Caleb H. Miles
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# EDUCATION

2015 Ph.D. in Biostatistics, Harvard University
Dissertation Title: Semiparametric Methods for Causal Mediation Analysis and Measurement Error
Thesis Adviser: Eric J. Tchetgen Tchetgen
Minor Field of Study: Epidemiology of HIV

2009 B.S. with Honors in Mathematics, University of Alabama, *magna cum laude*
Minor Field of Study: Engineering

# ACADEMIC APPOINTMENTS

2018–present Assistant Professor, Department of Biostatistics, Columbia University Mailman School of Public Health

2015–2018 Postdoctoral Fellow, Division of Biostatistics, University of California, Berkeley
Adviser: Mark J. van der Laan

# PUBLICATIONS

## Refereed Journal Articles

**Miles**, **C.H.**, Schwartz, J., and Tchetgen Tchetgen, E. J. (2018). A class of semiparametric tests of treatment effect robust to confounder measurement error. *Statistics in Medicine*, 37(24), 3403-3416.

**Miles**, **C.H.**, Shpitser, I., Kanki, P., Meloni, S., and Tchetgen Tchetgen, E.J. (2017). Quantifying an adherence path-specific effect of antiretroviral therapy in the Nigeria PEPFAR program. *Journal of the American Statistical Association*, 112(520), 1443-1452.

**Miles**, **C.H.**, Kanki, P., Meloni, S., and Tchetgen Tchetgen, E.J. (2017). On partial identification of the natural indirect effect. *Journal of Causal Inference*, 5(2).

### Manuscripts in Submission

**Miles, C.H.**, Petersen, M., and van der Laan, M.J. (2018). Causal inference when counterfactuals depend on the proportion of all subjects exposed. (In revision for *Biometrics*) preprint arXiv:1710.09588v2

**Miles, C.H.**, Shpitser, I., Kanki, P., Meloni, S., and Tchetgen Tchetgen, E.J. (2017). On semiparametric estimation of a path-specific effect in the presence of mediator-outcome confounding. (In revision for *Biometrika*) preprint arXiv:1710.02011

## AWARDS & HONORS

2016 The Biometrics Section of the American Statistical Association's travel award

2015 The Health Policy Statistics Section of the American Statistical Association's student paper award

2014 Travel scholarship, Summer Institute in Statistics and Modeling in Infectious Diseases. University of Washington, Seattle.

2009 Phi Beta Kappa

2005-2009 Presidential Scholarship, University of Alabama

## RESEARCH SUPPORT

2017–2018 Preterm Birth Initiative, University of California, San Francisco.
Role: Lead statistician.
Responsibilities: Oversee impact evaluation of two large facility-level implementation projects to improve preterm birth outcomes in East Africa. Supervise doctoral student.

## INVITED TALKS

2018 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Levin Lecture Series, Columbia University, New York, NY

2018 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, Vanderbilt University, Nashville, TN

2018 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Statistics Seminar, Colorado State University, Fort Collins, CO

2018 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, MD Anderson Cancer Center, Houston, TX

2018 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, University of Pennsylvania, Philadelphia, PA

2018 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, Kaiser Permanente Washington Health Research Institute, Seattle, WA

2017 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, New York University Division of Biostatistics, New York, NY

2017 "Partial Identification Bounds and Path-Specific Effects: Two (More) Options When Faced with Exposure-Induced Confounding", Joint Statistical Meetings, Baltimore, MD

2017 "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", Eastern North American Region of the International Biometric Society Spring Meeting, Washington, DC

2016 "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", Joint Statistical Meetings, Chicago, IL

2016 "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", Biostatistics Seminar, University of Washington Department of Biostatistics, Seattle, WA

2016 "A Class of Semiparametric Tests of Treatment Effect Robust to Measurement Error of a Confounder", Biostatistics Seminar Series, University of California, Davis Graduate Group in Biostatistics, Davis, CA

2015 "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", Joint Statistical Meetings, Seattle, WA

