

# Fredrik Sävje

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## Current appointments & affiliations

Associate Professor (starting July, 2024), Department of Economics, Uppsala University.

Associate Professor (untenured), Department of Political Science, Yale University.

Associate Professor (secondary), Department of Statistics & Data Science, Yale University.

Docent, Department of Economics, Uppsala University.

Fellow, Uppsala Center for Fiscal Studies, Uppsala University.

Fellow, Institute for the Foundations of Data Science, Yale University.

Fellow, Institution for Social & Policy Studies, Yale University.

## Past appointments

2017–2023 Assistant Professor, Department of Political Science, Yale University.

2018–2023 Assistant Professor (secondary), Department of Statistics & Data Science, Yale University.

2015–2017 Post-doctoral Fellow, Department of Political Science & Department of Statistics, UC Berkeley.

## Education

2015 Ph.D., Economics, Uppsala University.

2010 B.Sc., Political Science & Economics, Uppsala University.

## Publications

### *Peer-reviewed journal publications*

Harshaw, Sävje, Spielman & Zhang (2024). Balancing Covariates in Randomized Experiments with the Gram–Schmidt Walk Design. *Journal of the American Statistical Association*, in print.

Aronow, Robins, Saarinen, Sävje & Sekhon (2024). Nonparametric identification is not enough, but randomized controlled trials are. *Observational Studies*, in print.

Sävje (2024). Causal inference with misspecified exposure mappings: separating definitions and assumptions. *Biometrika*, 111(1), 1–15.

Harshaw, Sävje, Eisenstat, Mirrokni & Pouget-Abadie (2023). Design and analysis of bipartite experiments under a linear exposure-response model. *Electronic Journal of Statistics*, 17(1), 464–518.

Stommes, Aronow & Sävje (2023). On the reliability of published findings using the regression discontinuity design in political science. *Research & Politics*, 10(2).

Sävje (2022). On the inconsistency of matching without replacement. *Biometrika*, 109(2), 551–558.

Sävje, Higgins & Sekhon (2021). Generalized Full Matching. *Political Analysis*, 29(4), 423–447.

Sävje, Aronow & Hudgens (2021). Average treatment effects in the presence of unknown interference. *Annals of Statistics*, 49(2), 673–701.

Delevoye & Sävje (2020). Consistency of the Horvitz-Thompson estimator under general sampling and experimental designs. *Journal of Statistical Planning and Inference*, 207, 190–197.

Bengtsson, Sävje & Swartling Peterson (2020). Fetal iodine deficiency and schooling. *Scandinavian Journal of Economics*, 122(2), 582–621.

Higgins, Sävje & Sekhon (2016). Improving massive experiments with threshold blocking. *Proceedings of the National Academy of Sciences*, 113(27), 7369–7376.

### *Invited and conference publications*

Sävje (2024). Rejoinder: Causal inference with misspecified exposure mappings: separating definitions and assumptions. *Biometrika*, 111(1), 25–29.

Sävje (2021). Randomization does not imply unconfoundedness. *Workshop on the Neglected Assumptions in Causal Inference at ICML 2021*.

Sävje (2020). Comment: Matching Methods for Observational Studies Derived from Large Administrative Databases. *Statistical Science*, 35(3), 356–360.

Aronow & Sävje (2020). Review: The Book of Why. *Journal of the American Statistical Association*, 115(529), 482–485.

## **Software**

GSWDesign.jl: Julia package with a fast implementation of the Gram-Schmidt Walk for balancing covariates in randomized experiments (also R wrapper).

distances: R package with tools for distance metrics.

quickmatch: Quick Generalized Full Matching in R.

quickblock: Quick Threshold Blocking in R.

scclust: C library for size-constrained clustering.

## **Awards & fellowships**

Best Paper Award at 2022 NeurIPS Workshop on Causal Machine Learning for Real-World Impact, with Christopher Harshaw and Yitan Wang.

