*, 7(2): e31623.

[4] Lemieux, J.*, Feller, A.*, Holmes, C., and C. Newbold (2009). "In vivo profiles show continuous variation between two cellular populations," *Proceedings of the National Academies of Science*, 106(27): E71–E72.

[3] Lemieux, J.*, Gomez-Escobar, N.*, Feller, A.*, Carret, C., Amambua-Ngwa, A., Pinches, R., Daya, F. Kyes, S., Conway, D., Holmes, C., and C. Newbold (2009). "Statistical estimation of cell-cycle progression and lineage commitment in P. falciparum reveals a homogeneous pattern of transcription in ex vivo culture," *Proceedings of the National Academies of Science*, 106(18): 7559–7564.

(* indicates equal contribution)

Comments

[2] Ding, P. and A. Feller (2016). "Comment on 'Causal Inference Using Invariant Prediction: Identification and Confidence Intervals' by J. Peters, P. Buehlmann, and N. Meinshausen," *Journal of the Royal Statistical Society, Series B*, 78(5): 994–995.

[1] Feller, A. and E. Airoldi (2013). "Comment on 'How to find an appropriate clustering for mixed type variables with application to socio-economic stratification' by Hennig and Liao," *Journal of the Royal Statistical Society, Series C*, 62(3): 347–348.

Pre-prints and manuscripts under review

[R7] Ben-Michael, E.‡, Feller, A., Keele, L., and R. Kelz, R. "Estimating racial disparities in emergency general surgery."

[R6] Ben-Michael, E.‡, Feller, A., Hirshberg, D., and J. Zubizarreta. "The Balancing act in causal inference."

[R5] Bruns-Smith, D.‡, Dukes, O., Feller, A., and E. Ogburn. "Augmented balancing weights as linear regression."

[R4] Lee, J., Che, J., Rabe-Hesketh, S., Feller, A., and L. Miratrix. "Improving the estimation of site-specific effects and their distribution in multisite trials."

[R3] Lei, L., D'Amour, A., Ding, P., Feller, A., and J. Sekhon. "Distribution-free assessment of population overlap in observational studies."

[R2] Murray, J. and A. Feller. "A Weighting wiew of Bayesian nonparametric models for causal inference."

[R1] Sun, L.[‡], Ben-Michael, E., and A. Feller. "Using multiple outcomes to improve the Synthetic Control Method."

Software

[S2] Fifield, B., Ding, P., Feller, A., and L. Miratrix. `hettx` package for `R`.

[S1] Ben-Michael, E., Feller, A., and J. Rothstein. `augsynth` package for `R`.

Grants

Grants as PI or co-PI

[PI] Institute of Education Sciences, US Department of Education ($896,026), "Improving methods for policy impact evaluation with group panel data in education research," 2020 – 2024.

[PI] Hellman Family Foundation ($57,185), "What works in reducing gun violence? Assessing methods for estimating impacts of gun policy changes," 2019 – 2020.

[co-PI] National Science Foundation ($1,908,227), "Research and training grant: Advancing machine learning — causality and interpretability," 2018 – 2023.

[co-PI] Institute of Education Sciences, US Department of Education ($803,246), "Understanding and measuring treatment effect heterogeneity in large scale experiments and pseudo-experiments in education," 2015 – 2018.

[co-PI] Omidyar Network ($99,875), "The Taxpayer Receipt in the United Kingdom," 2014 – 2015.

Other grants as PI or co-PI: UC Berkeley Institute for Research on Labor and Employment (2015, 2019, 2020); UC Berkeley Opportunity Lab (2019); Harvard University Foundations of Human Behavior Initiative (2014).

Additional funded research

Arnold Ventures, "Evaluating the Intended and Unintended Effects of Opioid Prescribing Cap Policies," 2019 – 2021.

Institute of Education Sciences, US Department of Education, "Exploring the role of access to school-based pre-kindergarten in promoting equity in enrollment and academic outcomes," 2018 – 2020.

Spencer Foundation, "Using emerging methods with existing data from multi-site trials to learn about and from variation in educational program effects," project personnel, 2014 – 2017.

Select other technical advisory roles: US Department of Labor, America's promise job driven grant program evaluation; Get Ready Guilford Initiative; Baby's First Years research consortium; UK Medical Research Council, BISECT working group.

