

Vignesh Viswanathan

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Education

PhD in Computer Science

University of Massachusetts, Amherst

Advisor: Prof. Yair Zick

2020–Present

BTech in Computer Science And Engineering

Indian Institute of Technology, Kharagpur

2016–2020

Research Interests

Fair Allocation, Mechanism Design, Graph Theory

Selected Awards and Honors

2022: Received the **College Outstanding Synthesis Award** for the academic year 2021-2022

2021: Received the **Robin Popplestone Graduate Fellowship**

2020: **Ranked 3rd** among all the computer science undergraduate students at IIT, Kharagpur

2019: Received the **IIT KGP Foundation Award** to support my internship at NUS, Singapore

Selected Publications

Gagan Biradar, Yacine Izza, Elita Lobo, **Vignesh Viswanathan** and Yair Zick. *Axiomatic Aggregations of Abductive Explanations*. In Proceedings of the 38th AAAI Conference on Artificial Intelligence (AAAI), 2024.

Cyrus Cousins, **Vignesh Viswanathan** and Yair Zick. *The Good, the Bad and the Submodular: Fairly Allocating Mixed Manna Under Order-Neutral Submodular Preferences*. In Proceedings of the 19th Conference on Web and Internet Economics (WINE), 2023.

Vignesh Viswanathan and Yair Zick. *A General Framework For Fair Allocation with Matroid Rank Valuations*. In Proceedings of the 24th ACM Conference on Economics and Computation (EC), 2023.

Hadi Hosseini, Justin Payan, Rik Sengupta, Rohit Vaish and **Vignesh Viswanathan**. *Graphical House Allocation*. In Proceedings of the 22nd International Conference on Autonomous Agents and Multi-agent Systems (AAMAS), 2023.

Omer Lev, Neel Patel, **Vignesh Viswanathan** and Yair Zick. *The Price is (Probably) Right: Learning Market Equilibria from Samples*. In Proceedings of the 20th International Conference on Autonomous Agents and Multi-agent Systems (AAMAS), 2021.

Work Experience

Microsoft Research

Research Intern in the Causal Machine Learning Group

Mentors: Tobias Schnabel and Robert Ness

Summer, 2022

Worked on designing and evaluating attribution methods in sequential decision problems.

Invited Talks

Theory Reading Group, Dartmouth College

Yankee Swap: A Fast and Simple Fair Allocation Mechanism for Matroid Rank Valuations

2023

COMSOC, Haifa, Israel and University of Waterloo

Learning Market Equilibria from Samples

2021

Miscellaneous

Programming Languages: Python, C++, CUDA

Packages: PyTorch, Numba, CPLEX, Scikit-Learn, Multiprocessing, STL (for C++)

Self-taught Topics: Matroid Theory, Boolean Function Analysis, Multi-armed Bandits, Linear Programming