

Timothy Bates

CONTACT INFORMATION	Email:	tgb50@scarletmail.rutgers.edu timghbates@gmail.com
	Website:	link
RESEARCH INTERESTS	Geometric topology, in particular knot theory, Floer theories, and concordance. Symplectic Geometry, algebraic geometry, and mathematical physics.	
EDUCATION	Rutgers The State University of New Jersey (New Brunswick) Ph.D. Mathematics (2023 - Present)	
	Texas A&M University (2019-2023) M.S, Mathematics B.S, Mathematics, summa cum laude <ul style="list-style-type: none">• Masters Thesis: Thurston Polytopes• Undergraduate Thesis: Uniform Acceleration Radiation• Minor in physics• GPA: 3.931	
OUTREACH	2022	Math Club Officer
	2022	Organizer for the TAMU Low-Dimensional Topology Graduate Student Seminar (LDT Seminar)
TEACHING EXPERIENCE	Spring 2022	Grader, Linear Algebra
	Fall 2021	Teaching Assistant, Calculus 1
HONORS AND AWARDS	2022	Dean's List Spring Semester
	2021	Dean's List Fall Semester
RESEARCH EXPERIENCE	2022-present	Thurston Norm & Link Floer Homology Advisor: S. Gong, Department of Mathematics Texas A&M University.
	2021-present	Radiation of Uniformly Accelerating Charges Advisor: S. Fulling, Department of Mathematics & Physics Texas A&M University.
	2020-2021	Soft Wall Casimir effect Advisor: S. Fulling, Department of Mathematics & Physics Texas A&M University.
CONFERENCE TALKS	<i>Scalar Acceleration Radiation</i> , TXDE Conference, Texas A&M University, October 2022 <i>Uniform Acceleration Radiation and the Equivalence Principle</i> , TXLA Undergraduate Math Conference (Talk and Poster), University of Houston, March 2022	
OTHER TALKS	<i>Thurston Norm and Links</i> , Winter School in Low dimensional topology and singularities, Erdős Center, January 2023 <i>An Introduction to the Study of Knots via Seifert and Slice Surfaces</i> , GSO, Texas A&M University, October 2022 <i>Knot Concordance</i> , LDT Seminar, Texas A&M University, September 2022	

Introduction to Surgery Theory on 3-Manifolds, LDT Seminar, Texas A&M University, September 2022

**Workshops and
conferences
attended**

- Georgia Topology Conference, UGA, May 2023
- TXLA Undergraduate Math Conference, Louisiana State University, March 2023
- Winter School in Low dimensional topology and singularities, Erdős Center, January 2023
- FullingFest, Texas A&M University, Texas A&M University, October 2022
- Texas Differential Equations Conference, Texas A&M University, October 2022
- Graduate Student Concentration Week on Metric Geometry, Texas A&M University, July 2022
- Topological Data Visualization Workshop (online), University of Iowa, May 2022
- TXLA Undergraduate Math Conference, University of Houston, March 2022

**RELEVANT
SKILLS**

Languages: English (native), German (native)
Programming: Python (Numpy, Sage, Snappy, Ripser), Matlab, L^AT_EX