

## EDUCATION

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### Massachusetts Institute of Technology

Cambridge, MA

Ph.D. in Operations Research, Advisor: Thodoris Lykouris

2022–Current

- Research Interests: Sequential Decision Making for Economic Environments, Machine Learning, Applied Probability, Online Marketplaces and Platforms
- Relevant Courses: Statistical Reinforcement Learning, Machine Learning, Inference and Information, Nonlinear Optimization, Probability, Linear Programming, Inventory Management, Revenue Management, GPA: 5/5

### Princeton University

Princeton, NJ

A.B. in Mathematics, Magna Cum Laude, GPA: 3.968/4

2018–2022

- Relevant Courses: Probability Theory, High-Dimensional Probability, Stochastic Calculus, Statistical Theory and Methods, Stochastic Control, Financial Econometrics, Machine Learning, Complex and Real Analysis, Combinatorics, Graph Theory, Algebra

## RESEARCH EXPERIENCE

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### Massachusetts Institute of Technology

Cambridge, MA

Research Assistant, Advisor: Thodoris Lykouris

August 2022–

- I develop theoretical frameworks and methodologies for sequential decision making and apply tools from stochastic processes to analyze and improve the efficiency of digital marketplaces.

### Princeton University

Princeton, NJ

Undergraduate Researcher, Advisor: S. Matthew Weinberg

2020–2022

- Designed a novel optimal online contention resolution scheme for  $k$ -uniform matroids and proved its optimality.
- Proved new tight bounds on manipulation gains in Incentive Compatible Tournament Design.

### Princeton University, Department of Computer Science

Princeton NJ

Undergraduate Researcher, Advisor: Ryan P. Adams

Summer 2019

- Designed and analyzed a Gibbs sampling algorithm for uniform samples from the Birkhoff polytope.

## PUBLICATIONS

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- **Social Learning with Limited Attention: Negative Reviews Persist under Newest First**  
*with Jackie Baek and Thodoris Lykouris*
  - 25th ACM Conference on Economics and Computation (EC), 2024
  - Major Revision at Operations Research
  - arXiv link: <https://arxiv.org/abs/2406.06929>
- **Simple and Optimal Online Contention Resolution Schemes for  $k$ -Uniform Matroids**  
*with S. Matthew Weinberg*
  - Innovations in Theoretical Computer Science (ITCS), 2024
  - arXiv link: <https://arxiv.org/abs/2309.10078>
- **Tight Bounds on 3-Team Manipulations in Randomized Death Match**  
*with S. Matthew Weinberg*
  - Conference on Web and Internet Economics (WINE), 2022
  - arXiv link: <https://arxiv.org/abs/2301.07862>

## TALKS

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- **Social Learning with Limited Attention: Negative Reviews Persist under Newest First**
  - INFORMS Manufacturing and Service Operations Management Conference SIG (MSOM SIG 2025), June 2025
  - Marketplace Innovation Workshop (MIW 2025), May 2025
  - INFORMS Annual Meeting (INFORMS 2024), October 2024
  - INFORMS Revenue Management and Pricing Section Conference (RMP 2024), July 2024
  - 25th ACM Conference on Economics and Computation (EC 2024), July 2024
  - INFORMS Manufacturing and Service Operations Management Conference (MSOM 2024), June 2024
- **Simple and Optimal Online Contention Resolution Schemes for  $k$ -Uniform Matroids**
  - Innovations in Theoretical Computer Science (ITCS), 2024
- **Tight Bounds on 3-Team Manipulations in Randomized Death Match**
  - Conference on Web and Internet Economics (WINE), 2022

## HONORS AND AWARDS

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- Phi Beta Kappa, *Princeton University* May 2022
- Sigma Xi, *Princeton University* May 2022
- Shapiro Prize For Academic Excellence, *Princeton University*, Top 2-3% of class Sep 2020
- International Mathematical Olympiad 2016, 2017, 2018
  - 2016 - Bronze Medal, 2017 - Bronze Medal, 2018 - Bronze Medal*
- William Lowell Putnam Mathematical Competition - Top 200 out of 4000 2018, 2019
- Balkan Mathematical Olympiad 2016, 2017, 2018
  - 2016 - Silver Medal, 2017 - Gold Medal, 2018 - Silver Medal*
- East Coast Regional Datathon, Citadel, Citadel Securities, and Correlation One - Top 8 out of 30 Feb 2019

## TEACHING EXPERIENCE

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- **Teaching Assistant, Data, Models, and Decisions (15.060)**, MIT Fall 2024  
*Graduate, MBA Core Course, 400 students*
  - Led recitations on random variables, linear and logistic regression, classification metrics, and optimization.
- **Head Teaching Assistant, The Analytics Edge (15.071)**, MIT Spring 2024  
*Graduate, MBA Course, 200 students*
  - Designed and improved course materials on linear regression, classification, regularization, and CART.
- **Princeton University, Teaching Assistant** Spring 2022  
*Economics and Computation (COS 445), Undergraduate, 200 students*

## INDUSTRY EXPERIENCE

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- Citadel Securities LLC** New York, NY  
Quantitative Trading Intern Summer 2021
  - Learned about financial markets; built time series model for ETF returns; analyzed counterparty accumulation.
- Aquatic Capital Management** Chicago, IL  
Research Intern Summer 2020
  - Investigated a coordinate descent algorithm and optimized its performance on elastic net for large datasets.

## ACADEMIC SERVICE

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### Seminar Coordinator, MIT Operations Research Center (ORC)

Spring 2025

- Organize and coordinate weekly seminars featuring invited speakers in operations research and related fields.

## SKILLS

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**Advanced:** Python, R, Numpy, Pandas, scikit-learn, statsmodels, L<sup>A</sup>T<sub>E</sub>X, Power Point

**Intermediate:** Git, GitHub, Julia, JuMP, Gurobi, Java, Excel

**Basic:** Matlab, C++