

Daniel P. Keliher

Contact Information	Middlebury College Department of Mathematics & Statistics 14 Old Chapel Road Middlebury, VT 05753, USA	Email: dkeliher@middlebury.edu Webpage: https://keliher.github.io
Interests	Number theory, arithmetic statistics, elliptic curves, Selmer groups, number fields	
Employment	<i>Middlebury College</i> Assistant Professor of Mathematics & Statistics	July 2026 - present
	<i>Massachusetts Institute of Technology</i> Concourse Program Lecturer	July 2024 - July 2026
	<i>University of Georgia</i> Limited Term Assistant Professor	Aug. 2022 - June 2024
Education	<i>Tufts University</i> Ph.D in Mathematics Advisor: Robert Lemke Oliver	May 2022
	<i>Tufts University</i> M.S. in Mathematics	May 2019
	<i>Brown University</i> Sc.B in Mathematics	May 2017
Funding	MIT Education Innovation Fund Grant. \$43,673. (Co-PI with Erica Zimmer)	June 2025 - June 2026
Published Papers	9. <i>Large Deviation Principles for Abelian Monoids</i>, with Sun Woo Park. Electronic Communications in Probability, 2026. (arXiv) 8. <i>Exponents of Jacobians and relative class groups</i>, with Borys Kadets. Proceedings of the American Mathematical Society, 2026. (arXiv) 7. <i>Rank Growth of Elliptic Curves in S_4 and A_4 Quartic Extensions of the Rationals</i>. Pacific Journal of Mathematics, 2024. (arXiv) 6. <i>On the Constants in Mertens' Theorems for Primes in Arithmetic Progressions</i>, with Ethan Lee. Proceedings of the Integers Conference 2023, 2024. (arXiv) 5. <i>Exceptional Biases Over Function Fields</i>, with Alexandre Bailleul, Lucile Devin, and Wanlin Li. Journal of the London Mathematical Society, 2024. (arXiv) 4. <i>Optimal Transport for Some Symmetric Multidimensional Partitions</i>, with Daniel Adu. Discrete Applied Mathematics, 2023. (arXiv) 3. <i>Enumerating D_4 Quartics and a Galois Group Bias Over Function Fields</i>. Journal de Théorie des Nombres de Bordeaux, 2022. (arXiv) 2. <i>Mertens' Theorem for Chebotarev Sets</i>, with Santiago Arango-Piñeros and Christopher Keyes. International Journal of Number Theory, 2022. (arXiv)	

Invited Talks

- Colby College Mathematics Colloquium, April 2026
- Middlebury College Mathematics and Statistics Seminar, January 2026
- MIT Digital Humanities + Data Seminar, October 2025
- Five College Number Theory Seminar (at Amherst College), February 2025
- James Madison University Math Dept. Colloquium, February 2024
- Bentley University Mathematical Sciences Seminar, January 2024
- Institute for Defense Analyses, Center for Communications Research (Princeton) Colloquium, January 2024
- University of South Carolina Algebra, Geometry, and Number Theory Seminar, December 2023
- AMS Fall Southeastern Sectional Special Session “Number Theory and Friends”, University of South Alabama, October 2023
- AMS Central Sectional Special Session on Arithmetic Statistics, University of Cincinnati, April 2023
- Joint Math Meetings, Special Session on Arithmetic Statistics, January 2023
- Emory University Algebra and Number Theory Seminar, November 2022
- University of Georgia Number Theory Seminar, October 2022
- University of Georgia Oberseminar, August 2022
- AMS Virtual Spring Eastern Sectional Meeting, March 2022
- Duke University Number Theory Seminar, February 2022
- Montréal Online Biweekly Inter-University Seminar on Analytic Number Theory, November, 2021

Contributed Talks

- Southern Regional Number Theory Conference, Louisiana State University, March 2024
- INTEGERS 2023, University of Georgia, May 2023
- Southern Regional Number Theory Conference, Louisiana State University, March 2023
- Upstate Number Theory Conference, Union College, October 2021
- Graduate Student Conference in Algebra, Geometry, and Topology, Temple University, May 2021
- Tufts Graduate Student Summer Speaker Series, Virtual Series, Tufts University, June 2020
- Modular Forms, Arithmetic and Women in Mathematic, Emory University, November 2019
- Maine-Québec Number Theory Conference, University of Maine, October 2019
- Graduate Student Conference in Algebra, Geometry, and Topology, Temple University, May 2019
- Palmetto Number Theory Series, University of South Carolina, December 2018
- Tufts University Math Graduate Student Seminar (4 Talks)

Service	• Refereed papers at the following journals: ◦ European Journal of Mathematics ◦ Proceedings of the American Mathematical Society ◦ Research Directions In Number Theory ◦ Mathematische Nachrichten • MIT First-year advisor. ◦ 6 advisees 2025-26 ◦ 8 advisees 2024-25 • Co-organizer, special session on “Counting and Asymptotics in Number Theory” at the AMS Spring Eastern Sectional Meeting, April 2025 • Conference organizer, Palmetto Area Number Theory Series (PANTS XXXVII), December 2023 • University of Georgia Calculus 1 Exam Committee, Fall 2022 • Mentor, Spelman-Morehouse Joint Direct Reading Program, Fall 2022 • Co-Organizer, Tufts Algebra/Geometry/Number Theory Seminar, Fall 2021 • Organizer, Tufts Graduate Student Seminar, Spring 2018-Fall 2021 • Tufts University Directed Reading Program in Mathematics: ◦ Co-organizer for the DRP, Fall 2019 - Spring 2022 ◦ Mentor for a DRP project on Elliptic Curves, Fall 2019 ◦ Mentor for a DRP project on Information Theory, Spring 2020 • Organizer, Reading Seminar on Arithmetic Geometry, Spring 2020 (with participants from Tufts, Emory, and Georgia Tech.) • Tufts University Organization for Graduate Students in Mathematics (OGSM) ◦ First-Year Representative, AY 2017-2018 ◦ Second-Year Representative, AY 2018-2019
Professional Memberships	• American Mathematical Society • The National Association of Mathematicians
Computer Skills	R, Python, L ^A T _E X, Mathematica, Sage, Magma