

Sai Srivatsa Ravindranath

CONTACT INFORMATION	Harvard University 5.427, Science and Engineering Campus, Allston, MA	http://saisrivatsa.com/saisr@g.harvard.edu
INTERESTS	Machine Learning Deep Learning, Reinforcement 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 EXPERIENCE	Google Research (July 2024 - Feb 2025) <i>Student Researcher</i> , Algorithms and Optimization LLMs and Mechanism Design Google Research (June 2023 - Jan 2024) <i>Student Researcher</i> , Market Algorithms Auctions and Deep Reinforcement Learning Microsoft Research (2016 - 2017) <i>Research Fellow</i> , Machine Learning and Optimization Large-scale Multi-label learning and Recommender Systems	
JOURNAL ARTICLES	^α denotes alphabetical ordering of authors Automated Mechanism Design: A Survey MJ. Curry, Z. Fan, Y. Jiang, <u>SS. Ravindranath</u> , T. Wang, DC. Parkes SIGecom Exchange, 2025 Paper: https://www.sigecom.org/exchanges/volume_22/2/CURRY.pdf Optimal Auctions through Deep Learning: Advances in Differential Economics ^α P. Dutting, Z. Feng, H. Narasimhan, DC. Parkes, <u>SS. Ravindranath</u> . <ul style="list-style-type: none">Journal of the ACM (JACM), September 2023 DOI: https://dl.acm.org/doi/10.1145/3630749Communications of the ACM, Volume 64 (8), August 2021 DOI: https://dl.acm.org/doi/10.1145/3470442	
PREPRINTS	Framing and Signaling: An LLM-Based Approach to Information Design S. Hossain, T. Lin, P. Duetting, RP. Leme, H. Xu, S. Zuo, <u>SS. Ravindranath</u> Under Submission, 2025 Strategic Foundation Models D. Goktas, A. Greenwald, T. Osogami, ..., <u>SS. Ravindranath</u> et. al. Position Paper, 2025 Deep Reinforcement Learning for Sequential Combinatorial Auctions <u>SS. Ravindranath</u> , Z. Feng, D. Wang, M. Zaheer, A. Mehta, DC. Parkes ArXiv: https://arxiv.org/abs/2407.08022	
CONFERENCE & WORKSHOP PAPERS	Data Market Design through Deep Learning <u>SS. Ravindranath</u> *, 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)
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>

Learning Objective functions for Improved Image retrieval

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

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

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

Workshop Reviewing

AAAI 2025 Workshop on Markets, Incentives, and Gen AI

ICLR 2022 Workshop on Gamification and Multiagent Solutions