ISABEL ROSE FULCHER

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EDUCATION

Harvard University — **Cambridge, MA**
Doctor of Philosophy, Biostatistics — March 2019
Dissertation Advisor: Eric Tchetgen Tchetgen
Dissertation Title: "Statistical Inference for Causal Mechanisms: Mediation and Interference"

Harvard University — **Cambridge, MA**
Masters of Arts, Biostatistics — May 2016

McGill University — **Montreal, QC**
Bachelor of Arts and Science, Mathematics and Anthropology — May 2012

ACADEMIC APPOINTMENTS

Harvard Data Science Initiative — **Cambridge, MA**
Postdoctoral Fellow — September 2019 – Current

Department of Global Health and Social Medicine, Harvard Medical School — **Boston, MA**
Postdoctoral Fellow — January 2019 – August 2019
Advisers: Bethany Hedt-Gauthier and Eric Tchetgen Tchetgen

PUBLICATIONS

PEER REVIEWED

5. **Fulcher, I. R.**, Shpitser, I., & Tchetgen Tchetgen, E. J. (2019). Robust inference on population indirect causal effects: the generalized front-door criterion. Journal of the Royal Statistical Society Series B. DOI: 10.1111/rssb.12345

4. **Fulcher, I. R.**, Shi, X., & Tchetgen Tchetgen, E. J. (2019). Estimation of natural indirect effects robust to unmeasured confounding and mediator measurement error. Epidemiology, 30(6), 825-834.

3. Janiak, E., **Fulcher, I. R.**, ..., & Goldberg, A. (2019). Impact of Massachusetts' parental involvement law on procedural timing among adolescents seeking abortion. Obstetrics & Gynecology, 133(5): 978-986.

2. Bao, E.L., Lareau, C. A., Brugnara, C., **Fulcher, I. R.** et al. (2019). Heritability of fetal hemoglobin, white cell count, and other clinical traits from a sickle cell disease family cohort. American Journal of Hematology. DOI: 10.1002/ajh.25421.

1. **Fulcher, I. R.**, Tchetgen Tchetgen E. J., & Williams, P. L. (2017). Mediation analysis for censored survival data under an accelerated failure time model. Epidemiology, 28(5), 660-666.

PRE-PRINTS

1. Tchetgen Tchetgen, E. J., **Fulcher, I. R.**, and Shpitser, I. (2018). Auto-g-computation of causal effects on a network. *In revision*. arXiv preprint arXiv:1709.01577.

HONORS & AWARDS

University of Florida Statistics Workshop Travel Award	2019
National Science Foundation Travel Award for Atlantic Causal Inference Conference	2018
Barry R. and Irene Tilenius Bloom Fellowship	2018
Harvard University Distinction in Teaching	2017
Harvard T.H. Chan School of Public Health Rose Traveling Fellowship	2017
Maternal Health Task Force Travel Award	2017
Statistics in Epidemiology Young Investigator Award	2017
McGill University Dean's Honour List	2012
McGill University Golden Key Society	2010, 2011, 2012

INVITED TALKS

"Improving the delivery of healthcare to pregnant women in sub-Saharan Africa with statistics and data science." Mathematics and Statistics Colloquium, Colby College, Waterville, ME (December 2019).

"Bayesian auto-g-computation of network causal effects: incarceration and infection in a high risk network." Joint Statistical Meetings, Denver, CO (July 2019).

"Bayesian auto-g-computation of network causal effects: incarceration and infection in a high risk network." New England Statistical Society, Hartford, CT (May 2019).

CONFERENCE PARTICIPATION

CONTRIBUTED TALKS

"The Generalized Front-Door Formula for Estimation of Indirect Causal Effects of a Confounded Treatment." ENAR Spring Meeting, Atlanta, GA (2018).

"Data for decision-making in digital health programs: how analysis of routine data from the Safer Deliveries program in Zanzibar improved program implementation and mothers' outcomes." Global Digital Health Forum, Washington, DC (2017).

