

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 University** – 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

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)

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), Interna-
 tional Conference on Machine Learning (ICML), AAAI Conference on Artificial In-
 telligence (AAAI)

Other Industry Work Experience

- Apr 19 - Sep 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