

# Xizhi Tan

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## Research Interests

My research focuses on *algorithmic game theory*, *beyond worst-case analysis*, and *mechanism design*. Recently, I am particularly interested in *mechanism design with predictions*

## Employment History

- Jun 2024 - **Google Research** – Mountain View, CA  
Student Researcher in Market Algorithms; *Host: Mingfei Zhao*
- Jun- Sept 2023 **Google Research** – Mountain View, CA  
Research Intern in Discrete Algorithms; *Host: Greg Hutchins*

## 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

## Honors and Scholarships

- 2024 **Exemplary Theory Track Paper Award** for “Online Mechanism Design with Predictions”  
by the ACM Conference on Economics and Computation (EC 2023)
- 2024 **Werner Krandick Teaching Assistant Award**  
by Department of Computer Science, Drexel University
- 2023 **Finalist of 2023 Meta Research PhD Fellowship**
- 2023 **Jay Modi Memorial Award** for *academic excellence*  
by Department of Computer Science, Drexel University
- 2023 **PhD Research Excellence**  
by College of Computing & Informatics, Drexel University
- 2022 **Teaching Excellence Award (Graduate)**  
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

## 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)*
- 2023 **Mechanism Design with Predictions: An Annotated Reading List** [↗](#)  
Eric Balkanski, Vasilis Gkatzelis, Xizhi Tan  
*ACM SIGecom Exchanges*, 21.1, pp. 54–57

TBD **Deterministic Budget Feasible Clock Auctions**  
Eric Balkanski, Pranav Garimidi, Vasilis Gkatzelis, Daniel Schoepflin, Xizhi Tan  
Major revision at *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)*  
(received **Exemplary Theory Track Paper Award**)
- 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, pp. 2807–2815 (IJCAI 2024)*
- 2024 **Extracting Small Subgraphs in Road Network** [↗](#)  
Sara Ahmadian, Sreenivas Gollapudi, Greg Hutchins, Kostas Kollias, Xizhi Tan  
*33rd ACM Web Conference, pp. 493–502 (WWW 2024)*
- 2023 **EFx Budget-Feasible Allocations with High Nash Welfare** [↗](#)  
Marius Garbea, Vasilis Gkatzelis, Xizhi Tan  
*26th European Conference on Artificial Intelligence, Vol. 372, pp. 795–802 (ECAI 2023)*
- 2023 **Strategyproof Scheduling with Predictions** [↗](#)  
Eric Balkanski, Vasilis Gkatzelis, Xizhi Tan  
*14th Innovations in Theoretical Comp. Sci. Conf., Vol. 251, 11:1–11:22 (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, pp. 497–528 (EC 2022)*
- 2022 **Improved Price of Anarchy via Predictions** [↗](#)  
Vasilis Gkatzelis, Kostas Kollias, Alkmini Sgouritsa, Xizhi Tan  
*23rd ACM Conference on Economics and Computation, pp. 529–557 (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, pp. 2940–2963 (SODA 2022)*
- 2021 **Fair and Efficient Online Allocations with Normalized Valuations** [↗](#)  
Vasilis Gkatzelis, Alexandros Psomas, Xizhi Tan  
*35th AAAI Conference on Artificial Intelligence, pp. 5440–5447. (AAAI 2021)*
- TBD **Multi-Platform Autobidding with and without Predictions**  
Gagan Aggarwal, Anupam Gupta, Xizhi Tan, Mingfei Zhao  
*under submission*
- TBD **Clock Auctions Augmented with Unreliable Advice**  
Vasilis Gkatzelis, Daniel Schoepflin, Xizhi Tan  
*under submission*

## Teaching Experience

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

## 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

## Talks

Aug 2024     **Deterministic Budget Feasible Clock Auctions**  
Google MTV Algorithms Reading Group

July 2024     **Learning-Augmented Metric Distortion via  $(p, q)$ -Veto Core**  
25rd ACM Conference on Economics and Computation

May 2024     Yale FDS Student Theory Seminar

July 2024     **Online Mechanism Design with Predictions**  
25rd ACM Conference on Economics and Computation

July 2023     **Strategyproof Scheduling with Predictions**  
Google MTV Algorithms Reading Group

May 2023     Rutgers/DIMACS Theory Seminar

Jan 2023     14th Innovations in Theoretical Computer Science

Aug 2022     **Learning-Augmented Mechanism Design**  
Purdue University

July 2022     23rd ACM Conference on Economics and Computation

Apr 2022     Drexel Theory Reading Group

July 2022     **Improved Price of Anarchy via Predictions**  
23rd ACM Conference on Economics and Computation

May 2022     Drexel Theory Reading Group

Feb 2021     **Fair and Efficient Online Allocations with Normalized Valuations**  
35th AAAI Conference on Artificial Intelligence

## Academic Service

**Program Committees:** 24th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2025); 39th Conference on Artificial Intelligence (AAAI 2025)

**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 - 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*