

Haben Michael

Contact Information	Department of Mathematics & Statistics Lederle Graduate Research Tower 1336 University of Massachusetts Amherst, MA 01003-9305	<i>Phone:</i> (413) 577-9781 <i>E-mail:</i> hmichael@math.umass.edu <i>Website:</i> https://haben-michael.github.io
Education	Ph.D., Statistics, Stanford University, 2017 Ph.D. Minor, Computer Science Dissertation: Evaluating Diagnostics Under Dependency Constraints Advisors: Lu Tian, Ingram Olkin	
	J.D., Yale Law School, 2010	
	B.S., Mathematics, Stanford University, 2004	
Employment	Department of Mathematics & Statistics, University of Massachusetts Assistant Professor	Sept. 2019–present
	Department of Statistics, The Wharton School, University of Pennsylvania Post-doctoral Research Associate	Sept. 2017–Sept. 2019
	Wachtell, Lipton, Rosen & Katz Corporate Associate	Sept. 2010–June 2012
Research Interests	Causal inference Diagnostic assessment Meta-analysis Longitudinal data analysis Applications to HIV drug trials	

Publications

Pre-prints and submitted manuscripts

- [2] Haben Michael. *Results relating to a conjecture on the validity of a certain hypothesis test*. Tech. rep. University of Massachusetts, 2025.
- [1] Alexis Doyle-Connolley and Haben Michael. “Nonparametric estimation of the AUC of an index with estimated parameters”. Submitted. 2024.
- [3] Haben Michael. “Testing for a difference in AUCs based on LDA fitted values”. Under review. 2024.
- [6] Haben Michael, Angelina Chen, and Lu Tian. “Exact Inference on a Linear Combination of Multinomial Probabilities”. Submitted. 2024.
- [7] Haben Michael, Yifan Cui, and Eric J. Tchetgen Tchetgen. “Efficient and Robust Estimation of Marginal Structural Models for Time-varying Endogenous Treatments”. In progress. 2024.

Published

- [4] Haben Michael. “Inference on the difference of AUCs based on fitted values under the null”. In: *Communications in Statistics- Theory and Methods* (2025), pp. 1–20.
- [5] Haben Michael. “The effect of screening for publication bias on the outcomes of meta-analyses”. In: *Scandinavian Journal of Statistics* 52.1 (2025), pp. 513–531.
- [8] Haben Michael. “The power functions of Begg’s and Egger’s tests for publication bias”. In: *Statistica Neerlandica* 79.1 (2025), e12364.
- [0] Yifan Cui, Haben Michael, Frank Tanser, and Eric Tchetgen Tchetgen. “Instrumental variable estimation of the marginal structural Cox model for time-varying treatments”. In: *Biometrika* 110.1 (2023), pp. 101–118.
- [11] Haben Michael, Yifan Cui, Scott Lorch, and Eric Tchetgen Tchetgen. “Instrumental Variable Estimation of Marginal Structural Mean Models for Time-Varying Treatment”. In: *Journal of the American Statistical Association* 0.0 (2023), pp. 1–12.
- [12] Haben Michael and Musie Ghebremichael. “A correction to Begg’s test for publication bias”. In: *Communications in Statistics - Theory and Methods* 53.21 (2023), pp. 7678–7698.
- [13] Musie Ghebremichael and Haben Michael. “Comparison of the binormal and Lehman receiver operating characteristic curves”. In: *Communications in Statistics - Simulation and Computation* 53.2 (2021), pp. 772–785.
- [14] Joseph Makhema et al. “Universal testing, expanded treatment, and incidence of HIV infection in Botswana”. In: *New England Journal of Medicine* 381.3 (2019), pp. 230–242.
- [15] Haben Michael, Suzanne Thornton, Minge Xie, and Lu Tian. “Exact inference on the random-effects model for meta-analyses with few studies”. In: *Biometrics* 75.2 (2019), pp. 485–493.
- [16] Haben Michael, Lu Tian, and Musie Ghebremichael. “The ROC curve for regularly measured longitudinal biomarkers”. In: *Biostatistics* 20.3 (2019), pp. 433–451.
- [0] Eric J. Tchetgen Tchetgen, Haben Michael, and Yifan Cui. *Marginal Structural Models for Time-varying Endogenous Treatments: A Time-Varying Instrumental Variable Approach*. Tech. rep. Technical Report, Department of Statistics, The Wharton School. Department of Statistics, The Wharton School, Sept. 2018.
- [18] Haben Michael and Lu Tian. “Discussion of “A risk-based measure of time-varying prognostic discrimination for survival models,” by C. Jason Liang and Patrick J. Heagerty””. In: *Biometrics* 73.3 (2017).
- [19] Abraar Karan, Prashanth Somasundaram, Haben Michael, Aryan Shayegani, and Hylton Mayer. “The effect of multimedia interventions on the informed consent process for cataract surgery in rural South India”. In: *Indian Journal of Ophthalmology* 62.2 (2014), p. 171.

