

MATTHEW I JONES

Curriculum Vitae

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ACADEMIC APPOINTMENTS

Colby College , Waterville, ME Assistant Professor	<i>July 2025-Present</i>
College of the Holy Cross , Worcester, MA Visiting Assistant Professor	<i>August 2024-June 2025</i>
Yale University , New Haven, CT Postdoctoral Associate	<i>July 2022-August 2024</i>

EDUCATION

Dartmouth College , Hanover, NH Ph.D. Mathematics A.M. Mathematics	<i>September 2017 – June 2022</i> <i>Awarded June 2022</i> <i>Awarded March 2019</i>
Arizona State University , Tempe, AZ B.S. Physics, 4.0 GPA (with Minor in Mathematics) Barrett, The Honors College graduate	<i>August 2013 – May 2017</i> <i>Awarded May 2017</i>

RESEARCH PUBLICATIONS

Accepted Papers

- A1: *Equilibria and Group Welfare in Vote Trading Systems*, Matthew I. Jones, Social Choice and Welfare, 2025
- A2: *Bringing Leaders of Network Sub-Groups Closer Together Does Not Facilitate Consensus*, Matthew I. Jones and Nicholas A. Christakis, Scientific Reports 14(30183), 2024
- A3: *Simple Autonomous Agents can Enhance Creative Semantic Discovery by Human Groups*, Atsushi Ueshima, Matthew I. Jones, and Nicholas A. Christakis, Nature Communications 15(5212), 2024
- A4: *Containing Misinformation: Spatial Games of Fake News*, Matthew I. Jones, Scott D. Pauls, and Feng Fu, PNAS Nexus 3(3), 2024
- A5: *Estimating Recycling of Fish in Catch-and-Release Fisheries*, Thomas S. Jones, Matthew I. Jones, Melissa Treml, and Thomas Heinrich, Fisheries 47(12), 2022
- A6: *Polarization, Abstention, and the Median Voter Theorem* Matthew I. Jones, Antonio D. Sirianni and Feng Fu, Humanities and Social Science Communications 9(43), 2022
- A7: *The Dual Problems of Coordination and Anti-coordination on Random Bipartite Graphs*, Matthew I. Jones, Scott D. Pauls, and Feng Fu, New Journal of Physics 23(113018), 2021
- A8: *Random Choices can Facilitate the Solving of Collective Network Coloring Problems by Artificial Agents*, Matthew I. Jones, Scott D. Pauls, and Feng Fu, iScience 24(4), 2021

Preprints

- P1: *New fairness criteria for truncated ballots in multi-winner ranked-choice elections*, Adam Graham-Squire, Matthew I. Jones, and David McCune, arXiv: 2408.03926, 2024
- P2: *It is Easy for Multi-Issue Bundles to Advance Anti-Democratic Agendas*, Matthew I. Jones, Matthew Chervenak, and Nicholas A. Christakis, arXiv: 2307.11873, 2023

TEACHING EXPERIENCE

Colby College
Assistant Professor

Waterville, ME
Fall 2025 - Present

- **MA 262** - Vector Calculus *Fall 2025*
- **MA 381** - Probability *Fall 2025*

College of the Holy Cross
Visiting Assistant Professor

Worcester, MA
Fall 2024 - Spring 2025

- **Math 135** - Calculus 1 (2 sections) *Fall 2024*
- **Math 244** - Linear Algebra *Fall 2024*
- **Math 135** - Calculus 1 (2 sections) *Spring 2025*
- **Math 199** - Discrete Mathematics *Spring 2025*

Dartmouth College
Instructor of Record

Hanover, NH
Fall 2019 - Fall 2021

- **Math 36** - Mathematical Models in the Social Sciences *Fall 2021*
- **Math 22** - Linear Algebra with Applications *Spring 2021*
- **Math 8** - Calculus of Functions of One and Several Variables *Fall 2019*

Teaching Assistant

Fall 2017 - Winter 2019

- **Math 23** - Differential Equations *Winter 2019*
- **Math 76** - Topics in Applied Mathematics *Summer 2018*
- **Math 23** - Differential Equations *Winter 2018*
- **Math 13** - Calculus of Vector-valued Functions *Fall 2017*

Arizona State University
Learning Assistant

Tempe, AZ
Fall 2015 - Spring 2017

EDUCATIONAL OUTREACH

Research Mentorship

Various Locations

- Supervised students from high school to graduate school in various research projects. Outcomes have included presentations at conferences, competition in science competitions, and published papers.

Mathematics Department - Directed Reading Program
Graduate Student Mentor

Hanover, NH
Winter 2021, Winter 2022

- Mentored undergraduates reading advanced math textbooks on networks, game theory, and markets.

Dartmouth Rural STEM Educator Partnership
Graduate Student Mentor

Hanover, NH
Fall 2020 - Spring 2021

- Wrote and redesigned middle school STEM curriculum. Created instructional videos.

Dartmouth College Exploring Mathematics Camp
Co-Instructor

Hanover, NH
Summer 2019

- Designed and taught two week long math camps for middle and high school students.