Select Honors and Fellowships

2023	Committee of Presidents of Statistical Societies (COPSS) Emerging Leader Award. *"For ground-breaking research in causal inference and program evaluation; for bridging statistics, public policy, and education research; and for commitment to building a more inclusive field."*
2022	Society for Research on Educational Effectiveness, Early Career Award
2019	Hellman Family Foundation Award
2019	Introductory Overview Lecture, Joint Statistical Meetings (with J. Hill)
2019	Outstanding Paper, *Journal of Research on Educational Effectiveness*
2018	Spencer Foundation/National Academy of Education Postdoctoral Fellowship
2017	Regents' Junior Faculty Fellowship, UC Berkeley
2016	AERA Award for Outstanding Publication in "Advances in Methodology"
2015	ASA Student Paper Competition Award
2015	Thomas R. Ten Have Award, Atlantic Causal Inference Conference
2014	Julius B. Richmond Fellowship, Harvard Center on the Developing Child
2014	Taubman Center Urban Dissertation Fellowship, Harvard Kennedy School
2013, 2014	Certificate of Distinction in Teaching, Harvard University
2011	Smith Family Graduate Science and Engineering Fellowship, Harvard University
2011	James Mills Peirce Fellowship, Harvard University
2008	Prize for Graduate Distinction, Lincoln College, Oxford
2008	Friedmann Endowed Prize in Music, Lincoln College, Oxford
2007	Rhodes Scholarship
2006	Phi Beta Kappa, Yale University

Teaching

<u>As instructor</u>

Statistics for Program Evaluation (PP 249): Fall 2016, Fall 2017, Fall 2019, Fall 2020, Fall 2021
Data Science for Public Policy (PP 290): Fall 2017, Spring 2020, Fall 2020, Spring 2022
Causal Inference Group (Stat 298): Fall 2016 – Present
Core Data Analysis and Visualization Workshop (PP 297): Fall 2016, Fall 2017
Analytics for Government and Policy (PP 290-10): Spring 2016

<u>Short courses</u>

Panel Data Methods for Policy Evaluation in Education Research, SREE April 2021
Heterogeneous Treatment Effects, SREE March 2019 (with Luke Miratrix)
Principal Stratification, SREE March 2017, NYU June 2014 (with Lindsay Page)

Professional service

Professional societies and meetings

American Statistical Association

2017–2022 Scientific and Public Affairs Advisory Committee (Vice Chair, 2020 – 2022)

American Causal Inference Conference

2022 Co-Chair, Annual Conference at UC Berkeley
2017, 2021 Program Committee (NYU and UT Austin)

Editorial service and peer review

Associate editor/editorial board:

2019 – *Journal of Causal Inference*
2019 – *Journal of Research on Educational Effectiveness*
2019 – *Journal of Statistics and Public Policy*

Co-editor, special issue of *Observational Studies* on heterogeneous treatment effects

Referee for *American Economic Journal: Economic Policy*, *American Journal of Epidemiology*, *American Journal of Evaluation*, *Annals of Applied Statistics*, *Biometrics*, *Biometrika*, *Biostatistics*, *Economics of Education Review*, *Econometrica*, *Educational Researcher*, *Evaluation Review*, *ACM Conference on Fairness, Accountability, and Transparency (FAccT)*, *Harvard Data Science Review*, *Journal of Agricultural, Biological, and Environmental Statistics*, *Journal of Applied Econometrics*, *Journal of Causal Inference Journal of the American Statistical Association*, *Journal of the Royal Statistical Society*, *Journal of Econometrics*, *Journal of Educational and Behavioral Statistics*, *Journal of Policy Analysis and Management*, *Journal of Research on Educational Effectiveness*, *New England Journal of Medicine*, *Observational Studies*, *Political Analysis*, *Quarterly Journal of Economics*, *Review of Economics and Statistics*, *Science*, *Statistics in Medicine*

Other reviews for American Educational Research Association (Quantitative Methods Awards, 2017), Chapman & Hall, National Science Foundation, Patient-Centered Outcomes Research Institute, Society for Research on Educational Effectiveness (Annual Meeting 2016, 2017, 2019, 2020, 2021, 2023), Spencer Foundation, W. T. Grant Foundation