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Aaron Fisher

Education

2011–Present **PhD Candidate in Biostatistics**, *Johns Hopkins Bloomberg School of Public Health*, Baltimore, MD.
Advisors: Vadim Zipunnikov & Brian Caffo

2006–2010 **BA in Economics**, *University of Rochester*, Rochester, NY.
Summa cum laude

Academic Papers

Peer-Reviewed Publications **A. J. Fisher**, G. B. Anderson, R. Peng, J. Leek (2014). A randomized trial in a massive online open course shows people don't know what a statistically significant relationship looks like, but they can learn. *PeerJ.* (link; 6,428 unique visitors as of September 1, 2015).

To Appear **A. J. Fisher**, B. Caffo, B. Schwartz, V. Zipunnikov (2015). Fast, Exact Bootstrap Principal Component Analysis for $p > 1$ million. *Journal of the American Statistical Association (TM)*. (link).

Submitted R. Y. Coley, **A. J. Fisher**, M. Mamawala, H. B. Carter, K. J. Pienta, S. L. Zeger (2015). Bayesian Joint Hierarchical Model for Prediction of Latent Health States with Application to Active Surveillance of Prostate Cancer. (link).

T. Qian, E. Colantuoni, **A. J. Fisher**, M. Rosenblum (2015). Impact of Delayed Outcomes, Accrual Rates, and Prognostic Variables on a Simulated Randomized Trial with Adaptive Enrichment. (link).

Y. Webb-Vargas, S. Chen, **A. J. Fisher,** A. Mejia, Y. Xu, C. Crainiceanu, B. Caffo, M. A. Lindquist (2014). Big Data and Neuroimaging. *Statistics in Biosciences (Invited Submission).*

A. J. Fisher, H Jaffee, M Rosenblum (2014). interAdapt – An Interactive Tool for Designing and Evaluating Randomized Trials with Adaptive Enrollment Criteria. (link).

Technical Reports **A. J. Fisher,** R. Y. Coley, S. L. Zeger (2015). Fast Out-of-Sample Predictions for Bayesian Hierarchical Models of Latent Health States.

Reviewer

2014 Risk Analysis

Software

bootSVD An R package for implementing fast, exact bootstrap principal component analysis and singular value decompositions for high dimensional data (i.e. >1 million covariates). Matrices too large for memory can be entered as class `ff` objects, with contents stored on disk. (CRAN link; GitHub link)

ggBrain An R package for beautiful brain image figures (GitHub link)

interAdapt An interactive tool for designing and evaluating randomized trials with adaptive enrollment criteria (Shiny App link; CRAN link; Github link).

Professional Experience

2010 (Summer) **Structured Decisions Corporation**, *Newton*, MA.
Intern Analyst - Background research project for a linear programming application

Computer Skills

Advanced Skills: R

Basic Skills: git, Python, C, D3.js, MATLAB, stata, shell scripting, LaTeX

Awards and Scholarships

2014 **The June B. Culley Award:** Honors outstanding achievement by a Biostatistics student on his or her school-wide oral examination paper

2012-present **Doctoral Training Grant in Environmental Biostatistics:** Provides funding for at least three years

2006-2010 **Undergraduate Awards:** Phi Beta Kappa; John Dows Mairs Prize (University of Rochester Economics Dept); Omicron Delta Epsilon International Honor Society for Economics; Theta Chi Long, Walter, Ott Award; Theta Chi Valentine H. Zahn Fund

Teaching

Co-Instructor

2015 Statistical Reasoning I and II: My role included teaching independently for 13 hours of lectures *(JHSPH Summer Institute of Epidemiology and Biostatistics)*

Guest Lecturer

2013 Essentials of Probability and Statistical Inference I-II *(JHSPH)*

Teaching Assistant with Content Design

2012-2014 Essentials of Probability and Statistical Inference I-IV: My role included designing and administering a weekly 1-hour lab lecture *(JHSPH)*

Teaching Assistant without Content Design

2015 Facilitator at JHU Data Science Hackathon: Assisted a team through the process of scraping web data and building a shiny app (3-day event)

2014-2015 Statistical Methods in Public Health I, II and IV: This (with lab lecture component in term II), *(JHSPH)*

2012 Statistical Reasoning I and II, *(JHSPH Summer Institute of Epidemiology and Biostatistics)*

Educational Presentations

2013-2015 JHU Biostatistics Computing Club: I have given talks on environments in R, and on LaTeX.

2013-2015 JHU Biostatistics Journal Club: I have given talks on high dimensional asymptotics, and on adaptive clinical trials.

Conference Presentations

2015 "A Randomized Trial in a Massive Online Open Course Shows People Don't Know What a Statistically Significant Relationship Looks Like, but They Can Learn." JSM, Seattle WA. *Contributed Speed Session & Poster.*

2015 "Fast Exact Bootstrap Principal Component Analysis for $p > 1$ million." ENAR, Miami, FL. *Contributed Talk.*

2014 "Fast, Exact Bootstrap Principal Component Analysis for $p > 1$ Million." (4th Annual Hopkins Imaging Conference) Baltimore, MD, *Invited Short Talk & Poster.*

2014 "Fast Exact Bootstrap Principal Component Analysis for $p > 1$ million: Leveraging Low-Dimensional Structure Across High-Dimensional Bootstrap Samples." JSM, Boston, MA. *Contributed Speed Session & Poster.*

2014 "People Can't See Statistical Significance: A Massive Randomized Trial on the Visual Perception of Relationships." ENAR Spring Meeting, Baltimore, MD, *Contributed Talk.*

Other Leadership Roles

2014-2015 JHU Biostatistics Meat Chili Champion

2013-2014 JHU Biostatistics Vegetarian Chili Champion

2012-2013 Co-organizer of JHU Biostatistics Computing Club, with Prasad Patil (speaker schedule link)

Last updated: October 8, 2015