



Alina Chadwick

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PhD Student in Computer Science
The University of Rochester

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🐙 GitHub Profile

🌐 LinkedIn Profile

EDUCATION

The University of Rochester

Ph.D. in Computer Science

2024–2028/9

GPA: 4.0

Dartmouth College

B.A. in Computer Science and Economics

2020–2024

GPA: 3.5

PUBLICATIONS

Academic Papers

- **Automating Probabilistic Coherence in LLMs ($\alpha - \beta$)**
AAAI 2027 (In Progress) 2026
Authors: Milos Bisenic, **Alina Chadwick**, Anson Kahng, Jens Kipper, Euan Seow
- **Proportional Representation for Rankings in Content Recommendation ($\alpha - \beta$)**
AAMAS 2027 (In Progress) 2026
Authors: **Alina Chadwick**, Anson Kahng, Kiet Nguyen, Joseph Saber, Rebecca Salganik
- **Robustness and Feasibility of Voting in Linear Social Choice ($\alpha - \beta$)**
ADT 2026 2026
Authors: **Alina Chadwick**, Anson Kahng, Euan Seow
- **Dutch Books and Money Pumps: Rectifying Vulnerabilities in LLMs Through Rationality ($\alpha - \beta$)**
HAR 2025 September 2025
Authors: **Alina Chadwick**, Anson Kahng, Jens Kipper
- **Welfare Maximization in the Airplane Problem**
Dartmouth Digital Commons June 2024
Authors: **Alina Chadwick**
- **MicroGlam: Microscopic Skin Image Dataset with Cosmetics**
ACM SIGGRAPH Asia 2023 (Accepted, Technical Communications) December 2023
Authors: Toby Chong, **Alina Chadwick**, I-Chao Shen, Haoran Xie, Takeo Igarashi

Talks

- **Proportional Representation for Rankings in Content Recommendation** 2026
 - Theory Canal at Rochester Institute of Technology (Rochester, NY)
- **Dutch books and money pumps: rectifying vulnerabilities in LLMs through rationality** 2025
 - 4th International Conference on Human and Artificial Rationalities (Paris, France)
- **Robustness of Voting in Linear Social Choice** 2025
 - Theory Canal at Rochester Institute of Technology (Rochester, NY)
- **MicroGlam: Microscopic Skin Image Dataset with Cosmetics** 2023–2024
 - International Symposium on Intelligence Design (Kanazawa, Japan (Remote))
 - SIGGRAPH Asia (Sydney, Australia)
 - JAIST IRES Physical AI Design Workshop (Tokyo, Japan)

RESEARCH EXPERIENCE

Massachusetts Institute of Technology

Visiting Student in Computer Science (LIDS) and Political Science

June 2026 - Present

Cambridge, MA U.S.A

- Studying priorities and preferences in a participatory budgeting setting.
- Topics: Computational social choice, algorithms.

The University of Rochester

PhD Research in Computer Science

August 2024 - Present

Rochester, NY U.S.A

- Applying principles from computational social choice literature to real-world applications.
- Topics: Algorithmic game theory, computational social choice, fairness, machine learning, algorithms.

Dartmouth College

Undergraduate Thesis Research: The airplane problem

September 2023 - June 2024

Hanover, NH U.S.A

- Published a year-long thesis advised by Professor Hsien-Chih Chang on matching passengers to airplane seats.
- Topics: Nash Social Welfare, matching algorithms, linear programming.

University of Tokyo (National Science Foundation IRES)

Research Fellow

June - August 2023

Tokyo, Japan

- Conducted a project on virtual makeup try-on. Submitted and presented a Technical Communication at SIGGRAPH Asia.
- Topics: Computer graphics, neural networks, cosmetic rendering, makeup transfer, machine learning.

WORK EXPERIENCE

DUST Identity

Software Engineer Intern

September - December 2022

Boston, MA U.S.A

- Created an internal web app that serves as an admin portal, allowing DUST's customer success team to monitor customer account health and view data that indicate how each customer is using the product.
- Frontend written in React-Admin and Javascript; Backend utilizes FastAPI and was written in Python

IBM

Accelerate, Software Track

June - August 2022

Remote

- Virtually worked on frontend website development projects in HTML/CSS, JavaScript, and React
- Participated in workshops on backend development and security

TEACHING EXPERIENCE

The University of Rochester, Computer Science Department

Teaching Assistant

January 2025 - Present

Rochester, NY U.S.A

- Course: Gems of Algorithms and Elections (CSC 285/485). Instructor: Lane Hemaspaandra
- Course: Computer Models and Limitations (CSC 280/480). Instructor: Monika Polak

Dartmouth College, Computer Science Department

Teaching Assistant

January 2021 - June 2024

Hanover, NH U.S.A

- Course: Introduction to Programming and Computation (COSC 01). Instructors: Vasanta Lakshmi-Kommimeni and Andrew Campbell
- Course: Discrete Mathematics in Computer Science (COSC 30). Instructor: Hsien-Chih Chang
- Course: Full-Stack Web Development (COSC 52). Instructor: Timothy Tregubov
- Course: Machine Learning and Statistical Analysis (COSC 74). Instructors: Soroush Vosoughi and Yujun Yan

Dartmouth College, Russian Department

Apprentice Teacher

January 2021 - June 2024

Hanover, NH U.S.A

- Course: Introduction to Russian Language and Culture (RUS 01, RUS 02, RUS 03). Instructors: Alfia Rakova, Valentina Apresyan, Tatiana Filimonova

HONORS AND AWARDS

Best TA Award Dartmouth College Computer Science Department

2024

NSF Research Stipend International Research Experience for Students IRES Program

2023

New York Andrew S. Macdowell Jr. 1944 Scholarship Fund Dartmouth Club of Rochester

2020-2024

SKILLS AND RESEARCH INTERESTS

Areas of Interest: Algorithmic Game Theory, Computational Social Choice, Fairness, Machine Learning

Spoken Languages: English, Russian. Intermediate Spanish

Programming Languages: Python, Javascript, React, Java, C, C++

Coursework: (*Graduate*) Algorithmic Game Theory, Advanced Algorithms, Computational Complexity, Artificial Intelligence, Computer Imaging and Graphics, Parallel and Distributed Systems, Problem-Solving Seminar, (*Undergraduate*) International Finance, Monetary Policy and the Macroeconomy, International Trade, Econometrics, Network Science and Complex Systems, Macroeconomics, Microeconomics, Full-Stack Web Development, Computer Graphics, Algorithms, Machine Learning, Discrete Mathematics in Computer Science, Differential Equations, Software Design and Implementation, Problem Solving via Object-Oriented Programming, Multivariable Calculus.

Things I'm bad at but am trying: Golf, tennis, chess

Alumni of the above category: Knitting, skiing

OTHER POSITIONS OF RESPONSIBILITY

President Women in Computer Science, Dartmouth College	<i>2022-2024</i>
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Volunteer/Math Teacher GiGi's Playhouse	<i>2025</i>
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Violinist Individual Study Program under Omar Chen Guey at Dartmouth College	<i>2022-2024</i>
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