Xiaochuan Shi – Curriculum Vitæ

CONTACT INFORMATION

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RESEARCH INTERESTS

Areas: causal inference, semiparametric theory, longitudinal analysis.
My research advances causal inference methods for complex observational data, particularly under unmeasured confounding. By leveraging structured assumptions in high-dimensional or longitudinal outcomes, I develop approaches that yield more reliable, interpretable, and actionable causal estimates.

EDUCATION

University of Toronto
Department of Statistical Science 2021/09 – Present
Ph.D., Supervisors: Linbo Wang and Dehan Kong

University of Washington
Department of Statistical Science 2019/09 – 2021/06
MSc, Supervisor: Amy Willis
GPA: 3.96/4.00
Courses: Statistical Inference & Learning, Advanced Regression Methods

University of California, Berkeley
Department of Statistics 2018/01 – 2018/05
Exchange Student
Courses: Time Series, Linear Model, Principles & Techniques of Data Science

Nanjing University
School of Mathematics 2015/09 – 2019/06
BASc, Supervisor: Hui Qu
GPA: 3.88/4.00, Rank: 10/78
Thesis: Panel-based Autoregressive Model for Forecasting Realized Volatility
Outstanding Graduate in Jiangsu, NJU Outstanding Scholarship (top 5%)

PROFESSIONAL EXPERIENCE

Emory University, Atlanta, GA
Research Intern at *Biostatistics and Bioinformatics Lab* 2023/05 – 2023/07
Advisor: *Steve Qin*
Research Area: Machine Learning for Genetics

PREPRINT & UNDER REVIEW

[A1] **Xiaochuan Shi**, Dehan Kong, Linbo Wang. Longitudinal Treatment Effects under Unmeasured Confounding, 2025.

[A2] **Xiaochuan Shi**, Amy Willis. Removing sample-to-sample cross-contamination in high throughput sequencing data. Major Revision in *Journal of Applied Statistics*, 2024.

PUBLICATIONS

[J1] **Xiaochuan Shi**, Dehan Kong, Linbo Wang, Simultaneous Estimation of Multiple Treatment Effects from Observational Studies. *Journal of Computational and Graphical Statistics*, 2024. https://doi.org/10.1080/10618600.2024.2449074

[J2] Yanting Huang, Xiaobo Sun, Huige Jiang, Shaojun Yu, Chloe Robins, Matthew J Armstrong, Ronghua Li, Zhen Mei, **Xiaochuan Shi**, Ekaterina Sergeevna Gerasimov, Philip L De Jager, David A Bennett, Aliza P Wingo, Peng Jin, Thomas S Wingo, Zhaohui S Qin. A machine learning approach to brain epigenetic analysis reveals kinases associated with Alzheimer's disease. *Nature Communications*, 12.1: 4472, 2021. https://doi.org/10.1038/s41467-021-24710-8

TEACHING

Teaching Assistant, University of Toronto

- STA347: Probability — 2024 Winter
- STA314: Statistical Methods for Machine Learning — 2024 Fall
- STA347: Probability — 2023 Winter
- STA257: Probability and Statistics — 2023 Fall
- STA347: Probability — 2022 Winter
- STA314: Statistical Methods for Machine Learning — 2022 Fall
- STA303: Methods of Data Analysis — 2021 Winter
- STA257: Probability and Statistics — 2021 Fall

Drop-in Tutor at Statistics Study Center, University of Washington — 2020

AWARDS & HONORS

- Connaught International Scholarship — 2021 – 2025
- ASA Student and Early Career Travel Fund — 2025
- Nanjing University Outstanding Scholarship (top 5%) — 2018
- Hainan Airlines Scholarship — 2017

PROFESSIONAL SERVICE

Reviewer:

- Conference on Uncertainty in Artificial Intelligence (UAI)