

Quanhao (Johnny) Xi

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Education

- 2022 – **The University of British Columbia** – Ph. D., Statistics
Supervisor: [Benjamin Bloem-Reddy](#).
Keywords: *Causal inference and discovery, measure transport, generative models*.
Candidacy achieved 2025, expected graduation Summer 2027.
- 2022 **The University of British Columbia** – M. Sc., Statistics
Thesis: *Indeterminacy in Latent Variable Models: Characterization and Strong Identifiability*. GPA: 95.7 %.
- 2020 **University of Ottawa** – B. Sc., Statistics, *Summa Cum Laude*.

Other Positions

- 2026 **Capital Markets Division, Ontario Teachers Pension Plan**
Quantitative Strategies and Research Intern
- 2025 **Gatsby Computational Neuroscience Unit, University College London**
Visiting PhD Student (Peter Orbanz Group)
- 2023 **Valence Labs (Recursion Pharmaceuticals)**
Machine Learning Research Intern
- 2020 – 2021 **Department of Civil and Mineral Engineering, University of Toronto**
MITACS Research Assistant (Jeffrey Packer Group)
- 2019 – 2020 **Department of Mathematics and Statistics, University of Ottawa**
Undergraduate Research Assistant (Chen Xu Group)

Awards

- 2023–2026 NSERC Canada Graduate Scholarships–Doctoral (CAD \$ 40,000 p.a.)
- 2022–2026 UBC 4 Year Fellowship (CAD \$ 23,200 in 2022, no monetary value 2023–2026)
- 2025 NSERC CGS-Michael Smith Foreign Study Supplement (CAD \$ 6,000)
- 2021 CD Howe Graduate Fellowship (CAD\$ 16,000)

- 2020 MITACS Research Training Award (CAD \$ 6,000)
2020 NSERC USRA (CAD \$ 4,500)

Papers

- 2026+ **Xi, J.**, Dance, H., Orbanz, P., Bloem-Reddy, B.
RKHS Inference for Heterogeneous and Distributional Partial Effects.
(Working Paper).
- 2026 Dance, H., **Xi, J.**, Orbanz, P., Bloem-Reddy, B.
Debiased Counterfactual Generation via Flow Matching from Observations.
arXiv preprint:2605.07665.
- 2025 **Xi, J.**, Dance, H., Orbanz, P., Bloem-Reddy, B.
Distinguishing Cause from Effect with Causal Velocity Models.
ICML 2025.
- 2025 Sytora, S., Zainchkovskyy, Y., **Xi, J.**, Bloem-Reddy, B., Hauberg, S.
Identifying Metric Structures of Deep Latent Variable Models.
ICML 2025.
- 2024 **Xi, J.**, Osea, J., Xu, Z., Hartford, J.
Propensity Score Alignment of Unpaired Multimodal Data.
NeurIPS 2024
ICLR 2024 Workshop on Machine Learning for Genomics Explorations (Spotlight).
- 2023 **Xi, Q.**, Gonzalez, S., Bloem-Reddy, B.
Triangular Monotonic Generative Models Can Perform Causal Discovery.
NeurIPS 2023 Workshop on Causal Representation Learning.
- 2023 **Xi, Q.**, Bloem-Reddy, B.
Indeterminacy in Generative Models: Characterization and Strong Identifiability.
AISTATS 2023 (**Oral/Notable Paper, ~2% of Reviewed Papers**).
- 2022 Rudman, D., **Xi, Q.**, Packer, J., Tousignant, K.
Reliability of HSS Cross-connections in Branch Axial Compression.
American Institute of Steel Construction (AISC) Engineering Journal 59, 4.
- 2021 **Xi, Q.**, Bloem-Reddy, B.
Multiple Environments Can Reduce Indeterminacy in VAEs.
NeurIPS 2021 Workshop on Causal Inference & Machine Learning: Why now?

- 2021 **Xi, Q.**, Packer, J.
Assessing the Probabilistic Assumptions Behind Structural Reliability via Simulation
Proceedings of the Canadian Society for Civil Engineering (CSCE) 2021 Annual Conference.
- 2020 Gong, T., **Xi, Q.**, Xu, C.
Robust Gradient-based Markov Subsampling.
AAAI 2020.

Teaching

- 2020 – **Department of Statistics, The University of British Columbia.**
Graduate Teaching Assistant
Elementary Statistics, Sample Surveys, Time Series, Probability Theory (Undergraduate and Graduate), Statistical Inference (Graduate).

Service

- Reviewing ICLR, ICML, NeurIPS, UAI, AISTATS.
- Organization Junior Chair, Machine Learning for Health (ML4H) 2024 Session in Causality
Co-organizer, UBC–SFU Statistics Joint Seminar