722 W 168th Street, 6th floor New York, NY 10032 212-305-1696 cm3825@cumc.columbia.edu

Date of Preparation

July 26, 2019

Personal Data

Name: Caleb H. Miles

Date of Birth: March 5, 1987 Birthplace: Southern Pines, NC Citizenship: United States

Academic Appointments

08/2018–Present Department of Biostatistics

Mailman School of Public Health, Columbia University

Assistant Professor

Education

08/2010–07/2015 Harvard University

PhD in Biostatistics, November 2015

Thesis title: Semiparametric Methods for Causal Mediation Analysis and

Measurement Error

Miles, C.H. 2015. Semiparametric Methods for Causal Mediation Analysis and Measurement Error. Doctoral dissertation, Harvard University, Gradu-

ate School of Arts & Sciences. Adviser: Eric J. Tchetgen Tchetgen

Minor field of study: Epidemiology of HIV

08/2005–12/2009 University of Alabama

B.S. with honors in Mathematics, magna cum laude, December 2009

Minor field of study: Engineering

Training

08/2015–06/2018 Division of Biostatistics

University of California, Berkeley

Postdoctoral Fellow

Adviser: Mark J. van der Laan

Honors & Awards

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
2005	National Merit Scholar

Academic Service

Communications Committee, Department of Biostatistics, Columbia Mail-
man School of Public Health
Inference Qualifying Exam Committee, Department of Biostatistics,
Columbia Mailman School of Public Health
Masters Program Admissions Committee, Department of Biostatistics,
Columbia Mailman School of Public Health
Student Recruitment Committee, Department of Biostatistics, Columbia
Mailman School of Public Health

Professional Organizations, Societies, and Service

EDITORIAL BOARD

11/2018-Present Associate Editor, International Journal of Biostatistics

JOURNAL AND CONFERENCE REVIEWER

American Journal of Epidemiology

Annals of Applied Statistics

Biometrical Journal

Biometrics

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

Journal of the Royal Statistical Society: Series C

Statistical Methods in Medical Research

Memberships

01/2015-Present Eastern North American Region (ENAR) of the International Biometrics

Society

06/2012–Present American Statistical Association

Educational Contributions

DIRECT TEACHING

Workshops

Spring 2019 Causal Mediation Analysis Training: Methods and Applications Using

Health Data (co-instructor, 21 students, 3-day intensive boot camp of sem-

inars and hands-on analytical sessions)

Teaching Assistant

Fall 2014 Department of Biostatistics, Harvard School of Public Health

Course: Methods I

Professor: Eric J. Tchetgen Tchetgen

Fall 2013 Department of Biostatistics, Harvard School of Public Health

Course: Methods I

Professor: Eric J. Tchetgen Tchetgen

Fall 2012 Department of Biostatistics, Harvard School of Public Health

Course: Introduction to Statistical Methods

Professor: Bernard Rosner

Note: Head teaching assistant & responsible for two recitation sections

Fall 2011 Department of Biostatistics, Harvard School of Public Health

Course: Introduction to Statistical Methods

Professor: Kimberlee Gauvreau

Guest Lectures

03/2019	"Introduction to Causal Inference (Pt. 2)", Neurology Training Seminar,
	Columbia University, New York, NY
02/2019	"Introduction to Causal Inference (Pt. 1)", Neurology Training Seminar,
	Columbia University, New York, NY
11/2017	Causal Inference With Interference. Advanced Topics in Causal Inference,
	University of California, Berkeley
03/2016	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

Advising and Mentorship

2019	Dissertation Proposal Committee, Rui Lu, Teacher's College, Columbia University
2019	Mentor, Biostatistics Epidemiology Summer Training Diversity Program,
	Department of Biostatistics, Columbia Mailman School of Public Health
2019	Master's thesis adviser (M.S. Theory and Methods track), Youn Kyeong
	Chang, current student, Department of Biostatistics, Columbia University
	Mailman School of Public Health
2014	Graduate mentor, Summer Program in Biostatistics & Computational Biol-
	ogy, Department of Biostatistics, Harvard School of Public Health

Publications

Original, Peer Reviewed Articles

- 1. Miles, C.H., Shpitser, I., Kanki, P., Meloni, S., and Tchetgen Tchetgen, E.J. (2019). On semiparametric estimation of a path-specific effect in the presence of mediator-outcome confounding. *Biometrika* (In press) preprint arXiv:1710.02011
- 2. Miles, C.H., Petersen, M., and van der Laan, M.J. (2019). Causal inference when counterfactuals depend on the proportion of all subjects exposed. *Biometrics* (In press) preprint arXiv:1710.09588v2
- 3. 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.
- 4. 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.
- 5. **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).

