

EDUCATION

- Massachusetts Institute of Technology** Cambridge, MA
Ph.D. in Operations Research, Advisor: Thodoris Lykouris 2022–Current
- Research Interests: Sequential Decision Making, Machine Learning, Online Marketplaces and Platforms, Applied Modelling, Applied Probability, Statistics
 - Relevant courses: Linear Programming, Probability, Inference and Information, Machine Learning, Statistical Reinforcement Learning, Theory of Operations Management GPA: 5/5
- Princeton University** Princeton, NJ
A.B. in Mathematics, GPA: 3.968/4 2018–2022
- Magna Cum Laude
 - 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

- Massachusetts Institute of Technology** Cambridge, MA
Research Assistant, Advisor: Thodoris Lykouris August 2022–
- Working on problems in sequential decision making and online learning with applications to pricing, online marketplaces, and online platforms.
- Princeton University** Princeton, NJ
Undergraduate Researcher, Advisor: S. Matthew Weinberg 2020–2022
- Proved new bounds on manipulation gains in Incentive Compatible Tournament Design
 - Designed a novel optimal online contention resolution scheme for k -uniform matroids and proved its optimality
- Princeton University, Department of Computer Science** Princeton NJ
Undergraduate Researcher, Advisor: Ryan P. Adams Summer 2019
- Designed and analyzed a Gibbs sampling algorithm to obtain uniform samples from the Birkhoff polytope and studied its convergence rate and mixing time.

PUBLICATIONS AND PREPRINTS

- **Social Learning with Bounded Rationality: Negative Reviews Persist under Newest First**
Jackie Baek, Atanas Dinev, Thodoris Lykouris
 - 25th ACM Conference on Economics and Computation (EC), 2024
 - INFORMS Revenue Management and Pricing Section Conference (RMP), 2024
 - INFORMS Manufacturing and Service Operations Management Conference (MSOM), 2024
- **Simple and Optimal Online Contention Resolution Schemes for k -Uniform Matroids**
Atanas Dinev, S. Matthew Weinberg
 - Innovations in Theoretical Computer Science (ITCS), 2024
- **Tight Bounds on 3-Team Manipulations in Randomized Death Match**
Atanas Dinev, S. Matthew Weinberg
 - Conference on Web and Internet Economics (WINE), 2022

TEACHING EXPERIENCE

- **Massachusetts Institute of Technology, Teaching Assistant** Fall 2024
Data, Models, and Decisions (15.060), Graduate (MBA), 400 students
Responsibilities: Hosted recitations and office hours, grades homework, and designed new recitation materials.
- **Massachusetts Institute of Technology, Head Teaching Assistant** Spring 2024
The Analytics Edge (15.071), Graduate (MBA), 200 students
Responsibilities: designed and improved homework assignments; administrative tasks (student attendance, waitlists, and project groups); computational tasks (R code for lecture materials)
- **Princeton University, Teaching Assistant** Spring 2022
Economics and Computation (COS 445), Undergraduate, 200 students

INDUSTRY EXPERIENCE

- Citadel Securities LLC** New York, NY
Quantitative Trading Intern Summer 2021
- Learned about financial market asset classes. Used time series models to analyze relationships between international ETF returns. Developed a tool for measuring counterparty position accumulation in options.
- Aquatic Capital Management** Chicago, IL
Research Intern Summer 2020
- Collaborated with Aquatic as part of the RIPS (Research in Industrial Projects for Students) 2020 program at IPAM. Investigated a coordinate descent algorithm to optimize its performance on elastic net with applications to quantitative trading. Performed studies on methods for approximating the covariance matrix of the data and studied feature selection rules

HONORS AND AWARDS

- 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
- International Zhautikov Olympiad in Mathematics 2017, 2018
2017 - Gold Medal, 2018 - Gold Medal
- Harvard - MIT Invitational Mathematics Competition - Top 8 out of 50 Apr 2018
- East Coast Regional Datathon, Citadel, Citadel Securities, and Correlation One - Top 8 out of 30 Feb 2018

SKILLS

Advanced: Python, R, Numpy, Pandas, scikit-learn, statsmodels, \LaTeX , Power Point

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

Basic: Matlab, C++