Yuchen Hu

My research focuses on guiding data-driven decision-making in complex environments using tools from causal inference, decision theory, and stochastic processes. I am particularly interested in addressing challenges that arise in the design and analysis of modern experiments.

CONTACT DETAILS

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EDUCATION

Ph.D. in Management Science & Engineering — 2020 – present
Stanford University, Stanford, CA — GPA: 4.1/4.3
Thesis Advisor: Stefan Wager
Committee: Stefan Wager, Johan Ugander, Ramesh Johari

M.S. in Biostatistics — 2018 – 2020
Harvard University, Cambridge, MA — GPA: 4.0/4.0
Thesis Advisor: Rui Wang

B.Sc. in Applied Mathematics — 2014 – 2018
Hong Kong Polytechnic University, Hong Kong — GPA: 4.0/4.0
Capstone Project Advisor: Binyan Jiang

INDUSTRY EXPERIENCE

- Research Intern, *Adobe*, San Jose, CA, Summer 2023
- Data Science Intern, *Quantco*, Boston, MA, Summer 2022
- Data Science Intern, *Nielsen*, Shanghai, China, Summer 2018
- Research Intern, *Everbright Securities*, Shanghai, China, Summer 2017

AWARDS

- Decision Analysis Society (DAS) Student Paper Award, 2024
- Tom Ten Have Award Honorable Mention, 2023
- V.K. Hsu & Sons Foundation Ltd. Scholarship, 2018
- Hong Kong Polytechnic University Full Entry Scholarship, 2014-2018
- HKSAR Government Scholarship Fund - Reaching Out Award, 2015-2016

TEACHING

- ECON293/MGTECON634 Machine Learning and Causal Inference, Teaching assistant, Spring 2020-2023.
- MS&E226 Fundamentals of Data Science, Teaching assistant, Autumn 2021-2022.
- BST224 Survival Methods in Clinical Research, Teaching assistant, Summer 2018-2019.

JOB MARKET PAPER

1. **Yuchen Hu** and Stefan Wager. Switchback Experiments under Geometric Mixing. arXiv preprint arXiv:2209.00197.

JOURNAL ARTICLES

6. **Yuchen Hu** and Lawrence M. Wein. Analysis of the Privacy-Performance Tradeoff of Reference Testing in Forensic Investigative Genetic Genealogy. *Journal of Forensic Sciences*, 69(5), 2024.
5. **Yuchen Hu** and Stefan Wager. Off-Policy Evaluation in Partially Observed Markov Decision Processes. *Annals of Statistics*, 51(4), 2023.
4. **Yuchen Hu**, Shuangning Li, and Stefan Wager. Average Direct and Indirect Causal Effects under Interference. *Biometrika*, 109(4), 2022.
3. Ante Bing*, **Yuchen Hu***, Melanie Prague, Alison L. Hill, Jonathan Z. Li, Ronald J. Bosch, Victor DeGruttola, and Rui Wang. Comparison of Empirical and Dynamic Models for HIV Viral Load Rebound after Treatment Interruption. *Statistical Communications in Infectious Diseases*, 12(s1), 2020. (*: Equal contribution)
2. Rui Wang, Ante Bing, Cathy Wang, **Yuchen Hu**, Ronald J. Bosch, and Victor DeGruttola. A Flexible Nonlinear Mixed Effects Model for HIV Viral Load Rebound after Treatment Interruption. *Statistics in Medicine*, 39(15), 2020.
1. Sara N. Bleich, Jesse C. Jones-Smith, Marian P. Jarlenski, Julia A. Wolfson, Johannah M. Frelier, Huiru Tao, **Yuchen Hu**, Anna Zink, Caroline G. Dunn, Mark J. Soto, and Bradley J. Herring. Impact of Changes in Chain Restaurant Calories over Time on Obesity Risk. *Journal of General Internal Medicine*, 35(6), 2020.

CONFERENCE ARTICLES

2. **Yuchen Hu**, Henry Zhu, Emma Brunskill, and Stefan Wager. Minimax-Regret Sample Selection in Randomized Experiments. *ACM Conference on Economics and Computation (EC)*, 2024.
1. Ruohan Zhan, Shichao Han, **Yuchen Hu**, and Zhenling Jiang. Estimating Treatment Effects under Recommender Interference: A Structured Neural Networks Approach. *ACM Conference on Economics and Computation (EC),* 2024.

ACADEMIC SERIVICES

- Journal Peer Review: Annals of Statistics (2), Journal of American Statistical Association (2), Biometrika (2), The Journal of the Royal Statistical Society, Series B (1), Operations Research (1), Management Science (4), Econometrica (1), Statistics in Medicine (1), INFORMS TutORials in Operations Research (1).
- Conference Peer Review: NeurIPS 2023, ICLR 2024, ICML 2024

TALKS AND WORKSHOPS

3. Minimax-Regret Sample Selection in Randomized Experiments.
   - *The Bravo Center/JEA/SNSF Workshop on Using Data to Make Decisions*, Brown University, Providence, July 2024.
   - *The Twenty-Fifth ACM Conference on Economics and Computation (EC'24)*, Yale University, New Haven, July 2024.
   - *Stanford Causal Science Center Conference on Experimentation*, Stanford, CA, May 2024.
   - *American Causal Inference Conference*, Seattle, WA, May 2024.
   - *Algorithmic Fairness Seminar, Stanford University*, Stanford, CA, April 2024.
   - *Stanford Causal Science Center Conference*, Stanford, CA, November 2023.
   - *Metrics Lunch, Stanford University*, Stanford, CA, November 2023.

- *Data Driven Research Group, Stanford University*, Stanford, CA, May 2023.
- *Stanford Data Science Conference*, Stanford, CA, May 2023.

2. Switchback Experiments under Geometric Mixing.
    - *Stanford Causal Inference Guest Lecture*, Stanford, CA, June 2024.
    - *American Causal Inference Conference*, Seattle, WA, May 2024.
    - *OR Seminar, Stanford University*, Stanford, CA, April 2024.
    - *Metrics Lunch, Stanford University*, Stanford, CA, April 2024.
    - *The 14th POMS-HK International Conference*, HKUST, Hong Kong SAR, January 2024.
    - *IMS Young Mathematical Scientist Forum*, NUS, Singapore, November 2023.
    - *INFORMS Annual Meeting*, Phoenix, AZ, October 2023.
    - *Experimentation and Causal Inference in the Tech Sector*, Stanford, CA, June 2023.
    - *American Causal Inference Conference*, Austin, TX, May 2023.
    - *Data Driven Research Group, Stanford University*, Stanford, CA, October 2022.

1. Off-Policy Evaluation in Partially Observed Markov Decision Processes.
    - *Joint Statistical Meetings*, Toronto, Canada, August 2023.
    - *Joint Statistical Meetings*, Washington, DC, August 2022.
    - *American Causal Inference Conference*, Berkeley, CA, May 2022.
    - *Causal Inference Group, Stanford University*, Stanford, CA, March 2022.
    - *Research in Operations, Information and Technology, Stanford University*, April 2022.