"Mediation Analysis for Censored Survival Data under an Accelerated Failure Time Model." Joint Statistical Meetings, Baltimore, MD (2017).

"The Generalized Front-door Formula for Identification of Partial Causal Effects." ENAR Spring Meeting, Washington, DC (2017).

"Mediation Analysis for Censored Survival Data under an Accelerated Failure Time Model." ENAR Spring Meeting, Austin, TX (2016).

POSTERS

"Bayesian auto-g-computation of network causal effects: incarceration and infection in a high risk network." 21st Meeting of New Researchers in Statistics and Probability. Fort Collins, CO (2019).

"Estimation of natural indirect effects robust to unmeasured confounding and mediator measurement error." University of Florida Winter Workshop, Gainesville, FL (2019).

"Nonparametric identification and robust estimation of indirect causal effects in the presence of exposure-outcome confounding." Atlantic Causal Inference Conference, Pittsburgh, PA (2018).

"Auto-g-computation of causal effects on a sexual and injection-drug use network." Harvard Data Science Conference, Cambridge, MA (2018).

"Working Towards Safer Deliveries in Zanzibar, Tanzania." Future Health Campaign Celebration, Harvard T.H. Chan School of Public Health, Boston, MA (2018).

"Nonparametric identification and robust estimation of indirect causal effects in the presence of exposure-outcome confounding." Atlantic Causal Inference Conference, Pittsburgh, PA (2018).

TEACHING EXPERIENCE

Global Initiative for Neuropsychiatric Genetics Education in Research — **Addis Ababa, Ethiopia**
Teaching Fellow, Interactive Biostatistics Workshop — November 2019

Harvard T.H. Chan School of Public Health — **Boston, MA**
Instructor, Biostatistics Preparatory Course: Methods and Computing in R — Summer 2018
Instructor, Stata Orientation for Incoming Graduate Students — Summer 2016, 2017, 2018
Teaching Fellow, Global Initiative for Neuropsychiatric Genetics Education in Research — Spring 2018
Head Teaching Assistant, ID 201: Core Principles of Biostatistics and Epidemiology — Fall 2015, 2016, 2017
Teaching Assistant, HPM 543: Quantitative Methods in Program Evaluation — Spring 2017
Teaching Assistant, BIO 507: Methods for Monitoring and Evaluation — Spring 2016

University of Global Health Equity — **Kigali, Rwanda**
Teaching Assistant, Program Monitoring, Evaluation, and Research Methods — Spring 2017, 2018

D-tree International — **Zanzibar, Tanzania**
Instructor, Data Analysis and Stata Software Training Course — Summer 2017

McGill University — **Montreal, QC**
Teaching Assistant, MATH 323: Probability — Fall 2010, 2011
Teaching Assistant, MATH 324: Statistics — Spring 2012

ACADEMIC CONSULTING EXPERIENCE

Bridge to Health USA — May 2019 – Present
Planned Parenthood League of Massachusetts — August 2017 – Present

D-tree International, Tanzania May 2017 – Present
Department of OB/GYN/RS, University of Pittsburgh School of Medicine April 2018 – March 2019

INDUSTRY EXPERIENCE

ZS Associates **Evanston, IL**
Business Associate September 2012 – July 2014

PROFESSIONAL SERVICE

JOURNAL PEER REVIEWER

Annals of Global Health
BMJ Open
Biometrics
Epidemiology
Journal of Causal Inference
Statistical Methods in Medical Research

UNIVERSITY ACTIVITY

Mentor, Pipelines into Biostatistics Summer Program, Harvard T.H. Chan School of Public Health 2018
Student Committee Chair, Department of Biostatistics, Harvard T.H. Chan School of Public Health 2018
Organizer, HIV Working Group, Department of Biostatistics, Harvard T.H. Chan School of Public Health 2017