

Xiang MENG

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Academic Position

Post-Doctoral Researcher, Dana-Faber Cancer Institute, Data Science	2025 – Present
Post-Doctoral Research Affiliate, Harvard School of Public Health, Biostatistics	2025 – Present

Education

PhD, Harvard University, Statistics	2025
Thesis committee: Iavor Bojinov, Luke Miratrix, Natesh Pillai	
MSc, University of Washington (UW), Statistics	2020
BSc, National University of Singapore (NUS), Quantitative Finance and Statistics	2018
Minor in Computer Science. Exchange program in University of California, San Diego (UCSD).	

Research Interests

Causal Survival Analysis; Matching Methods; Healthcare Applications; Statistical Theory; Generative Modelling

Selected Achievements & Awards

Rose Fellowship, Department of Epidemiology, Harvard School of Public Health	2026
Rising Stars in Data Science, selected participant recognized for innovative research and career potential, hosted by UC San Diego, University of Chicago, and Stanford University	2024
Bok Teaching Certificate, Harvard University	2024
Lijen Industrial Development Medal for best thesis project in the discipline, NUS	2018
Provost's Honors for academic excellence, Revelle College, UCSD	2017

Publications & Preprints

[1] Nabi K., **Meng X.**, Tian L., Connors J., Schrag D., Uno H. (Submitted) Average Cause-Specific Hazard: A Censoring-Invariant Measure of Event Burden Under Competing Risks.

[2] **Meng X.**, Tian L., Kehl K., Uno H. (Submitted) Efficient and Debiased Learning of Average Hazards Under Non-Proportional Hazards. *arXiv:2602.13475*.

[3] **Meng, X.**, Smith, A., Miratrix, L. (Submitted). Simple and Reliable Inference for Matching Estimators: A Single-Matching Variance Approach. *arXiv:2506.11317*.

[4] **Meng, X.**, Bojinov, I. (AAAI-25 Workshop on Artificial Intelligence with Causal Techniques. Journal version in preparation). Time-Varying Causal Survival Learning. *arXiv: 2503.00730*.

[5] **Meng X.***, Che J.*, Miratrix L. (Political Analysis, Accepted). Caliper Synthetic Matching.. *arXiv:2411.05246*.

[6] **Meng X.**, Dempsey W., Liao P., Reid N., Klasnja P., Murphy S. (Revision submitted). Evaluation of the HeartSteps Online Algorithm. *arXiv: 2501.02137*.

[7] **Meng X.**, Huang, J. (2025). REFINE2: A simplified simulation tool to help epidemiologists evaluate the suitability and sensitivity of effect estimation within user-specified data, *American Journal of Epidemiology*, <https://doi.org/10.1093/aje/kwaf195>.

[8] Weingarden, H., **Meng, X.**, Armeiy, M., Onnela, J-P., Jaroszewski, A., Armstrong, C., & Wilhelm, S. (2025). Predicting the strength of next-day negative emotion states in body dysmorphic disorder using passive smartphone data: An intensive longitudinal assessment study. *Internet Interventions*, 100833.

[9] Yang, L., Raveendran, G., **Meng, X.**, Lin, J., Meng, Z. (2024). Predict Progression Free Survival and Overall Survival Using Objective Response Rate for Anti-PD1/PDL1 Therapy Development. *BMC Cancer* **24**, 912 (2024). <https://doi.org/10.1186/s12885-024-12664-1>

- [10] Wang L., **Meng X.**, Richardson T., Robins J. (2022). Coherent modeling of longitudinal causal effects on binary outcomes. *Biometrics*. 2022 May 4. doi: 10.1111/biom.13687.
- [11] Gordon E., **Meng X.**, Barnes M., Bhattacharjee T., & Srinivasa, S. (2019). Adaptive Robot-Assisted Feeding: An Online Learning Framework for Acquiring Previously Unseen Food Items. *International Conference on Intelligent Robots and Systems, Las Vegas, US, 2020*
- [12] Gordon E., **Meng X.**, Barnes M., Bhattacharjee T., & Srinivasa, S. (2019). Learning from failures in robot-assisted feeding: Using online learning to develop manipulation strategies for bite acquisition. *IJCAI 2019 Workshop on AI × Food*.
- [13] **Meng X.** (2018). Dynamic Mean-Variance Portfolio Selection. *Undergraduate Thesis*. arXiv:1907.03093

Software & Methodologies

Xiang Meng, Jonathan Che, Luke Miratrix. Caliper Synthetic Matching. R package. Available at <https://github.com/jche/scmatch2>.

