LINDA CAI

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RESEARCH INTERESTS

Online Algorithms, Algorithmic Game Theory and Mechanism Design, Learning in the Presence of Strategic Behavior.

EDUCATION

Ph.D. in Computer Science, Princeton University *September 2020 - Present*
Advisor: Matt Weinberg

M.S. in Computer Science, Princeton University *2018-2020*
Thesis: Novel Behaviors in Combinatorial Auctions
Advisor: Matt Weinberg

B.S. in Computer Science and Mathematics, UIUC *2014-2018*
Graduated Summa Cum Laude

FELLOWSHIPS AND AWARDS

- **Chainlink Labs Research Fellowship** awarded by Chainlink Labs 2021
- **Francis Robbins Upton Fellowship** awarded by Princeton School of Engineering 2020
- **Bronze Tablet Award** for ranking in the top three percent at UIUC 2018
- **Jeffry P. Blahut Memorial Scholarship** for academic achievements in CS 2017
- **Franz Hohn and J.P. Nash Scholarship** for outstanding performance in applied and computational mathematics 2016

CONFERENCE PUBLICATIONS

- *Pandora's Problem with Nonobligatory Inspection: Optimal Structure and a PTAS.* [link]
  Hedyeh Beyhaghi, Linda Cai.
  In Proceedings of The 55th Annual ACM Symposium on Theory of Computing. **STOC 2023**
- *The Short-Side Advantage in Random Matching Markets.* [link]
  Linda Cai, Clayton Thomas.
  In Proceedings of the 5th Symposium on Simplicity in Algorithms. **SOSA 2022**
- *99% Revenue with Constant Enhanced Competition.* [link]
  Linda Cai, Raghuvansh R. Saxena.
  In Proceedings of The 22nd ACM Conference on Economics and Computation. **EC 2021**
- *Implementation in Advised Strategies: Welfare Guarantees from Posted-Price Mechanisms when Demand Queries are NP-hard.* [link]
  Linda Cai, Clayton Thomas, S. Matthew Weinberg.
  In Proceedings of the 11th Innovations in Theoretical Computer Science. **ITCS 2020**
- *Baechi: fast device placement of machine learning graphs.* [link]
  Beomyeol Jeon, Linda Cai, Pallavi Srivastava, Jintao Jiang, Xiaolan Ke, Yitao Meng, Cong Xie, Indranil Gupta.
  In Proceedings of ACM Symposium on Cloud Computing. **SOCC 2020**

SURVEYS

- *Recent Developments in Pandora's Box Problem: Variants and Applications.* [link]
  Hedyeh Beyhaghi, Linda Cai.
  ACM SIGecom Exchanges Vol. 21.1. Spring 2023

INVITED TALKS/POSTERS

- Pandora's Problem with Nonobligatory Inspection: Optimal Structure and a PTAS
  - Rutgers Theory Seminar Spring 2023
  - UPenn/Drexel Theory Seminar Fall 2022
- The Short-Side Advantage in Random Matching Markets.
  - EC Poster Session Summer 2019

ACADEMIC SERVICES

- **Program Committee** for EC (2023)
- **Conference Referee** for STOC (2022), SODA (2021, 2023), ITCS (2021, 2022), WINE (2019, 2020, 2021, 2022).
- **Co-organizer** for Gems of TCS Reading Group, Princeton University. Fall 2021 - Spring 2022
- **Co-organizer** for Princeton Theory Lunch, Princeton University. Fall 2022 - Present

TEACHING EXPERIENCE

- **Teaching Assistant**, New Horizons in TCS Summer School [link] Summer 2023
- **Teaching Assistant**, Princeton University
  - COS 521 Advanced Algorithms Design Fall 2021
  - COS 445 Economics and Computing (Recitation Leader) Spring 2020
  - COS 451 Computational Geometry Fall 2019
  - COS 445 Economics and Computing (Recitation Leader) Spring 2019
  - COS 126 Introduction to Computer Science (Recitation Leader) Fall 2018
- **Course Assistant**, University of Illinois at Urbana Champaign
  - CS 374 Algorithms and Models of Computation Fall 2017 - Spring 2018
  - CS 126 Intro to Computer Science Spring 2015

INTERNSHIPS

- Research Internship at Microsoft Research Summer 2022
- Software Engineering Internship at Jump Trading Summer 2017

SKILLS

- **Programming Languages**: C++, Java, Python, C, Haskell
- **Software Engineering Frameworks**: TensorFlow, PyTorch