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University of Massachusetts *Website:* <https://haben-michael.github.io>
Amherst, MA 01003-9305

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
Advisor: Eric Tchetgen Tchetgen
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

- [1] Alexis Doyle-Connolley and Haben Michael. “Nonparametric estimation of the AUC of an index with estimated parameters”. Submitted. 2024.
- [2] Haben Michael. “Gaffke’s Conjecture on an Exact Confidence Interval for a Bounded Mean”. In progress. 2024.
- [3] Haben Michael. “Testing for a difference in AUCs based on LDA fitted values”. Submitted. 2024.
- [4] Haben Michael. “Inference on the difference of estimated index AUCs under the null”. Submitted. 2024.
- [5] Haben Michael. “The effect of screening for publication bias on the outcomes of meta-analyses”. Under revision at Scandinavian Journal of Statistics. 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.
- [8] Haben Michael and Musie Ghebremichael. “Power Analysis of Common Tests for Publication Bias”. To appear in *Statistica Neerlandica*. 2024.
- [9] Haben Michael and Lu Tian. “The Population and Personalized AUCs for Clustered Data”. Under revision at *Statistica Sinica*. 2024.

Published

- [10] 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* 0.0 (2023), pp. 1–21.
- [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.
- [17] 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. arXiv:1809.05422. 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

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	2023–24, 2021–22, 2020–21
	Statistics and Probability Seminar Series, co-chair	2021–22, 2020–21, 2019–20
	Statistics Graduate Admissions, chair	2023–24
	Statistics Graduate Admissions, member	2021–22
	Tenure-track Faculty Search Committee, member	2022–23
	Permanent Lecturer Search Committee, member	2021–22
	VAP Search, Statistics subcommittee chair	2022–23
	Liaison to the Five Colleges Statistics Group	2019–2023

Professional Service	Student Award Committee, New England Statistics Society	2024
	Organizer, Special Session on Recent Advances in Causal Inference I, II, and III, AMS Sectional Meeting, Amherst, MA	2022
	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>	