

# JAKE A. SOLOFF

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## ACADEMIC APPOINTMENT

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**Postdoctoral Scholar**, *The University of Chicago*  
Advisors: Rina Foygel Barber and Rebecca Willett

6/2022 – present.

## EDUCATION

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**PhD in Statistics**, *University of California, Berkeley*  
Advisors: Adityanand Guntuboyina and Michael I. Jordan

8/2016 – 5/2022.

**ScB in Mathematics**, *Brown University*  
Advisors: Richard Evan Schwartz and Erik B. Sudderth

9/2012 – 5/2016.

## RESEARCH INTERESTS

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Large-scale inference; Shape constraints; Optimization;  
Uncertainty quantification in ML; Game theory & statistics;  
High-dimensional statistics; Multiple hypothesis testing.

## ACADEMIC PAPERS

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- [8] J. A. Soloff, R. F. Barber, & R. Willett. Bagging provides assumption-free stability. 2023. [arXiv]
- [7] S. Bates, M. I. Jordan, M. Sklar, & J. A. Soloff. Principal-agent hypothesis testing. 2022. [arXiv]
- [6] D. Xiang, J. A. Soloff, & W. Fithian. A frequentist perspective on the local false discovery rate. 2022.
- [5] J. A. Soloff, D. Xiang, & W. Fithian. The edge of discovery: Controlling the local false discovery rate at the margin. 2022. [arXiv]
- [4] J. A. Soloff, A. Guntuboyina, & B. Sen. Multivariate, heteroscedastic empirical Bayes via nonparametric maximum likelihood. 2021. [arXiv]
- [3] J. A. Soloff, A. Guntuboyina, & M. I. Jordan. Covariance estimation with nonnegative partial correlations. 2020. [arXiv]
- [2] J. A. Soloff, A. Guntuboyina, & J. Pitman. Distribution-free properties of isotonic regression. *Electronic Journal of Statistics*, 13(2), 3243-3253, 2019. [journal] [arXiv]
- [1] J. A. Soloff, R. A. Márquez, & L. M. Friedler. Products of geodesic graphs and the geodetic number of products. *Discussiones Mathematicae Graph Theory*, Vol. 35, 2015. [journal]

## SCHOLARSHIPS AND AWARDS

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Eric Lehmann Citation for outstanding dissertation in theoretical statistics, 2022.  
IMS Hannan Graduate Student Travel Award, 2022.  
Bridgewater Fellowship in Data Science, 2020.  
David Blackwell Fund, 2019.  
Outstanding Graduate Student Instructor Award, 2018.  
First place team, Citadel National Data Open Championship, 2017.  
Leonard Chung-Wei Cheng Graduate Student Fund in Statistics, 2016.  
Albert A. Bennett Prize for exceptional accomplishment in mathematics major, 2016.  
Jerome L. Stein Memorial Award for undergraduate excellence in applied math, 2016.  
Phi Beta Kappa, elected junior year, 2015.  
Sidney E. Frank Scholarship, 2012 – 2016.

## SOFTWARE

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npeb: Python package on nonparametric maximum likelihood empirical Bayes (on github).

## PROFESSIONAL ACTIVITIES

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### Select Talks

(since 2021).

- [6] *University of Bristol Statistics Seminar*, Nov. 2022.
- [5] *12th International Conference on Multiple Comparison Procedures*, Aug. 2022.
- [4] Discussant, *International Seminar on Selective Inference*, Jul. 2022. [recording]
- [3] *International Seminar on Selective Inference*, Mar. 2022. [recording]
- [2] *Fourth Annual Berkeley-Stanford Econometrics Jamboree*, Nov. 2021.
- [1] *Berkeley-Davis joint colloquium*, Apr. 2021.

### Referee Service

*Annals of Statistics (AoS)*; *Journal of the American Statistical Association (JASA)*; *Journal of the Royal Statistical Society-Series B (JRSS-B)*; *Operations Research (OR)*

## TEACHING EXPERIENCE

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### Graduate student instructor at UC Berkeley

2017 – 2020.

Data, Inference, and Decisions, taught by M. I. Jordan and J. Steinhardt.

Theoretical Statistics II, taught by M. I. Jordan.

Head GSI, Principles and Techniques of Data Science, taught by F. Perez and J. Gonzalez.

Principles and Techniques of Data Science, taught by D. Nolan and J. Gonzalez.

### Assistant instructor at RI Department of Corrections

2016.

Introductory Geography, taught by S. Bloch.

### Teaching assistant at Brown University

2014 – 2015.

Curricular Advising Fellow, Crime and the City, taught by S. Bloch.

Recent Applications of Probability and Statistics, taught by S. Geman.

Computational Probability and Statistics, taught by S. Geman.

Crime and the City, taught by S. Bloch.