Linbo Wang, **Xiang Meng**, Thomas Richardson, James Robins. Methodology of “Coherent modeling of longitudinal causal effects on binary outcomes”. *Harvard Dataverse*, <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/UZAI96&faces-redirect=true>

Xiang Meng and Jonathan Huang. "REFINE2: A tool to evaluate real-world performance of machine-learning based effect estimators for molecular and clinical studies". *Github*, <https://github.com/mengeks/drml-plasmode>

Invited Talks, Contributed Conference and Poster Presentations

“A Cosine-Projection Framework for Choosing Among Cox HR, D-RMST, and Average-Hazard Tests in Survival Trials”

<i>CompBio Seminar, Mohamed bin Zayed University of Artificial Intelligence (MBZUAI)</i>	Abu Dhabi, UAE, July 2026
<i>International Biometrics Society (IBC)</i>	Seoul, South Korea, July 2026
<i>Tokyo Medical University</i>	Tokyo, Japan, July 2026

“Efficient and Debiased Learning of Average Hazards Under Non-Proportional Hazards”

<i>Joint Statistical Meetings (JSM)</i>	Boston, MA, Aug 2026
<i>American Causal Inference Conference (ACIC)</i>	Salt Lake City, UT, May 2026

“Simple and Reliable Inference for Matching Estimators” (Past title: “Variance estimation after matching or re-weighting”)

<i>Seoul National University (SNU) Statistics Seminar</i>	Cambridge, MA, Apr 2026
<i>Harvard Applied Statistics Seminar</i>	Cambridge, MA, Apr 2026
<i>American Causal Inference Conference (ACIC)</i>	Detroit, MI, May 2025

“Time-Varying Causal Survival Learning”

<i>American Causal Inference Conference (ACIC)</i>	Detroit, MI, May 2025
<i>AAAI-25 AI for Causal Techniques</i>	Philadelphia, PA, Mar 2025
<i>Harvard Dept. Government Applied Statistics Workshop</i>	Cambridge, MA, Nov 2024
<i>Rising Star Workshop, UCSD</i>	San Diego, CA, Nov 2024

“Caliper Synthetic Matching”

<i>Peking University School of Education invited talk,</i>	Beijing, China, Jan 2025
<i>New England Statistics Symposium (NESS)</i>	Storrs, CT, May 2024
<i>American Causal Inference Conference (ACIC)</i>	Seattle, WA, May 2024
<i>New England Student Research Symposium on Statistics and Data Science</i>	Boston, MA, Apr 2024

“A Novel Evaluation of a Just-in-Time Adaptive Intervention Algorithm”

<i>INFORMS Annual Meeting</i>	Toronto, ON, Oct 2023
<i>Eastern North American Region (ENAR) Meeting</i>	Online, Mar 2022
<i>14th CMStatistics, Advances in statistical methods for mobile health</i>	Online, Dec 2021
<i>3rd Harvard Health Data Science Symposium</i>	Boston, MA, Nov 2021
<i>Joint Statistical Meeting (JSM)</i>	Online, Aug 2021

“Causal Questions in Micro-Randomized Trials (MRTs): Introduction and Challenges”

<i>Society for Causal Inference (SCI) Causal Inference for Social Impact</i>	Online, Jun 2021
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Teaching Experience

Introduction to Bioinformatics, Harvard University, Head Teaching Fellow (TF). Designed weekly section materials.

Spring 2025

Introduction to Data Science, Harvard University, Head Teaching Fellow (TF) for 220 students, oversaw 29 TFs.

Fall 2023

The Art of Teaching in Statistics, Harvard University, teaching preparation for all 1st year statistics PhD students.

AY 2022 – 23

Data Analysis in Modern Biostatistics (Biomarker and Cancer Research), Harvard University

Spring 2022

Introduction to Probability, Harvard University

Fall 2021

STEMPREP Summer Statistics Course for 7th and 8th Grade Students, UW

Summer 2019

Programming Methodology in Python, NUS

AY 2015 - 16, Spring 2018

Academic & Student Service

Reviewer for Biometrika, Journal of Clinical Epidemiology (JCE), Lifetime Data Analysis (LDA), Biometrical Journal, Journal of Applied Statistics (JAS), Americal Causal Inference Conference (ACIC), NeuroIPS workshop.

Co-Chair for seminar department at Harvard Chinese Student & Scholar Association (HCSSA), organized and supervised 7 seminars to give industry and academia exposure to Chinese graduate students across art and science, industry and academia.

Volunteered experiences (15+ times) in supporting elders, mentally disables, women and gender-diverse individuals.

Work Experience

Harvard University

Sep 2021 – May 2025

Graduate Research Assistant

- Develop causal inference methods integrating machine learning for large-scale data in public health, education, and business to improve decision-making and personalize interventions.
- Publish peer-reviewed research and present at conferences in collaboration with interdisciplinary teams.

Sanofi

May – Aug 2022

Summer Intern, Clinical Evidence and Data Science

- Co-created a comprehensive database from over 400 clinical trials on Anti-PD1/PDL1 cancer treatments using R.
- Co-developed a predictive method for three survival outcomes in cancer patients.

Dymon Asia Capital

April – July 2017

Summer Intern, Risk Analysis

- Improved risk reporting procedure for macro fund using VBA; shortened procedure from 2 hours to less than 20 seconds.
- Streamlined daily risk management by meticulously monitoring daily equity fund risk and macro fund risk.

Skills

Languages: Mandarin Chinese (Native), English and Japanese (Proficient in writing, speaking, reading, listening)

Programming & IT: Python, SQL, R, SAS, SPSS, C++, Unix, Java, VBA, Matlab

References

Hajime Uno

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