Yingkai Li

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Research Interests mechanism design, information design, microeconomic theory, algorithmic game theory

Employment	Assistant Professor (Presidential Young Professor) in Economics, National University of Singapore	2024 -
	Postdoc Associates, Cowles Foundation for Research in Economics and Department of Computer Science, Yale University	2022 - 2024
	Research Intern, Microsoft Research	Jun to Aug 2020, 2021

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

	Stony Brook University, Stony Brook, NY, USA M.S., Computer Science	May 2018
	Shanghai Jiaotong University, Shanghai, China B.S., Computer Science	June 2015

Awards	Northwestern Terminal Year Fellowship	2021

Working Papers

1. Implementing Evidence Acquisition: Time Dependence in Contracts for Advice.
   with Jonathan Libgober

2. Managing Persuasion Robustly: The Optimality of Quota Rules.
   with Dirk Bergemann and Tan Gan

3. Screening Signal-Manipulating Agents via Contests.
   with Xiaoyun Qiu

4. Simple Mechanisms for Agents with Non-linear Utilities.
   with Yiding Feng and Jason Hartline

5. Mechanism Design with Endogenous Principal Learning.
   with Daniel Clark

6. Scale-robust Auctions.
   with Jason Hartline and Aleck Johnsen

7. Falsifiable Test Design in Coordination Games.
   with Boli Xu

8. Dynamics and Contracts for an Agent with Misspecified Beliefs.
   with Argyris Oikonomou

9. Incentivizing Participation in Clinical Trials.
   with Alex Slivkins

10. Misspecified Beliefs about Time Lags.
    with Harry Pei

JOURNAL
PUBLICATIONS

1. Nearly Minimax-Optimal Regret for Linearly Parameterized Bandits.
   with Yining Wang and Yuan Zhou,   Transactions on Information Theory 2024

2. Your College Dorm and Dormmates: Fair Resource Sharing with Externalities.
   with Jiarui Gan and Bo Li,   Journal of Artificial Intelligence Research 2023

3. Bayesian Auctions with Efficient Queries.
   with Jing Chen, Bo Li and Pinyan Lu,   Artificial Intelligence 2022

4. Equilibrium Behaviors in Repeated Games.
   with Harry Pei,   Journal of Economic Theory 2021

5. Efficient Approximations for the Online Dispersion Problem.
   with Jing Chen and Bo Li,   SIAM Journal on Computing 2019

CONFERENCE
PUBLICATIONS

1. Algorithmic Information Disclosure in Optimal Auctions.
   with Yang Cai and Jinzhao Wu,   EC 2024

2. Optimal Scoring for Dynamic Information Acquisition.
   with Jonathan Libgober,   EC 2024

3. Revenue Maximization for Buyers with Costly Participation.
   with Yannai Gonczarowski, Nicole Immorlica and Brendan Lucier, SODA[1] 2024

4. Optimal Scoring Rules for Multi-dimensional Effort.
   with Jason Hartline, Liren Shan and Yifan Wu,   COLT[2] 2023

5. Bayesian Analysis of Linear Contracts.
   with Tal Alon, Paul Dütting and Inbal Talgam-Cohen,   EC[3] 2023

6. Making Auctions Robust to Aftermarkets.
   with Moshe Babaioff, Nicole Immorlica and Brendan Lucier,   ITCS[4] 2023

7. Budget Pacing in Repeated Auctions: Regret and Efficiency without Convergence.
   with Jason Gaitonde, Bar Light, Brendan Lucier and Alex Slivkins, ITCS 2023

8. Simple Mechanisms for Non-linear Agents.
   with Yiding Feng and Jason Hartline,   SODA 2023

9. Selling Data to an Agent with Endogenous Information.   EC 2022

10. Optimization of Scoring Rules.
    with Jason Hartline, Liren Shan and Yifan Wu,   EC 2022

11. Almost Proportional Allocations for Indivisible Chores.
    with Bo Li and Xiaowei Wu,   WebConf[5] 2022

12. Revelation Gap for Pricing from Samples.
    with Yiding Feng and Jason Hartline,   STOC[6] 2021

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[1] ACM-SIAM Symposium on Discrete Algorithms
[2] Conference on Learning Theory
[3] ACM Conference on Economics and Computation
[4] Innovations in Theoretical Computer Science
[5] The Web Conference
[6] ACM Symposium on Theory of Computing

13. Tight Regret Bounds for Infinite-armed Linear Contextual Bandits.
    with Yining Wang, Xi Chen and Yuan Zhou,   AISTATS[7] 2021

14. Benchmark Design and Prior-independent Optimization.
    with Jason Hartline and Aleck Johnsen,   FOCS[8] 2020

15. Multinomial Logit Bandit with Low Switching Cost.
    with Kefan Dong, Qin Zhang and Yuan Zhou,   ICML[9] 2020

16. Fair Resource Sharing and Dorm Assignments.
    with Bo Li,   AAMAS[10] 2020

17. Approximately Maximizing the Broker's Profit in a Two-sided Market.
    with Jing Chen and Bo Li,   IJCAI[11] 2019

18. Optimal Auctions vs. Anonymous Pricing: Beyond Linear Utility.
    with Yiding Feng and Jason Hartline,   EC 2019

19. Nearly Minimax-Optimal Regret for Linearly Parameterized Bandits.
    with Yining Wang and Yuan Zhou,   COLT 2019

20. Revenue Maximization with Imprecise Distribution.
    with Pinyan Lu and Haoran Ye,   AAMAS 2019

21. Information Elicitation for Bayesian Auctions.
    with Jing Chen and Bo Li,   SAGT[12] 2018

22. Dynamic Fair Division Problem with General Valuations.
    with Bo Li and Wenyang Li,   IJCAI 2018

23. Bayesian Auctions with Efficient Queries (Brief Announcement).
    with Jing Chen, Bo Li and Pinyan Lu,   ICALP[13] 2018

24. Efficient Approximations for the Online Dispersion Problem.
    with Jing Chen and Bo Li,   ICALP 2017

ACADEMIC SERVICE	Workflow Chair: EC 2024

Program Committee
- WINE[14] 2024, EAAMO 2024[15], EC 2024, WINE 2023, EC 2023, WebConf 2023, WINE 2022

Journal Reviewer
- American Economic Review, American Economic Review: Insight, Journal of Economic Theory, Journal of the ACM, SIAM Journal on Computing, Operations Research, Mathematics of Operations Research, Games and Economic Behavior, Transactions on Information Theory, Transactions on Economics and Computation, Economic Theory, Artificial Intelligence.

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[7] International Conference on Artificial Intelligence and Statistics
[8] IEEE Symposium on Foundations of Computer Science
[9] International Conference on Machine Learning
[10] International Conference on Autonomous Agents and Multiagent Systems
[11] International Joint Conferences on Artificial Intelligence
[12] International Symposium on Algorithmic Game Theory
[13] EATCS International Colloquium on Automata, Languages and Programming
[14] Conference on Web and Internet Economics
[15] ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization

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