RESEARCH PRESENTATIONS

Talks

1. Dept. of Mathematics, Lafayette College, Easton, PA *Colorings and Consensus on Graphs* February 2025
2. Dept. of Mathematics, Colby College, Waterville, ME *Colorings and Consensus on Graphs* January 2025
3. Dept. of Math, Stats, and CS, College of the Holy Cross, Worcester, MA *Colorings and Consensus on Graphs* January 2025
4. Joint Math Meeting 2025, Seattle, WA *New fairness criteria for truncated ballots in multi-winner ranked-choice elections* January 2025
5. Dept. of Mathematics, Le Moyne College, Syracuse, NY *Graph Colorings: How to Make Maps and Work Together* January 2024
6. Depts. of Mathematics and Data Analytics, Dickinson College, Carlisle, PA *The Distributed Graph Coloring Problem and Social Coordination* January 2024
7. Center for Mathematical Biology, University of Pennsylvania, Philadelphia, PA *The Distributed Graph Coloring Problem and Social Coordination* January 2024
8. Joint Math Meeting 2024, San Francisco, CA *Nash Equilibrium in a Low-Information Vote Trading Game* January 2024
9. Dept. of Math, Stats, and CS, Hollins University, Roanoke, VA *Enhancing Group Creativity with Bots* December 2023
10. Dept. of Mathematics and Statistics, Williams College, Williamstown, MA *Enhancing Group Creativity with Bots* November 2023
11. Human Nature Lab, Yale University, New Haven, CT *Three Experiments on Homophily, Consensus, and Information* April 2023
12. Applied and Computational Math Seminar, Dartmouth College, Hanover, NH *Nash Equilibrium in a Low-Information Vote Trading Game* March 2023
13. Human Nature Lab, Yale University, New Haven, CT *The Value of Vote Trading: A Mathematical Model of Multi-Issue Group Decision-Making* November 2022
14. New England Statistics Symposium 2022, Storrs, CT *Random Human Behavior in a Distributed Network Coloring Problem* May 2022
15. Fu Lab, Dartmouth College, Hanover, NH *Spatial Games of Fake News* March 2022
16. Dept. of Math and Stats, Washington State University, Pullman, WA *Polarization, Third Parties, and the Median Voter Theorem* November 2021
17. Minnesota Dept. of Natural Resources, Fisheries, MN *Angler Recycling Rate: An Ill-Posed Inverse Problem* October 2021
18. Fu Lab, Dartmouth College, Hanover, NH *Random Behavior in Collective Network Coloring Problems* September 2021
19. Human Nature Lab, Yale University, New Haven, CT *Random Behavior in Collective Network Coloring Problems* April 2021
20. eSMB Annual Meeting 2020, virtual *Spatial Games of Fake News* August 2020
21. Applied and Computational Math Seminar, Dartmouth College, Hanover, NH *Voter Preference and Party Ideological Shifts* October 2020
22. Graduate Student Seminar, Dartmouth College, Hanover, NH *Various Topics* 2018 - 2022

Press and Public Outreach

1. Why Trump's 'One Big Beautiful Bill' Is Bad for Democracy
The Wall Street Journal (Click here for link) *January 2025*
2. The Science of Group Creativity
The Sunwater Institute (Click here for link) *July 2024*
3. New Research Predicts Rising Political Polarization
Dartmouth News (Click here for link) *March 2022*
phys.org (Click here for link)

HONORS AND AWARDS

- Ken Bogart Teaching Award *October 2021*
Department-wide award for excellence in advancing the educational mission of the department.
- Dartmouth Graduate Fellowship *2017–2022*
- Graduated Summa Cum Laude *May 2017*
Arizona State University, B.S. Physics

PROFESSIONAL ACTIVITIES AND SERVICE

Pedagogy Development

- Participant, Inclusive Excellence Reading Group, College of the Holy Cross *Fall 2024*
- Participant, Fundamentals of Equitable Teaching Workshop, Yale University *Winter 2023*
- Participant, Gender in the Classroom Workshop, Yale University *Winter 2023*
- Participant, Teaching Seminar, Dartmouth College *Summer 2019*
Intensive summer seminar on pedagogy in mathematics in preparation for teaching classes as a graduate student
- Facilitator, Teaching Assistant Orientation, Dartmouth College *December 2019*
Led a graduate school-wide orientation for teaching assistants

Peer Review

- Journal of Supercomputing
- Autonomous Agents and Multi-Agent Systems
- Journal of Mathematical Sociology
- PNAS Nexus
- Science Advances
- Scientific Reports

Institutional Service

- Math Graduate Program Committee Graduate Liason *2019 - 2020*
Worked for communication and conflict resolution between graduate students and faculty.

CODING EXPERIENCE

- Python
- Mathematica
- Matlab
- Java/Groovy
- R

PROFESSIONAL MEMBERSHIPS

- American Mathematical Society (AMS) *joined September 2023*

Updated July 2025