

Sai Srivatsa Ravindranath

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INTERESTS **Machine Learning**
Deep Learning, LLMs and GenAI
Economics and Computation
Multi-agent systems, Market Design, Game Theory, Algorithmic Economics

EDUCATION **Harvard University** (July 2020 - Present)
Ph.D candidate in Computer Science
Advisor: Prof. David Parkes
Indian Institute of Technology, Kharagpur
B. Tech (with Honors) in EE, Minor in CS

WORK **Google Research** (2024 - Present)
EXPERIENCE *Student Researcher*, OMEGA Team
LLMs × Mechanism Design
Google Research (2023 - 2024)
Student Researcher, Market Algorithms Team
Auctions × Deep Reinforcement Learning
Microsoft Research (2016 - 2017)
Research Fellow, Machine Learning and Optimization Group
Large-scale Multi-label learning × Recommender Systems

JOURNAL ^α *denotes alphabetical ordering of authors*
PUBLICATIONS **Optimal Auctions through Deep Learning: Advances in Differential Economics^α**
P. Dutting, Z. Feng, H. Narasimhan, DC. Parkes, SS. Ravindranath.
• Journal of the ACM (JACM), September 2023
DOI: <https://dl.acm.org/doi/10.1145/3630749>
• Communications of the ACM, Volume 64 (8), August 2021
DOI: <https://dl.acm.org/doi/10.1145/3470442>

CONFERENCE **Deep Reinforcement Learning for Sequential Combinatorial Auctions**
PUBLICATIONS SS. Ravindranath, Z. Feng, D. Wang, M. Zaheer, A. Mehta, DC. Parkes
Under submission at *ICLR 2025*
ArXiv: <https://arxiv.org/abs/2407.08022>
Data Market Design through Deep Learning
SS. Ravindranath*, Y. Jiang*, DC. Parkes
Thirty-Seventh Conference on Neural Information Processing Systems (NeurIPS 2023)
ArXiv: <https://arxiv.org/pdf/2310.20096.pdf>
Deep Learning for Two-Sided Matching
SS. Ravindranath, Z. Feng, S. Li, J. Ma, SD. Kominers, DC. Parkes
Sixth International Workshop on Matching Under Preferences (MATCH-UP 2022)
Full version under submission at *ICLR 2025*
ArXiv: <https://arxiv.org/pdf/2107.03427.pdf>
From Predictions to Decisions: Using Lookahead Regularization
N. Rosenfeld, S. Hilgard, SS. Ravindranath, DC. Parkes
Thirty-Fourth Conference on Neural Information Processing Systems (NeurIPS 2020)
ArXiv: <https://arxiv.org/pdf/2006.11638.pdf>

Optimal Auctions through Deep Learning^α

P. Dutting, Z. Feng, H. Narasimhan, DC. Parkes, SS. Ravindranath.
 Thirty-Sixth International Conference on Machine Learning (ICML 2019)
 ArXiv: <https://arxiv.org/pdf/1706.03459.pdf>

Salient Object Detection via Objectness Measure

SS. Ravindranath, RV. Babu
 Twenty-Second International Conference on Image Processing (ICIP 2015)
 ArXiv: <https://arxiv.org/pdf/1506.07363.pdf>

BOOK
 CHAPTERS

Machine Learning for Matching Markets^α

Z. Feng, DC. Parkes, SS. Ravindranath.
 In F. Echenique N. Immorlica and V. Vazirani, editors
Online matching theory and market design. Cambridge University Press, 2022.

Machine Learning for Optimal Economic Design^α

P. Dutting, Z. Feng, N. Golowich, H. Narasimhan, DC. Parkes, SS. Ravindranath.
 In JF Laslier, H. Moulin, MR. Sanver, WS. Zwicker, editors,
The Future of Economic Design. Springer, 2019

TECHNICAL
 WORKSHOPS

Learning Objective functions for Improved Image retrieval

SS. Ravindranath, M. Gygli, LV. Gool
 MediaEval Workshops, 2015.

TEACHING

CS 136: Economics and Computation (Teaching Fellow)

Harvard University, Fall 2021

ADVISING

A.B Thesis in Applied Math/Computer Science co-advised with Prof. David Parkes.
 Dominik Bohnet Zurcher (Harvard → Oxford)

- Pick Me: Reducing Wastefulness in the RSD Mechanism

Jeff (Yanchen) Jiang (Harvard → Harvard)

- Learning to Sell Information

Christopher En (Harvard → Columbia)

- Introduction to Auction Theory

PROFESSIONAL
 SERVICES

Conference Reviewing

NeurIPS (2021 - Present), ICML (2023 - Present), ICLR (2023 - Present)

Journal Reviewing

Mathematics of Operations Research (MOR)

Workshop Reviewing

AAAI 2025 Workshop on Markets, Incentives, and Gen AI

ICLR 2022 Workshop on Gamification and Multiagent Solutions