

# 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

- Online Mechanism Design with Predictions**  
Eric Balkanski, Vasilis Gkatzelis, Xizhi Tan, Cherlin Zhu  
*under submission*
- Optimal Metric Distortion with Predictions**  
Ben Berger, Michal Feldman, Vasilis Gkatzelis, Xizhi Tan  
*under submission*
- 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

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