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

Ph.D., Computer Science — Expected: June 2022
Advisor: Jason D. Hartline

Stony Brook University, Stony Brook, NY

M.S., Computer Science — May 2018

Shanghai Jiaotong University, Shanghai, China

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

Research Experience

Summer Intern — Jun 2021 to Aug 2021
Microsoft Research New York Lab
Host: Alex Slivkins

Summer Intern — Jun 2020 to Sep 2020
Microsoft Research New England Lab
Host: Brendan Lucier, Nicole Immorlica, Moshe Babaioff

Research Assistant — Sep 2016 to Dec 2017
Department of Computer Science
Stony Brook University
Advisor: Jing Chen

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

Awards

Northwestern Terminal Year Fellowship — 2021

Best Poster Award, EC 2020 — 2020
- Optimization of Scoring Rules.
  with Jason Hartline, Liren Shan and Yifan Wu

Journal Publications

1. Bayesian Auctions with Efficient Queries.
   with Jing Chen, Bo Li and Pinyan Lu, accepted in AIJ
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. Revelation Gap for Pricing from Samples.
   with Yiding Feng and Jason Hartline, STOC 2021
2. Tight Regret Bounds for Infinite-armed Linear Contextual Bandits.
   with Yining Wang, Xi Chen and Yuan Zhou, AISTATS 2021
3. Benchmark Design and Prior-independent Optimization.
   with Jason Hartline and Aleck Johnsen, FOCS 2020
4. Multinomial Logit Bandit with Low Switching Cost.
   with Kefan Dong, Qin Zhang and Yuan Zhou, ICML 2020
5. Fair Resource Sharing and Dorm Assignments.
   with Bo Li, AAMAS 2020
6. Approximately Maximizing the Broker's Profit in a Two-sided Market.
   with Jing Chen and Bo Li, IJCAI 2019
7. Optimal Auctions vs. Anonymous Pricing: Beyond Linear Utility.
   with Yiding Feng and Jason Hartline, EC 2019
8. Nearly Minimax-Optimal Regret for Linearly Parameterized Bandits.
   with Yining Wang and Yuan Zhou, COLT 2019
9. Revenue Maximization with Imprecise Distribution.
   with Pinyan Lu and Haoran Ye, AAMAS 2019
10. Information Elicitation for Bayesian Auctions.
    with Jing Chen and Bo Li, SAGT 2018
11. Dynamic Fair Division Problem with General Valuations.
    with Bo Li and Wenyang Li, IJCAI 2018
12. Bayesian Auctions with Efficient Queries.
    with Jing Chen, Bo Li and Pinyan Lu, ICALP 2018 (Brief Announcement)
13. Efficient Approximations for the Online Dispersion Problem.
    with Jing Chen and Bo Li, ICALP 2017

Working Papers

1. Almost Proportional Allocations for Indivisible Chores.
   with Bo Li and Xiaowei Wu
2. Selling Data to an Agent with Endogenous Information.
3. On the Impact of Information Acquisition and Aftermarkets on Auction Efficiency.
   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. Fair Resource Sharing with Externailities.
   with Jiarui Gan and Bo Li
7. Optimization of Scoring Rules.
   with Jason Hartline, Liren Shan and Yifan Wu
8. Simple Mechanisms for Non-linear Agents.
   with Yiding Feng and Jason Hartline
9. Stochastic Linear Optimization with Adversarial Corruption.
   with Edmund Y. Lou and Liren Shan

Academic Service

Journal Reviewer

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

Conference Reviewer

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

Teaching Experience

Teaching Assistant - Northwestern University

COMP_SCI 396 - Online Markets — Spring 2020
Instructor: Jason Hartline

COMP_SCI 336 - Design & Analysis of Algorithms — Fall 2019
Instructor: Jason Hartline

COMP_SCI 212 - Mathematical Foundations of Computer Science — Spring 2019
Instructor: Aravindan Vijayaraghavan

Teaching Assistant - Stony Brook University

CSE 215 - Foundations of Computer Science — Fall 2015, Spring 2016
Instructor: Himanshu Gupta; Paul Fodor

CSE 114 - Computer Science I — Spring 2016
Instructor: Paul Fodor

CSE 540 - Theory of Computation — Fall 2016
Instructor: Jing Chen