Invited Talks

1. "Causal Inference When Counterfactuals Depend on the Proportion of All Subject Exposed", Séminaire de Statistiques, Université Paris-Descartes, Paris, France (05/2019)

- 2. "Causal Inference When Counterfactuals Depend on the Proportion of All Subject Exposed", Séminaire de Biostatisique, Université de Bordeaux, Bordeaux, France (05/2019)
- 3. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Levin Lecture Series, Columbia University, New York, NY (01/2018)
- 4. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, Vanderbilt University, Nashville, TN (01/2018)
- 5. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Statistics Seminar, Colorado State University, Fort Collins, CO (01/2018)
- 6. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, MD Anderson Cancer Center, Houston, TX (01/2018)
- 7. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, University of Pennsylvania, Philadelphia, PA (01/2018)
- 8. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, Kaiser Permanente Washington Health Research Institute, Seattle, WA (01/2018)
- 9. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Biostatistics Seminar, New York University Division of Biostatistics, New York, NY (12/2017)
- 10. "Partial Identification Bounds and Path-Specific Effects: Two (More) Options When Faced with Exposure-Induced Confounding", Joint Statistical Meetings, Baltimore, MD (07/2017)
- 11. "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 (03/2017)
- 12. "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", Joint Statistical Meetings, Chicago, IL (08/2016)
- 13. "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", Biostatistics Seminar, University of Washington Department of Biostatistics, Seattle, WA (04/2016)
- 14. "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 (02/2016)
- 15. "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", Joint Statistical Meetings, Seattle, WA (08/2015)

16. "Partial Identification of the Pure Direct Effect Under Exposure-Induced Confounding", Eastern North American Region of the International Biometric Society Spring Meeting, Miami, FL (03/2015)

- 17. "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEPFAR Program", McGill University Biostatistics Seminar, Montreal, Canada (03/2015)
- 18. "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 (02/2015)
- 19. "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 (02/2015)
- 20. "Quantifying an Adherence Path-Specific Effect of Antiretroviral Therapy in the Nigeria PEP-FAR Program", Johns Hopkins University Causal Inference Group, Baltimore, MD (01/2015)
- 21. "Identification of the Natural Indirect Effect Under Various Models", Joint Statistical Meetings, Boston, MA (08/2014)
- 22. "Background and Recent Developments in Causal Mediation Analysis", Joint Statistical Meetings, San Diego, CA (07/2012)

Conference Activity

Sessions Organized

1. "Identifying and Addressing Sources of Bias in Causal Inference", Joint Statistical Meetings, Denver, CO, July 27–August 1 (07/2019)

CONTRIBUTED TALKS

- 1. "A Class of Semiparametric Tests of Treatment Effect Robust to Confounder Classical Measurement Error", International Biometric Conference, Victoria, Canada (07/2016)
- "Semiparametric Estimation of Path-Specific Effects in the Presence of Unmeasured Confounding and Exposure-Induced Confounding", Joint Statistical Meetings, Montreal, Canada (08/2013)

Posters

- 1. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", IMS New Researchers Conference, Baltimore, MD (07/2017)
- 2. "Causal Inference for a Single Group of Causally-Connected Units Under Stratified Interference", Atlantic Causal Inference Conference, Chapel Hill, NC (05/2017)
- "Semiparametric Estimation of Path-Specific Effects in the Presence of Unmeasured Confounding and Exposure-Induced Confounding", Atlantic Causal Inference Conference, Boston, MA (05/2013)

Campus Talks

1. "Causal Inference in Partially-Observed Networks", School Assembly, Columbia University, New York, NY (10/2018)

- 2. "On Partial Identification of the Pure Direct Effect", Biostatistics Seminar Series, University of California, Berkeley Division of Biostatistics, Berkeley, CA (09/2015)
- 3. "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 (02/2015)