Work on publications [14]–[19] was all or primarily completed prior to my employment at the University of Massachusetts.

Invited Presentations	New England Statistics Symposium, Boston, MA, June, 2023 London School of Economics Joint Econometrics and Statistics Seminar, London, UK, February 2023 Pan-African Scientific Research Council, Abuja, Nigeria (virtual), Dec. 2022 UConn Statistics Seminar, Storrs, CT, Oct. 2022 UMass Amherst, Applied Math Seminar, Amherst, MA, Oct. 2021 UMass Amherst, Biostatistics Seminar, Amherst, MA, Nov. 2019 UCLA Biostatistics Seminar, Los Angeles, CA, April 2019 Eastern Northeast Regional Spring Meeting, Philadelphia, PA, March 2019 Penn Center for Causal Inference Seminar, Philadelphia, PA, March 2019 University of Florida Biostatistics Seminar, Gainesville, FL, Feb. 2019 Meta-Research Innovation Center at Stanford Forum, Stanford, CA, Apr. 2016
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Teaching	University of Massachusetts, Department of Mathematics and Statistics
	Stat 310: Fundamental Concepts of Statistics Fall 2023 (2 sections), Fall 2021
	Stat 516: Statistics II Fall 2022 (2 sections), Spring 2021 (2 sections), Fall 2021, Fall 2019 (2 sections)
	Stat 639: Time Series Analysis Fall 2023
	Stanford University, Statistics Department
	Statistics 195: Statistical Computing 1 quarter per year, 2013–2017

300/500-numbered courses are regular upper-undergraduate level; 600-numbered courses are graduate topics courses.

Mentoring	Post-doctoral
	Budhinath Padhy, Statistics VAP 2020–21 currently at the Dept. of Defense
	Shixiao Zhang, Statistics VAP (co-advisor) 2021–22
	Doctoral
	Alexis Doyle-Connolley (committee chair) 2022–present Rui Hu (committee member) 2022–present Zhou Tang (committee member) 2021–2023
	Masters and below
	Nina Roche (Computer Science, thesis committee member) 2021–22 Gregory Lederer (faculty supervisor for externship) Spring 2023, Fall 2023 Project supervisor for Stat 197SC, intro stats for 15–20 high school and freshmen students Summer 2022 10–15 math major advisees 2020–present

Department Service	Climate Committee, member Statistics and Probability Seminar Series, co-chair Statistics Graduate Admissions, chair Statistics Graduate Admissions, member Tenure-track Faculty Search Committee, member Permanent Lecturer Search Committee, member VAP Search, Statistics subcommittee chair Liaison to the Five Colleges Statistics Group	2023–24, 2021–22, 2020–21 2021–22, 2020–21, 2019–20 2023–24 2021–22 2022–23 2021–22 2022–23 2019–2023
Professional Service	Student Award Committee, New England Statistics Society Organizer, Special Session on Recent Advances in Causal Inference I, II, and III, AMS Sectional Meeting, Amherst, MA Ad-hoc Reviewer for <i>The American Statistician</i> , <i>Journal of the Royal Statistical Society Series B and C</i> , <i>Biometrics</i> , <i>Electronic Journal of Statistics</i> , <i>Statistics in Medicine</i> , <i>Statistical Methods in Medical Research</i> , <i>Biometrical Journal</i>	2024 2022