Xizhi Tan

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Research Interests

Mechanism Design with Predictions, Algorithmic Game Theory, and Multi-agent Resource Allocation

Employment History

Jun 2024 -	**Google** – Mountain View, CA *Student Researcher*
Jun- Sept 2023	**Google** – Mountain View, CA *Research Intern*

Education

Jan 2020-	**Drexel Universty** – Philadelphia, PA Ph.D. in Computer Science Advisor: Vasilis Gkatzelis
Sept 15- Dec 19	**Drexel University** – Philadelphia, PA BSc in Mathematics

Journal Publications

Deterministic Budget Feasible Clock Auctions
Eric Balkanski, Pranav Garimidi, Vasilis Gkatzelis, Daniel Schoepflin, Xizhi Tan
Major revision at *Operations Research*

2023   **Learning-Augmented Mechanism Design: Leveraging Predictions for Facility Location**
Priyank Agrawal, Eric Balkanski, Vasilis Gkatzelis, Tingting Ou, Xizhi Tan
Mathematics of Operations Research

Conference Publications

2024   **Learning-Augmented Metric Distortion via (p, q)-Veto Core**
Ben Berger, Michal Feldman, Vasilis Gkatzelis, Xizhi Tan
25rd ACM Conference on Economics and Computation (**EC 2024**)

2024   **Online Mechanism Design with Predictions**
Eric Balkanski, Vasilis Gkatzelis, Xizhi Tan, Cherlin Zhu
25rd ACM Conference on Economics and Computation (**EC 2024**)
Exemplary Track Paper Award for the Theory Track

2024   **Getting More by Knowing Less: Bayesian Incentive Compatible Mechanisms for Fair Division**
Vasilis Gkatzelis, Alexandros Psomas, Xizhi Tan, Paritosh Verma
33rd International Joint Conference on Artificial Intelligence (**IJCAI 2024**)

2024   **Extracting Small Subgraphs in Road Network**
Sara Ahmadian, Sreenivas Gollapudi, Greg Hutchins, Kostas Kollias, Xizhi Tan
33rd ACM Web Conference (**WWW 2024**)

2023	**EFx Budget-Feasible Allocations with High Nash Welfare** Marius Garbea, Vasilis Gkatzelis, Xizhi Tan *26th European Conference on Artificial Intelligence* (**ECAI 2023**)
2023	**Strategyproof Scheduling with Predictions** Eric Balkanski, Vasilis Gkatzelis, Xizhi Tan *14th Innovations in Theoretical Computer Science* (**ITCS 2023**)
2022	**Learning-Augmented Mechanism Design: Leveraging Predictions for Facility Location** Priyank Agrawal, Eric Balkanski, Vasilis Gkatzelis, Tingting Ou, Xizhi Tan *23rd ACM Conference on Economics and Computation* (**EC 2022**)
2022	**Improved Price of Anarchy via Predictions** Vasilis Gkatzelis, Kostas Kollias, Alkmini Sgouritsa, Xizhi Tan *23rd ACM Conference on Economics and Computation* (**EC 2022**)
2022	**Deterministic Budget Feasible Clock Auctions** Eric Balkanski, Pranav Garimidi, Vasilis Gkatzelis, Daniel Schoepflin, Xizhi Tan *33rd ACM-SIAM Symposium on Discrete Algorithms* (**SODA 2022**)
2021	**Fair and Efficient Online Allocations with Normalized Valuations** Vasilis Gkatzelis, Alexandros Psomas, Xizhi Tan *35th AAAI Conference on Artificial Intelligence.* (**AAAI 2021**)

Teaching Experience

Fall 22	**Teaching assistant, CS 521: Data Structures and Algorithms I (Graduate)**
Fall 20, 21, 23	**Teaching assistant, CS 457: Data Structures and Algorithms I**
Spring 20	**Teaching assistant, CS 380: Artificial Intelligence**

Talks

Learning-Augmented Metric Distortion via (p, q)-Veto Core

May 2024	Yale FDS Students Theory Seminar

Strategyproof Scheduling with Predictions

July 2023	Google MTV Algorithms Reading Group
May 2023	Rutgers/DIMACS Theory Seminar
Jan 2023	14th Innovations in Theoretical Computer Science

Learning-Augmented Mechanism Design

Aug 2022	Purdue University
July 2022	23rd ACM Conference on Economics and Computation
Apr 2022	Drexel Theory Reading Group

Improved Price of Anarchy via Predictions

July 2022	23rd ACM Conference on Economics and Computation
May 2022	Drexel Theory Reading Group

Fair and Efficient Online Allocations with Normalized Valuations

Feb 2021	35th AAAI Conference on Artificial Intelligence

Honors and Scholarships

2024	**Werner Krandick Teaching Assistant Award** by Department of Computer Science, Drexel University
2023	**Finalist for 2023 Meta Research PhD Fellowship**
2023	**Jay Modi Memorial Award** by Department of Computer Science, Drexel University
2023	**PhD Research Excellence** *for excellence in research* by College of Computing & Informatics, Drexel University
2022	**Teaching Excellence Award (Graduate)** *for excellence in academics teaching* by College of Computing & Informatics, Drexel University
2019	**Robert J. Bickel Scholarship** *for outstanding academic achievements* by College of Arts & Science, Drexel University
2017	**Philadelphia City Council Citation** *for contributions to the AAPI community* by City of Philadelphia
2016	**William Avery Scholarship** *for excellent performance in freshmen year* by LeBow College of Business, Drexel University
2015 - 2019	**A.J. Drexel Scholarship** *supplemental financial support* by Drexel University
2015 - 2019	**Drexel Grant** *supplemental financial support* by Drexel University

Research Visits

Aug 22 - Sept 22	**Purdue University** – West Lafayette, IN Host: Alex Psomas
July 22 - Aug 22	**Columbia University** – New York, NY Host: Eric Balkaniski

Academic Service

Journal Reviewer: Transactions on Economics and Computation (TEAC)

Conference Reviewer/Subreviewer: Symposium on Discrete Algorithms (SODA), Conference on Economics and Computation (EC), Neural Information Processing Systems (NeurIPS), International Symposium on Algorithmic Game Theory (SAGT), Symposium on Mathematical Foundations of Computer Science (MFCS), International Conference on Machine Learning (ICML), AAAI Conference on Artificial Intelligence (AAAI)

Other Industry Work Experience

Apr 19 - Step 19	**JPMorgan Chase & Co.** – Wilmington, DE *Digital Quality Operations Analyst*
Sept 17 - Mar 18	**Comcast Corporation** – Philadelphia, PA *Assistant Product Manager*
May 17 - Aug 17	**City Council of Philadelphia** – Philadelphia, PA *Asian Outreach Intern*
Step 16 - Mar 17	**Your Part-time Controller LLC** – Philadelphia, PA *Data Visualization Analyst*