David X. Lin

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Education

M.S., Cornell University, Ithaca, NY — August 2024 – present
Computer Science

B.A., Cornell University, Ithaca, NY — August 2019 – May 2023
Mathematics, Magna Cum Laude
Computer Science, Summa Cum Laude

Research Experience

Algorithmic Game Theory research advised by Éva Tardos and Sid Banerjee — Fall 2024 – present

- Exploring problems in fair resource allocation and non-monetary mechanism design.

Algorithms research advised by David Shmoys — Fall 2021 – Spring 2023

- Explored learning-augmented online algorithms for interval scheduling problems.
- Explored linear programming-based approximation algorithms for interval covering problems.
- Explored linear programming formulations for the capacitated facility location problem and their integrality gaps.

Human-Computer Interaction research advised by Cheng Zhang — Spring 2020 – Spring 2021

- Developed ML models to detect user interest and hand posture on mobile devices.

Publications

- **David X. Lin**, Giannis Fikioris, Siddhartha Banerjee, and Éva Tardos. Robust Resource Allocation via Competitive Subsidies. In *Proceedings of the Innovations in Theoretical Computer Science Conference (ITCS)*, 2026. (To appear)
- **David X. Lin**, Giannis Fikioris, Siddhartha Banerjee, and Éva Tardos. Robust Equilibria in Shared Resource Allocation via Strengthening Border's Theorem. In *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2026. (To appear)
- **David X. Lin**, Daniel Hall, Giannis Fikioris, Siddhartha Banerjee, and Éva Tardos. Online Resource Sharing: Better Robust Guarantees via Randomized Strategies. In *Proceedings of the 34th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 179–186, 2025.
- Hyunchul Lim, **David Lin**, Jessica Tweneboah, and Cheng Zhang. HandyTrak: Recognizing the Holding Hand on a Commodity Smartphone from Body Silhouette Images. In *The 34th Annual ACM Symposium on User Interface Software and Technology (UIST)*, pages 1210–1220, 2021.

Preprints

- Chido Onyeze, **David X. Lin**, Siddhartha Banerjee, and Éva Tardos. Dynamic Allocation of Public Goods with Approximate Core Equilibria. (In submission)

Teaching Experience

Teaching Assistant at Cornell University

- CS 4820: Introduction to Analysis of Algorithms — Fall 2021, Fall 2022, Fall 2025
- CS 2800: Mathematical Foundations of Computing — Spring 2025
- CS 4830: Introduction to Cryptography — Fall 2024
- CS 2802: Discrete Structures - Honors — Fall 2020, Spring 2023
- CS 2800: Discrete Structures — Spring 2021, Spring 2022

Industry Experience

Software Engineer, Google — July 2023 – August 2024

- Worked on Android XR, a new operating system for extended reality (XR) devices.

Software Engineering Intern, Google — Summer 2022

- Built user-facing augmented reality experiences.

Software Development Engineering Intern, Amazon — Summer 2021

- Built tools to trace Amazon API Gateway requests.

Awards and Honors

- Outstanding Teaching Assistant Recognition, Spring 2025
- Top 500 scorer in the William Lowell Putnam Mathematics Competition, 2022
- Phi Beta Kappa Honor Society, Theta Chapter of New York at Cornell University, 2022