Yingkai Li

Contact Information

Northwestern University
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Evanston, IL 60201

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Research Interests

Algorithmic game theory, mechanism design, microeconomic theory, online algorithms

Education

Northwestern University, Evanston, IL, USA — June 2022
Ph.D., Computer Science
Advisor: Jason D. Hartline

Stony Brook University, Stony Brook, NY, USA — May 2018
M.S., Computer Science

Shanghai Jiaotong University, Shanghai, China — June 2015
B.S., Major: Computer Science, Minor: Robotics (IEEE honor class)

Research Experience

Research Intern — Jun to Aug 2020, 2021
Microsoft Research New England Lab and New York Lab

Visiting Student — May to Jun 2017, 2018
School of Information Management and Engineering
Shanghai University of Finance and Economics

Awards

Northwestern Terminal Year Fellowship — 2021

Journal Publications

1. Bayesian Auctions with Efficient Queries.
   with Jing Chen, Bo Li and Pinyan Lu, AIJ 2022
2. Equilibrium Behaviors in Repeated Games.
   with Harry Pei, JET 2021
3. Efficient Approximations for the Online Dispersion Problem.
   with Jing Chen and Bo Li, SICOMP 2019

Conference Publications

1. Selling Data to an Agent with Endogenous Information. EC 2022
2. Optimization of Scoring Rules.
   with Jason Hartline, Liren Shan and Yifan Wu, EC 2022 (Best Poster Award, EC 2020)
3. Almost Proportional Allocations for Indivisible Chores.
   with Bo Li and Xiaowei Wu, WebConf 2022
4. Revelation Gap for Pricing from Samples.
   with Yiding Feng and Jason Hartline, STOC 2021
5. Tight Regret Bounds for Infinite-armed Linear Contextual Bandits.
   with Yining Wang, Xi Chen and Yuan Zhou, AISTATS 2021
6. Benchmark Design and Prior-independent Optimization.
   with Jason Hartline and Aleck Johnsen, FOCS 2020

7. Multinomial Logit Bandit with Low Switching Cost.
   with Kefan Dong, Qin Zhang and Yuan Zhou, ICML 2020
8. Fair Resource Sharing and Dorm Assignments.
   with Bo Li, AAMAS 2020
9. Approximately Maximizing the Broker's Profit in a Two-sided Market.
   with Jing Chen and Bo Li, IJCAI 2019
10. Optimal Auctions vs. Anonymous Pricing: Beyond Linear Utility.
    with Yiding Feng and Jason Hartline, EC 2019
11. Nearly Minimax-Optimal Regret for Linearly Parameterized Bandits.
    with Yining Wang and Yuan Zhou, COLT 2019
12. Revenue Maximization with Imprecise Distribution.
    with Pinyan Lu and Haoran Ye, AAMAS 2019
13. Information Elicitation for Bayesian Auctions.
    with Jing Chen and Bo Li, SAGT 2018
14. Dynamic Fair Division Problem with General Valuations.
    with Bo Li and Wenyang Li, IJCAI 2018
15. Bayesian Auctions with Efficient Queries.
    with Jing Chen, Bo Li and Pinyan Lu, ICALP 2018 (Brief Announcement)
16. Efficient Approximations for the Online Dispersion Problem.
    with Jing Chen and Bo Li, ICALP 2017

Working Papers

1. Budget Pacing in Repeated Auctions: Regret and Efficiency without Convergence.
   with Jason Gaitonde, Bar Light, Brendan Lucier and Alex Slivkins
2. Incentivizing Participation in Clinical Trials.
   with Alex Slivkins
3. Making Carbon-Allowance Auctions Robust to Aftermarkets.
   with Moshe Babaioff, Nicole Immorlica and Brendan Lucier
4. Revenue Maximization for Buyers with Outside Options.
   with Yannai Gonczarowski, Nicole Immorlica and Brendan Lucier
5. Misspecified Beliefs about Time Lags.
   with Harry Pei
6. Simple Mechanisms for Non-linear Agents.
   with Yiding Feng and Jason Hartline

Academic Service

Journal Reviewer

- SIAM Journal on Computing, Games and Economic Behavior, Transactions on Information Theory, Transactions on Economics and Computation

Conference Reviewer

- STOC, SODA, EC, ICALP, ICML, ITCS, KDD, AISTATS, ESA, WebConf, WINE, COCOA

Teaching Experience

Teaching Assistant - Northwestern University

COMP_SCI 396 - Online Markets	Spring 2020
COMP_SCI 336 - Design & Analysis of Algorithms	Fall 2019
COMP_SCI 212 - Mathematical Foundations of Computer Science	Spring 2019

Teaching Assistant - Stony Brook University

CSE 215 - Foundations of Computer Science	Fall 2015, Spring 2016
CSE 114 - Computer Science I	Spring 2016
CSE 540 - Theory of Computation	Fall 2016