

Xiaoxuan Cai

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CURRENT POSITION

Columbia Mailman School of Public Health
Postdoctoral Research Fellow

Research direction: Causal inference, missing data, mediation analysis, and machine learning prediction for mobile health data

Advisor: Linda Valeri

New York, NY

08/2020 – Present

EDUCATION

Yale University
Ph.D. in Biostatistics

Dissertation: Causal Inference for Intervention Effects under Contagion
Advisor: Forrest W. Crawford

New Haven, CT

08/2015 – 08/2020

Yale University,
M.S. in Biostatistics

Thesis: LASSO variable selection under GEE models
Advisor: Peter M. Aronow

New Haven, CT

08/2013 – 05/2015

Peking University,
B.S. in Biology, B.A. in Economics

Beijing, China

09/2009 – 07/2013

HONORS AND AWARDS

Young Investigator Award, ASA Section on Statistics in Epidemiology	2019
Travel Award, Women in Statistics and Data Science conference	2018
Travel Award, Summer Institutes at the University of Washington	2018
MassMutual Student Poster Award, 32nd New England Statistics Symposium	2018
Fellowship from Takeda pharmaceutical Company	2015
Huirong Li Scholarship, Peking University	2013

MANUSCRIPTS IN PREPARATION AND UNDER REVIEW

Linda Valeri, **Xiaoxuan Cai**, Aijin Wang, Zixu Wang, Habiballah Rahimi Eichi, Einat Liebenthal, Scott Rauch, Dost Ongur, Russell Schutt, Lisa Dixon, Justin Baker, Jukka-Pekka Onnela (2021). Smartphone-based markers of social networks in schizophrenia and bipolar disorder. (*working progress*)

Xiaoxuan Cai, Jukka-Pekka Onnela, Justin T. Baker, Linda Valeri (2021). Causal inference for multivariate time series data in N-of-1 studies. (*working progress*)

Xiaoxuan Cai, Xinru Wang, Justin T. Baker, Jukka-Pekka Onnela, Linda Valeri (2021) State space model multiple imputation for missing data in non-stationary multivariate time series. (*Manuscript accepted by NeurIPS 2021 Workshop on Causal Inference Challenges in Sequential Decision Making: Bridging Theory and Practice*)

Xiaoxuan Cai, Eben Kenah, and Forrest W. Crawford (2020) Causal identification of infectious disease intervention effects in a clustered population. *Submitted to Annals of Statistics*

PUBLICATIONS

Xiaoxuan Cai, Wen Wei Loh, and Forrest W. Crawford (2021) Identification of causal intervention effects under contagion. *Journal of Causal Inference* 9.1: 9-38

Regina Melendez, **Xiaoxuan Cai**, Cristine Hine, et al. (2015) Correlates of Cocaine Use in Pregnancy. *Yale Medicine Thesis Digital Library*.

PRESENTATIONS

2022 Invited session, 2022 Joint Statistical Meetings, Washington, DC (upcoming)

2021 Invited session, NeurIPS 2021 Workshop on Causal Inference Challenges in Sequential Decision Making: Bridging Theory and Practice. (upcoming)

2021 E-poster session, 3rd Annual Health Data Science Symposium, Boston, MA

2021 Presentation, 2021 Joint Statistical Meetings, Virtual

2021 Invited session, 42th International Society of Clinical Biostatistics, Lyon, France

2021 Invited session, 2021 ENAR, Virtual

2020 Causal inference learning group, School of Public Health, Columbia University, Virtual

2020 Biostatistics department seminar, School of Public Health, Columbia University, Virtual

2020 Invited session, 2020 Women in Statistics and Data Science Conference, Virtual

2020 Invited session, 2020 Joint Statistical Meetings, Philadelphia, PA

2019 Research presentation, School of Public Health, Yale University, New Haven, CT

2019 Contributed session, 2019 Joint Statistical Meetings, Denver, CO

2019 Invited session, 33rd New England Statistics Symposium, Hartford, CT

2019 Invited session, 2019 ENAR, Philadelphia, PA

2018 Invited session, 2018 Women in Statistics and Data Science Conference, Cincinnati, OH

2018 Poster session, 32nd New England Statistics Symposium, Amherst, MA

2018 Speed session, 2018 Joint Statistical Meetings, Vancouver, BC

MENTORSHIP AND DEPARTMENT SERVICE

Co-mentored master student (Junzhe Shao) with Dr. Valeri, Columbia University 09/2021 - Present

Co-mentored master student (Xinru Wang) with Dr. Valeri, Columbia University 03/2021 – Present

Co-organized the Causal Inference Learning Group with Dr. Valeri, Columbia University 08/2020 – Present

TEACHING

Teaching Assistant

Yale University, Department of Biostatistics

Teaching Assistant (Courses: Applied Survival Analysis, Intro to Stat Thinking, Applied Regression Analysis, Biostatistics in Clinical Investigation)

New Haven, CT

08/2014 – 05/2018

Peking University, Department of Biology

Teaching Assistant (Course: Biostatistics)

Beijing, China

09/2012 – 01/2013

REFERENCES

Dr. Linda Valeri, Assistant Professor

Department of Biostatistics

Columbia Mailman of School of Public Health

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Dr. Forrest Crawford, Associate Professor

Department of Biostatistics

Yale School of Public Health

350 George Street, 3rd Floor, New Haven, CT, 06510

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Dr. Eben Kenah, Associate Professor

College of Public Health

The Ohio State University

1841 Neil Ave, 280F Cunz Hall, Columbus, OH, 43210

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