YICHUN HU

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EDUCATION

Cornell University   *08/2017 - 05/2023 (expected)*
Ph.D. Candidate in Operations Research
Ph.D. minor in Applied Mathematics

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

RESEARCH INTERESTS

Data-driven Decision-Making, Online/Sequential Learning, Contextual Bandit & Reinforcement Learning, Stochastic Optimization.

RESEARCH PAPERS

Journal Publications

1. **Y. Hu**, N. Kallus, X. Mao (2022) Smooth Contextual Bandits: Bridging the Parametric and Non-differentiable Regret Regimes.

   - ***Operations Research*** *(Articles in Advance).*

   - **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.*

   - Accepted to Fast Track in Management Science.

Journal Papers Under Review/Revision

3. **Y. Hu**, N. Kallus. DTR Bandit: Learning to Make Response-Adaptive Decisions with Low Regret.

   - *Under 2nd-round review after major revision at **Journal of the American Statistical Association**.*

4. **Y. Hu**, N. Kallus, M. Uehara. Fast Rates for the Regret of Offline Reinforcement Learning.

   - Preliminary version appeared in 34th Conference on Learning Theory (***COLT 2021***).

   - Journal version under review.

   - Invited for presentation at Online RL Theory Seminar.

Conference Papers

5. M. Garrard, H. Wang, B. Letham, Z. Wang, Y. Huang, **Y. Hu**, C. Zhou, N. Zhou, E. Bakshy. Practical Policy Optimization with Personalized Experimentation.

   - *NeurIPS Workshop on Causal Inference Challenges in Sequential Decision Making, 2021.*

SELECTED HONORS

Finalist, Applied Probability Society Best Student Paper Competition, INFORMS	*2020*
Sherri Koenig Stuewer Graduate Fellowship, Cornell University	*2018*
Excellent Graduate Award, Peking University	*2017*
Award for Academic Excellents, Peking University	*2015,2016*
May Fourth Scholarship, Peking University	*2016*
Kwuang-Hua Scholarship, Peking University	*2015*

INDUSTRY EXPERIENCE

Facebook (Meta)   *Menlo Park, CA (Remote)*
Research Engineer Intern, Core Data Science (Adaptive Experimentation)   *05/2021-08/2021*
- Researched on multi-objective contextual bandit learning and value model tuning in personalized experiments. Resulted in a NeurIPS workshop paper.
- Proposed algorithm has been launched in Facebook's personalized experimentation platform.

Google   *Mountain View, CA (Remote)*
Data Scientist Intern, Google Play   *05/2020-08/2020*
- Researched on causal methods to analyze the impact of app usage on the retention rate of Google Play Pass.
- Wrote a practitioner-friendly tech report for response curve analysis and treatment effect estimation.

TEACHING EXPERIENCE

Cornell University, Teaching Assistant
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
- Conference Reviewer & PC Member: ICML 2020-2022, ICLR 2021, AISTATS 2021-2022, NeurIPS 2021-2022, EAAMO 2022, NeurIPS 2021 Workshop on Causal Inference Challenges in Sequential Decision Making
- Session Chair: INFORMS 2020 General Session (Stochastic Bandits)
- Cornell University ORGA (Operations Research Graduate Association) Tech Liaison   *2019-2020*

SELECTED PRESENTATIONS

Fast Rates for Contextual Linear Optimization
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 (COLT 2021), 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
33rd Annual Conference on Learning Theory (COLT 2020), 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), R, C/C++, Julia.
- *Interests*: Books, Music, Nature, Soccer