

Jonas Mikhaeil

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EDUCATION

Columbia University Ph.D. in Statistics, expected May 2027 Advisers: Michael Sobel and Andrew Gelman	<i>September 2022–present</i> New York, NY
Heidelberg University M.Sc. in Physics	<i>April 2020–March 2022</i> Heidelberg, Germany
Heidelberg University B.Sc. in Physics	<i>October 2016–February 2020</i> Heidelberg, Germany

PUBLICATIONS

Working Papers

An Optimal Transport based Approach to Distributional Group-Inequality

Jonas M. Mikhaeil and Michael Sobel.
Stone Center Working Paper Series. 2026.

Valid Inference when Testing Violations of Parallel Trends for Difference-in-Differences

Jonas M. Mikhaeil and Christopher Harshaw.
arXiv:2510.26470. October 30, 2025 (updated May 9, 2026).
Revise and resubmit at *Journal of Econometrics*.

Bayesian Adaptive Design for Neural Recruitment Curves

Vishweshwar Tyagi, Saihari S. Dukkipati, Daniel Twili, **Jonas M. Mikhaeil**, Andrew Gelman, Jason B. Carmel, and James R. McIntosh.
arXiv:2610.15000. October 10, 2026.

The Sequential Nature of Science: Quantifying Learning from a Sequence of Studies

Jonas M. Mikhaeil, Donald P. Green, and David Blei.
arXiv:2511.14996. November 19, 2025.

Sharp Bounds on the Variance of General Regression Adjustment in Randomized Experiments

Jonas M. Mikhaeil and Donald P. Green.
arXiv:2411.00191. October 31, 2024 (updated October 21, 2026).
Tom Ten Have Award, ACIC 2025.

Published Papers

Hierarchical Bayesian Models to Mitigate Systematic Disparities in Prediction with Proxy Outcomes

Jonas M. Mikhaeil, Andrew Gelman, and Philip Greengard.
Journal of the Royal Statistical Society Series A: Statistics in Society, 189(1), 242–255.
2026.

Russian Roulette: The Need for Stochastic Potential Outcomes when Utilities Depend on Counterfactuals

Andrew Gelman and **Jonas M. Mikhaeil**.
Biometrika, 112(4), asaf062. 2025.

On the Difficulty of Learning Chaotic Dynamics with RNNs

Jonas M. Mikhaeil, Zahra Monfared, and Daniel Durstewitz.
Advances in Neural Information Processing Systems, 35, 11297–11312. 2022.
Oral-equivalent paper.

Tractable Dendritic RNNs for Reconstructing Nonlinear Dynamical Systems

Manuel Brenner, Florian Hess, **Jonas M. Mikhaeil**, Leonard F. Bereska, Zahra Monfared, Po-Chen Kuo, and Daniel Durstewitz.

Proceedings of the 39th International Conference on Machine Learning, PMLR 162, 2292–2320. 2022.
Spotlight presentation.

Discussion Contributions

Contribution to the Discussion of “Balanced and Robust Randomized Treatment Assignments: The Finite Selection Model for the Health Insurance Experiment and Beyond” by Chattopadhyay, Morris, and Zubizarreta

Donald P. Green and **Jonas M. Mikhaeil**.

Journal of the Royal Statistical Society Series A: Statistics in Society, 189(4), 2105–2106. 2026.

TALKS AND PRESENTATIONS

Invited Talks and Panels

Distributional Group Inequality: Using Optimal Transport to Measure Inequality between Groups

- January 2027, International Conference on Health Policy Statistics (ICHPS), Annapolis, MD, USA. Upcoming.
Invited session: “Incorporating Normative Assumptions into Healthcare Disparities Evaluations.”
- December 2025, Integrating Normative Considerations into Inequality Measurement, Stone Center, University of Chicago, Chicago, USA.

The Hippocratic Oath and Statistics for Medicine: Are Counterfactual Utilities What We Need?

May 2026, American Causal Inference Conference, Salt Lake City, USA. Panel discussion.

Improved Statistical Inference for Common Causal Designs

April 2026, Social Statistics Seminar, London School of Economics and Political Science, London, UK.

Sharp Bounds on the Variance of General Regression Adjustment in Randomized Experiments

March 2025, Causal Inference Learning Group, Columbia University, New York, USA.

Contributed Talks

Sharp Bounds on the Variance of General Regression Adjustment in Randomized Experiments

April 2025, Minghui Yu Memorial Conference, Columbia University, New York, USA.

Hierarchical Bayesian Models to Mitigate Systematic Disparities in Prediction with Proxy Outcomes

September 2024, StanCon, Oxford, UK.

Poster Presentations

In Defense of the Pre-Test: Valid Inference when Testing Violations of Parallel Trends for Difference-in-Differences

- May 2026, American Causal Inference Conference, Salt Lake City, USA.
- April 2026, EuroCIM, Oxford, UK.
- October 2025, Data Science Frontiers: Society and Politics, New York University, USA.

Sharp Bounds on the Variance of General Regression Adjustment in Randomized Experiments

May 2025, American Causal Inference Conference, Detroit, USA.

Tom Ten Have Award.

Bayesian Workflow for the Evaluation of Constraints on Depositional Ice Growth Models with Cloud Chamber Observations

February 2024, 104th American Meteorological Society Annual Meeting, Baltimore, USA.

On the Difficulty of Learning Chaotic Dynamics with RNNs

December 2022, NeurIPS, New Orleans, LA, USA.

How to Train RNNs on Chaotic Neural Data?

September 2021, Bernstein Conference, online.

AWARDS AND FELLOWSHIPS

2025 **Tom Ten Have Award**, American Causal Inference Conference.
2017–2022 German Academic Scholarship Foundation scholarship.
 Awarded to fewer than 0.5% of German students.

TEACHING EXPERIENCE

Instructor of Record

STAT S1201, Calculus-Based Introduction to Statistics *Summer 2025*
Columbia University

Teaching Assistant

STATG5235 Causal Inference *Fall 2026*
Columbia University

STATW2103 Applied Linear Regression Analysis *Spring 2026*
Columbia University

STATG6102 Applied Statistics II (Ph.D. level) *Spring 2025*
Columbia University

STATG6101 Applied Statistics I (Ph.D. level) *Fall 2024*
Columbia University

POLSW4726 Quantitative Methods IV (Ph.D. political science / master's statistics) *Spring 2024*
Columbia University

STATUN3105 Applied Statistical Methods *Fall 2023*
Columbia University

STATW5703 Statistical Inference and Modeling *Spring 2023*
Columbia University

STATW5203 & STATW5204 Probability & Statistical Inference *Fall 2022*
Columbia University

PROFESSIONAL SERVICE

Journal reviewer: *Biometrika*, *Journal of Causal Inference*.