

# ISABEL ROSE FULCHER

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## EDUCATION

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### Harvard University

Doctor of Philosophy, Biostatistics

Dissertation Advisor: Eric Tchetgen Tchetgen

Dissertation Title: “Statistical Inference for Causal Mechanisms: Mediation and Interference”

Cambridge, MA

March 2019

### Harvard University

Masters of Arts, Biostatistics

Cambridge, MA

May 2016

### McGill University

Bachelor of Arts and Science, Mathematics and Anthropology

Montreal, QC

May 2012

## ACADEMIC APPOINTMENTS

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### Harvard Data Science Initiative

*Postdoctoral Fellow*

Cambridge, MA

September 2019 – Current

### Department of Global Health and Social Medicine, Harvard Medical School

*Postdoctoral Fellow*

Advisers: Bethany Hedt-Gauthier and Eric Tchetgen Tchetgen

Boston, MA

January 2019 – August 2019

## PUBLICATIONS

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### PEER REVIEWED

4. **Fulcher, I. R.**, Shi, X., & Tchetgen Tchetgen, E. J. (2019). Estimation of natural indirect effects robust to unmeasured confounding and mediator measurement error. *In press at Epidemiology*. arXiv preprint arXiv:1808.03692.
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.

2. **Fulcher, I. R.**, Shpitser, I., & Tchetgen Tchetgen, E. J. (2018). Robust inference on indirect causal effects. *In revision*. arXiv preprint arXiv:1711.03611.

## HONORS & AWARDS

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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

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

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

## CONFERENCE PARTICIPATION

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### PRESENTATIONS

"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

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### **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

## RESEARCH & INDUSTRY EXPERIENCE

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### **Planned Parenthood League of Massachusetts**

**Boston, MA**

*Statistical Consultant*

August 2017 – Present

### **D-tree International**

**Zanzibar, Tanzania**

*Researcher*

May 2017 – Present

### **Department of OB/GYN/RS, University of Pittsburgh School of Medicine**

**Pittsburgh, PA**

*Statistical Consultant*

April 2018 – Present

### **ZS Associates**

**Evanston, IL**

*Business Associate*

September 2012 – July 2014

## PROFESSIONAL SERVICE

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### JOURNAL PEER REVIEWER

Annals of Global Health

BMJ Open

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