Xizhi Tan

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Research Interests

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

Employment History

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

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

Conference Publications

2023	**Extracting Small Subgraphs in Road Network** Sara Ahmadian, Sreenivas Gollapu, Greg Hutchins, Kostas Kollias, Xizhi Tan *under submission*
2023	**Online Mechanism Design with Predictions** Eric Balkanski, Vasilis Gkatzelis, Xizhi Tan, Cherlin Zhu *under submission*
2023	**Optimal Metric Distortion with Predictions** Ben Berger, Michal Feldman, Vasilis Gkatzelis, Xizhi Tan *under submission*
2023	**Getting More by Knowing Less: Bayesian Incentive Compatible Mechanisms for Fair Division** Vasilis Gkatzelis, Alexandros Psomas, Xizhi Tan, Paritosh Verma *under submission*
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 2022	**Teaching assistant, CS 521: Data Structures and Algorithms I (Graduate)**
Fall 2020, 2021	**Teaching assistant, CS 457: Data Structures and Algorithms I**
Spring 2020	**Teaching assistant, CS 380: Artificial Intelligence**

Talks

Strategyproof Scheduling with Predictions

July 2023	MTV Algorithms Reading Group, Google
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

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)

Industrial 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