YICHUN HU

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EDUCATION

Cornell University/Cornell Tech *New York, NY*
Ph.D. in Operations Research, Ph.D. minor in Applied Mathematics *08/2017 - 05/2023*
Advisor: Nathan Kallus

Peking University *Beijing, China*
B.S. in Mathematics and Applied Mathematics *09/2013 - 06/2017*
B.A. in Economics *09/2014 - 06/2017*

RESEARCH INTERESTS

Data-driven Decision-Making, Adaptive Experimentation, Contextual Bandit and Reinforcement Learning, Stochastic Optimization.

RESEARCH PAPERS

Publications

1. **Y. Hu**, N. Kallus, X. Mao (2022) Smooth Contextual Bandits: Bridging the Parametric and Non-differentiable Regret Regimes. ***Operations Research*** *70(6):3261-3281.*
   - **Finalist, INFORMS Applied Probability Society 2020 Best Student Paper Competition.**
   - Preliminary version appeared in 33rd Conference on Learning Theory (***COLT***), 2020.
2. **Y. Hu**, N. Kallus, X. Mao (2022) Fast Rates for Contextual Linear Optimization. ***Management Science*** *68(6):4236-4245 (fast track).*
3. M. Garrard, H. Wang, B. Letham, Z. Wang, Y. Huang, **Y. Hu**, C. Zhou, N. Zhou, E. Bakshy (2021) Practical Policy Optimization with Personalized Experimentation. *NeurIPS Workshop on Causal Inference Challenges in Sequential Decision Making.*

Working Papers

4. **Y. Hu**, N. Kallus, M. Uehara. Fast Rates for the Regret of Offline Reinforcement Learning. *Minor Revision at* ***Mathematics of Operations Research.***
   - Preliminary version appeared in 34th Conference on Learning Theory (***COLT***), 2021.
5. **Y. Hu**, N. Kallus. DTR Bandit: Learning to Make Response-Adaptive Decisions with Low Regret. *Moderate Revision at* ***Journal of the American Statistical Association.***

SELECTED HONORS

FODSI Postdoctoral Fellowship (declined) *2023*
Rising Scholar, Chicago Booth *2022*
Finalist, Applied Probability Society Best Student Paper Competition, INFORMS *2020*
Sherri Koenig Stuewer Graduate Fellowship, Cornell University *2018*
Excellent Graduate Award, Peking University *2017*

INDUSTRY EXPERIENCE

Facebook (Meta) *Menlo Park, CA (Remote)*
Research Engineer Intern, Core Data Science (Adaptive Experimentation) *05/2021-08/2021*
• Worked on multi-objective adaptive experimentation algorithms.

Google *Mountain View, CA (Remote)*

Data Scientist Intern, Google Play *05/2020-08/2020*
• Worked on causal methods to analyze the impact of app usage on the retention rate of Google Play Pass.

TEACHING EXPERIENCE

Cornell University, Teaching Assistant
ORIE 5751: Learning, Inference, and Decision Making from Data *Spring 2023*
CS 5785: Applied Machine Learning *Fall 2019*
ORIE 4360: A Mathematical Examination of Fair Representation *Fall 2018*
ORIE 3510: Introduction to Engineering Stochastic Processes I *Spring 2018*
ORIE 5600: Financial Engineering with Stochastic Calculus I *Fall 2017*

PROFESSIONAL SERVICE

• **Journal Reviewer**: Operations Research, Journal of Machine Learning Research, Transactions on Machine Learning Research, IEEE Transactions on Information Theory
• **Conference Reviewer & PC Member**
- International Conference on Machine Learning (ICML) 2020-2023
- International Conference on Learning Representations (ICLR) 2021
- International Conference on Artificial Intelligence and Statistics (AISTATS) 2021-2023
- Conference on Neural Information Processing Systems (NeurIPS) 2021-2023
- ACM conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO) 2022
- NeurIPS Workshop on Causal Inference Challenges in Sequential Decision Making 2021
• **Session Chair**
- INFORMS 2020 General Session (Stochastic Bandits)
- INFORMS 2023 General Session (Learning and Experimentation in Markets)
- INFORMS 2023 General Session (Learning and Decision-Making for Platforms)
• Cornell University ORGA (Operations Research Graduate Association) Tech Liaison *2019-2020*

INVITED PRESENTATIONS

Fast Rates for Contextual Linear Optimization
University of Illinois Urbana-Champaign - Industrial & Enterprise Systems Engineering, Champaign, IL *02/2023*
Massachusetts Institute of Technology - Sloan School of Management, Cambridge, MA *02/2023*
University of Oxford - Saïd Business School, Virtual *01/2023*
University of Toronto - Rotman School of Management, Toronto, Canada *01/2023*
Columbia University - Industrial Engineering and Operations Research, New York, NY *01/2023*
University of Illinois Chicago - Information and Decision Sciences, Chicago, IL *01/2023*
Johns Hopkins University - Carey Business School, Baltimore, MD *01/2023*
Duke University - Fuqua School of Business, Durham, NC *01/2023*
Carnegie Mellon University - Tepper School of Business, Pittsburgh, PA *12/2022*
University of British Columbia - Sauder School of Business, Vancouver, Canada *12/2022*
Cornell University - SC Johnson College of Business, Ithaca, NY *12/2022*
Northwestern University - Industrial Engineering & Management Sciences, Evanston, IL *12/2022*
University College London - School of Management, Virtual *11/2022*
London Business School, Virtual *11/2022*
University of Texas at Austin - McCombs School of Business, Austin, TX *11/2022*
INFORMS Annual Meeting, Indianapolis, IN *10/2022*
Cornell ORIE Young Researchers Workshop, Ithaca, NY *10/2022*
NYC Operations Day (Poster), New York, NY *04/2022*
ORIE PhD Colloquium at Cornell Tech, New York, NY *04/2022*
INFORMS Optimization Society Conference, Greenville, SC *03/2022*
Cornell ORIE Young Researchers Workshop (Poster), Ithaca, NY *10/2021*

Fast Rates for the Regret of Offline Reinforcement Learning
RL Theory Seminar, Virtual *11/2021*
INFORMS Annual Meeting, Anaheim, CA *10/2021*
16th INFORMS Workshop on Data Mining and Decision Analytics, Anaheim, CA *10/2021*
34th Annual Conference on Learning Theory, Boulder, CO *08/2021*

DTR Bandit: Learning to Make Response-Adaptive Decisions with Low Regret
INFORMS Annual Meeting, Virtual *11/2020*
15th INFORMS Workshop on Data Mining and Decision Analytics, Virtual *11/2020*

Smooth Contextual Bandits: Bridging the Parametric and Non-differentiable Regret Regimes
INFORMS Healthcare Conference, Toronto, Canada *07/2023*
Rising Scholars Conference (Chicago Booth), Virtual *11/2022*
33rd Annual Conference on Learning Theory, Virtual *07/2020*
INFORMS Annual Meeting, Seattle, WA *10/2019*
14th INFORMS Workshop on Data Mining and Decision Analytics, Seattle, WA *10/2019*
Cornell ORIE Young Researchers Workshop, Ithaca, NY *10/2019*

OTHERS

- *Programming*: Python (PyTorch), C/C++, R, Julia.
- *Languages*: Chinese (native), English (fluent), Japanese (N2)