Yale Junior Faculty Fellowship, 2019–2020.

Gosnell Prize for Excellence in Political Methodology, 2018, with P. M. Aronow and Michael Hudgens.

## **Grants**

Planetary Solutions Project seed grant from the Climate Impact Innovation Fund and the Gordon Data and Environmental Sciences Research Grants, 2023–2024, USD 80,000, as PI with Megan Ayers and Luke Sanford (co-PI).

Swedish International Development Cooperation Agency, 2013–2015, SEK 2,595,000, with Niklas Bengtsson, Eva Mörk (PI) and Jonas Poulsen.

The Jan Wallander and Tom Hedelius foundation, 2013–2014, SEK 321,000.

## Research visits

- 2024 Data Science Lab, Hertie School. 2 weeks (scheduled).
- 2024 Department of Economics, European University Institute. 2 weeks (scheduled).
- 2024 Department of Mathematical Sciences, University of Copenhagen. 3 weeks (scheduled).
- 2024 Harvard Data Science Initiative, Harvard University. 4 weeks.
- 2023 Department of Political Science, University of Chicago. 6 weeks.
- 2019–2020 Department of Political Science & Graduate School of Business, Stanford University. Full AY.
- 2013–2014 Department of Economics, UC Berkeley. Full AY.

## Presentations

### *Invited presentations*

- 2024 Data Science Lab, Hertie School, scheduled.
- Department of Economics, European University Institute, scheduled.
- Department of Mathematical Sciences, University of Copenhagen, scheduled.
- Department of Quantitative Theory and Methods, Emory University.
- Harvard Data Science Initiative, Harvard University.
- 2023 Methodology, Organization, and Management Workshop, Harvard Business School.
- International Conference on Design of Experiments, University of Memphis.
- Applied Statistics Workshop, Harvard University.
- Ben Recht's Lab, UC Berkeley.
- Department of Economics, Yale University.
- 2021 Department of Economics, Rutgers University.
- Econometrics and Statistics Colloquium, University of Chicago Booth School of Business.
- Department of Political Science, NYU.
- Department of Statistics, Stanford.
- Cowles Foundation, New Haven.
- Online Causal Inference Seminar, Stanford.
- 2020 Department of Political Science, UC San Diego.
- Interdisciplinary Seminar in Quantitative Methods, University of Michigan.
- Gillings School of Global Public Health, UNC Chapel Hill.
- Causal Inference Group, UC Berkeley.
- 2019 Causal Learning with Interactions Conference, Cemmap, London.
- Causal Inference Group, Stanford University.
- Joint Statistical Meetings, Denver.

- 2018 Joint Statistical Meetings, Vancouver.  
Yamakawa Kenjiro Lecture, University of Tokyo.  
European Causal Inference Meeting, University of Florence.  
Department of Political Science, NYU.  
Department of Political Science, MIT.
- 2016 Columbia Business School, Columbia University.
- 2015 Department of Political Science, Yale University.  
Department of Statistics, Uppsala University.  
Institute for International Economic Studies, Stockholm University.
- 2014 Quantitative Methodology in the Social Sciences Seminar, UC Berkeley.  
Department of Economics, Uppsala University.
- 2013 Department of Statistics, Umeå School of Business and Economics.
- 2012 Department of Economics, Uppsala University.

*Contributed presentations*

- 2023 Society for Political Methodology (PolMeth), Stanford University.  
American Causal Inference Conference, UT Austin.
- 2022 CMStatistics, London.  
Latin American PolMeth, University of San Andrés.  
Society for Political Methodology (PolMeth), Washington University.  
American Causal Inference Conference, UC Berkeley.
- 2021 APSA Annual Meeting, Seattle.  
Society for Political Methodology, New York University.
- 2020 Society for Political Methodology, University of Toronto.
- 2019 Society for Political Methodology, MIT.  
Atlantic Causal Inference Conference, McGill University.
- 2018 APSA Annual Meeting, Boston.
- 2017 Society for Political Methodology, University of Wisconsin-Madison.  
Atlantic Causal Inference Conference, University of North Carolina.  
Midwest Political Science Association, Chicago.
- 2016 Midwest Political Science Association, Chicago.
- 2015 Society for Political Methodology, University of Rochester.  
UK Causal Inference Meeting, University of Bristol.
- 2013 Uppsala Center for Labor Studies, Uppsala University.  
Nordic Econometric Meeting, Norwegian School of Economics.

