Yuchen Hu

CONTACT DETAILS

Address: 475 Via Ortega, Stanford, CA 94305
Telephone: (617)510-9810
E-mail: yuchenhu@stanford.edu
Website: https://yuchenhhu.github.io/

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. 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.

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 SERIVICES

- 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