2015 "Partial Identification of the Pure Direct Effect Under Exposure-Induced Confounding", Eastern North American Region of the International Biometric Society Spring Meeting, Miami, FL

2015 "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", McGill University Biostatistics Seminar, Montreal, Canada

2015 "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", University of North Carolina Causal Inference Research Group, Chapel Hill, NC

2015 "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", Biostatistics Seminar Series, University of California, Berkeley Division of Biostatistics, Berkeley, CA

2015 "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", Johns Hopkins University Causal Inference Group, Baltimore, MD

2014 "Identification of the Natural Indirect Effect Under Various Models", Joint Statistical Meetings, Boston, MA

2012 "Background and Recent Developments in Causal Mediation Analysis", Joint Statistical Meetings, San Diego, CA

# CONFERENCE ACTIVITY

### Contributed Talks

2013 "Semiparametric Estimation of Path-Specific Effects in the Presence of Unmeasured Confounding and Exposure-Induced Confounding", Joint Statistical Meetings, Montreal, Canada.

2016 "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", International Biometric Conference, Victoria, Canada

### Posters

2017 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", IMS New Researchers Conference, Baltimore, MD

2017 "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Atlantic Causal Inference Conference, Chapel Hill, NC

2013 "Semiparametric Estimation of Path-Specific Effects in the Presence of Unmeasured Confounding and Exposure-Induced Confounding", Atlantic Causal Inference Conference, Boston, MA

# CAMPUS TALKS

2018 "Causal Inference in Partially-Observed Networks", School Assembly, Columbia University, New York, NY

2015 "On Partial Identification of the Pure Direct Effect", Biostatistics Seminar Series, University of California, Berkeley Division of Biostatistics, Berkeley, CA

2015 "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", Harvard University Department of Biostatistics HIV Working Group Seminar, Boston, MA

# TEACHING EXPERIENCE

### Teaching Assistant

2013-2014 Department of Biostatistics, Harvard School of Public Health
Course: Methods I
Professor: Eric J. Tchetgen Tchetgen

2012 Department of Biostatistics, Harvard School of Public Health
Course: Introduction to Statistical Methods
Professor: Bernard Rosner
Note: Head teaching assistant

2011 Department of Biostatistics, Harvard School of Public Health
Course: Introduction to Statistical Methods
Professor: Kimberlee Gauvreau

### Guest Lectures

2017 Causal Inference With Interference. Advanced Topics in Causal Inference, University of California, Berkeley

2016 Estimation and Inference for a Causal Effect With i.i.d. and Non-i.i.d. Data. Introduction to Modern Biostatistical Theory and Practice, University of California, Berkeley

## PROFESSIONAL SERVICE

### Editorial Activity

2018–present Associate Editor, *International Journal of Biostatistics*

### Journal and Conference Review Service

*American Journal of Epidemiology*
*Biometrical Journal*
*Biometrika*
*Biostatistics*
*Computational Learning Theory*
*International Journal of Biostatistics*
*Journal of Business and Economic Statistics*
*Journal of Causal Inference*
*Journal of Educational and Behavioral Statistics*
*Journal of the American Statistical Association*
*Statistical Methods in Medical Research*

## DEPARTMENTAL & SCHOOL SERVICE

2018–present Communications Committee, Department of Biostatistics, Columbia Mailman School of Public Health

2018–present Inference Qualifying Exam Committee, Department of Biostatistics, Columbia Mailman School of Public Health

2018–present Masters Program Admissions Committee, Department of Biostatistics, Columbia Mailman School of Public Health

2018–present Student Recruitment Committee, Department of Biostatistics, Columbia Mailman School of Public Health

2018–present Organizer, Causal Inference Learning Group, Columbia Mailman School of Public Health

2013-2015 Organizer, HIV Working Group, Department of Biostatistics, Harvard School of Public Health

2014 Graduate mentor, Summer Program in Biostatistics & Computational Biology, Department of Biostatistics, Harvard School of Public Health

## PROFESSIONAL SOCIETIES

2015-present Eastern North American Region (ENAR) of the International Biometrics Society

2012-present American Statistical Association