

# Sam Freedman

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🌐 <https://www.math.brown.edu/sfreedm3/>

Last updated: October, 2023

## Education

- Expected **Brown University**, *Ph.D. in Mathematics*, Providence, RI.  
May 2024 Advisor: Jeremy Kahn  
May 2020 **Brown University**, *Sc.M. in Mathematics*.  
May 2018 **University of Michigan**, *B.S. in Mathematics with High Honors*, Ann Arbor, MI.  
Minor in Computer Science

## Research Interests

Translation Surfaces, Teichmüller Dynamics, Algorithms for Flat Surfaces

## Papers and Preprints

- October 2023 **Veech Fibrations**, with *T. Lucas*, Preprint.  
November 2022 **There are no primitive Teichmüller curves in Prym(2, 2)**, with *Julian Boulanger*,  
To appear in *Comptes Rendus Mathématique*.  
November 2022 **Periodic Points of Prym Eigenforms**, Preprint.  
December 2021 **Computing Periodic Points on Veech Surfaces**, with *Z. Chowdhury, S. Everett and D. Lee*, *Geom. Dedicata* 217, no. 66 (2023).  
February 2021 **Automorphisms of Tropical Hassett Spaces**, with *J. Hlavinka and S. Kannan*,  
*Port. Math.* 79 (2022), no. 1/2.

## Awards

- August 2022 **Excellence in Teaching Award**, *Brown University Mathematics Department*.  
March 2022 **Junior Scientific Visibility Program Grant**, *Fondation Mathématique Jacques Hadamard*.

## Teaching

- Fall 2023 **Intermediate Calculus (Physics/Engineering)**, *Instructor/TAII for Math 200*,  
Brown University.  
Spring 2023 **Linear Algebra**, *Instructor/TAII for Math 520 (Team Inquiry-Based Learning)*, Brown  
University.

- Fall 2022 **Intermediate Calculus (Physics/Engineering)**, *Instructor/TAII for Math 200*, Brown University.
- Fall 2021 **Advanced Placement Calculus (Physics/Engineering)**, *Instructor/TAII for Math 190*, Brown University.
- Winter 2021, Fall 2019 **Introductory Calculus 2**, *TA for Math 100*, Brown University.
- Winter 2020 **Introductory Calculus 1**, *TA for Math 90*, Brown University.
- Fall 2020 – **Levels 1400, 1700 and 1800**, *Lead Instructor at Squared School*, Providence, RI.
- Winter 2018 Teacher Training Program with D. Katz

## ■ Mentoring

- Fall 2018 – **Students Mentored:**, *Directed Reading Program*, Brown University.
- Fall 2022 Seiji Shaw, *Discrete Differential Geometry* by Keenan Crane  
 Kevin Lu and Shane Weiner, *Differential Topology* by Guillemin and Pollack  
 Kevin Lu and Shane Weiner, *Matrix Groups for Undergraduates* by Tapp  
 Dominick Joo, *Geometry of Surfaces* by Stillwell  
 Kenneth Blakey and Taylor Knapp, *Mostly Surfaces* by Schwartz  
 Joseph Hlavinka, *Differential Geometry of Curves and Surfaces* by do Carmo  
 Jasper Liu, using *The Four Pillars of Geometry* by Stillwell
- Summer 2020 **Mentored Group 5: Electa Cleveland, Andrew Steptoe and Mathew Yee**, *BUMP (Brown Undergraduate Mathematics Program)*.

## ■ Service

- March 2022 **Organizer/Speaker**, *Brown Departmental Undergraduate Group*, “Talking about and talks about talks”.
- September 2021 **Speaker**, *GAIN (Graduates Achieveing Inclusion Now) Conference*, “Combating Sexism in Mentorship: Strategies to Uplift your Mentees”.
- Fall 2020 – **Organizer**, *Directed Reading Program*, Brown University.
- Fall 2019 – **Organizer, SAO Liason**, *Brown University Math Circle*.
- Summer 2020 **Organizer (with S. Griffith) and Mentor**, *BUMP (Brown University Mathematics Program)*.
- April 2020 **Presentor**, “**The 1, 2, 3, 4 game**”, *Math CoOp*.
- April 2019 **Panelist**, *AWM Grad School Panel*.

## ■ Talks

- September 2023 **Algebraic Geometry Seminar**, “*Veech fibrations*”, Boston College, Boston, MA.
- June 2023 **Workshop in Geometric Topology**, “*Periodic points of Prym Eigenforms*”, Colorado College, Colorado Springs, CO.

- May 2023 **Graduate Student Conference in Algebra, Geometry and Topology**, "*Periodic points of Prym Eigenforms*", Temple University, Philadelphia, PA.
- April 2023 **AMS New England Graduate Student Conference**, "*Periodic points of Prym Eigenforms*", Brown University, Providence, RI.
- March 2023 **Geometry Seminar**, "*Periodic points of Prym Eigenforms*", University of Michigan, Ann Arbor, MI, 02906.
- January 2023 **AMS Special Session on Geometry and Dynamics in Moduli Spaces of Abelian Differentials**, "*Periodic Points of Prym Eigenforms*", JMM, Boston, MA.
- November 2022 **Geometry and Topology Seminar**, "*Periodic Points of Prym Eigenforms*", Brown University.
- May 2022 **Geometry and Topology Seminar**, "*Computing Periodic Points on Veech Surfaces*", University Grenoble Alpes.
- May 2022 **Working Group Weitze-Schmithüsen**, "*Computing Periodic Points on Veech Surfaces*", Saarland Univeristy.
- May 2022 **Structures on Surfaces**, "*Computing Periodic Points on Veech Surfaces*" (*lighting talk*), CIRM, Marseille.
- April 2022 **Mini-conference on Flat Surfaces**, "*Computing Periodic Points on Veech Surfaces*", LaBRI, Bordeaux.
- April 2022 **Ergodic Theory and Dynamical Systems Seminar**, "*Computing Periodic Points on Veech Surfaces*", University Paris-Saclay.
- December 2019 **Brown SIAM Math Slam**, "*Translation surfaces*", Brown University.