*Presentations as discussant*

- 2023 Society for Political Methodology, Stanford.
- 2022 Latin American PolMeth, University of San Andrés.  
Online Causal Inference Seminar, Stanford.
- 2021 Society for Political Methodology, New York University.  
Online Causal Inference Seminar, Stanford.
- 2020 Society for Political Methodology, University of Toronto.
- 2019 Society for Political Methodology, MIT.
- 2017 Midwest Political Science Association, Chicago.

**Teaching***Yale University*

- Data Science for Politics and Policy (undergrad). Spring 2018, 2019, 2021, 2022.
- Causal Inference and Research Design (grad). Spring 2021, Fall 2021, 2022.
- Foundations of Statistical Inference (grad). Spring 2019, Fall 2020, 2021, 2022.
- Advanced Quantitative Methods (grad). Fall 2017, 2018.
- The Application of Quantitative Methods (grad). Spring 2018.

*Uppsala University (teaching assistant)*

- Micro Theory I (grad). Fall 2011, 2012.
- Intermediate Micro Theory with Applications (undergrad). Spring 2011.
- Introductory Micro- and Macroeconomics (undergrad). Fall 2011, 2012.

**Students***Dissertation committee chair*

- Amanda Weiss, Political Science, Yale, 2022–present.
- Megan Ayers, Statistics, Yale, 2023–present.

*Dissertation committee member*

- Robin Wang, Political Science, Yale, 2021–present.
- Chris Harshaw, Computer Science, Yale, 2020–2022.
- Brandon Chow, Statistics & Data Science, Yale, 2019–2023.
- Kyle Peyton, Political Science, Yale, 2018–2020.
- Molly Offer-Westort, Political Science and Statistics & Data Science, Yale, 2017–2019.

*Dahl Research Scholar mentor*

- Akhil Rajan, Political Science, Yale, 2018–2019.

## Service

### *Yale University*

Graduate Admissions Committee, 2020–2021, 2022–2023.

Quantitative Methods General Exam Committee, 2019, 2020, 2021, 2022.

Organizer, MacMillan–CSAP Workshop on Quantitative Research Methods, 2018, 2019, 2021, 2022, 2023.

Social Science–Data Science Search Committee, 2018.

### *Disciplinary Service*

Ad-hoc reviewer, National Science Foundation, 2021, 2022.

Committee member, Gosnell Prize for Excellence in Political Methodology, 2019.

Reviewer, American Statistical Association Biometrics Section Travel Awards, 2018.

Session organizer, Joint Statistical Meetings, 2018, 2023.

### *Reviewer*

American Journal of Political Science; American Political Science Review; American Statistician; Annals of Applied Statistics; Annals of Statistics; Biometrics; Biometrika; Biostatistics; Canadian Journal of Statistics; Communications in Statistics - Theory & Methods; Econometrica; Electronic Journal of Statistics; European Journal of Political Economy; Journal of the American Statistical Association; Journal of Causal Inference; Journal of Computational and Graphical Statistics; Journal of Economic Behavior & Organization; Journal of Health Economics; Journal of Machine Learning Research; Journal of the Royal Statistical Society: Series A; Journal of the Royal Statistical Society: Series B; Political Analysis; Political Science Research & Methods; The R Journal; Review of Economic Studies; Statistics & Probability Letters; Statistics & Public Policy.

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