

Yuchen Hu

CONTACT DETAILS

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RESEARCH INTERESTS

I have broad research interests in causal inference, data-driven decision making, and dynamic treatment regimes, with a focus on tackling challenges that emerge from experiments due to the existence of temporal, network, and marketplace interference.

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](#)

JOURNAL ARTICLES

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. Frelief, 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.

PRIPRINTS

1. **Yuchen Hu** and Stefan Wager. [Switchback Experiments under Geometric Mixing](#). arXiv preprint arXiv:2209.00197.

WORK IN PROGRESS

Manuscripts or slides for the works below are available upon request.

- A Decision-Theoretic Framework for Sample Selection in Randomized Experiments. With Emma Brunskill, Stefan Wager, and Henry Zhu.
- Estimation and Inference under Algorithmic Interference on Content-Sharing Platforms. With Shichao Han, Zhenling Jiang, Darwin Wang, and Ruohan Zhan.
- Seeding Information Diffusion in Multilayer Networks. With Martin Saveski and Johan Ugander.
- Analysis of the Privacy-Performance Tradeoff of Third-Party Sampling in Forensic Investigative Genetic Genealogy. With Lawrence M. Wein.

INVITED TALKS

3. A Decision-Theoretic Framework for Sample Selection in Randomized Experiments.
 - *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.
2. Switchback Experiments under Geometric Mixing.
 - *IMS Young Mathematical Scientist Forum*, NUS, Singapore, November 2023.
 - *INFORMS Annual Meeting*, Phoenix, AZ, October 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.
 - *Causal Inference Group, Stanford University*, Stanford, CA, March 2022.

INVITED WORKSHOPS

3. A Decision-Theoretic Framework for Sample Selection in Randomized Experiments.
 - *Stanford Data Science Conference*, Stanford, CA, May 2023.
2. Switchback Experiments under Geometric Mixing.
 - *Experimentation and Causal Inference in the Tech Sector*, Stanford, CA, June 2023.
 - *American Causal Inference Conference*, Austin, TX, May 2023.
1. Off-Policy Evaluation in Partially Observed Markov Decision Processes.
 - *American Causal Inference Conference*, Berkeley, CA, May 2022.
 - *Research in Operations, Information and Technology, Stanford University*, April 2022.

INTERNSHIP

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

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.

AWARDS

- Tom Ten Have Award Honorable Mentions, 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

ACADEMIC SERVICES

- Journal Peer Review: Annals of Statistics (1), Journal of American Statistical Association (1), Biometrika (1), Operations Research (1), Management Science (3), Econometrica (1), Statistics in Medicine (1).
- Conference Peer Review: NeurIPS 2023, ICLR 2024