

CALEB PARTIN

University of California, Los Angeles \diamond ctpartin@math.ucla.edu

EDUCATION

University of California, Los Angeles
PhD in Mathematics

August 2023 - Present

Georgia Institute of Technology
Major in Mathematics (High Honors)
Minor in Computer Science

August 2018 - December 2021

RESEARCH EXPERIENCE

Georgia Tech School of Mathematics 2021 REU

May - July 2021

- Project Title: *Generalizing the Twisted Rabbit Problem*
- Conducted original mathematics research on the twisted rabbit problem and its generalizations under the mentorship of Professor Dan Margalit.

University of Michigan Department of Mathematics 2020 REU

June 2020 - July 2020

- Project Title: *Minimal stretch factors for punctured non-orientable surfaces*
- Conducted original mathematics research in topology under the mentorship of Professor Alex Wright and Professor Becca Winarski. Over the course of the program, we investigated minimal stretch factors of pseudo-Anosov mapping classes on nonorientable surfaces.

Georgia Tech School of Mathematics Undergraduate Research

August 2019 - March 2020

- Project Title: *The Thompson Group and Random Knots*
- Conducted original research using the Thompson group and techniques from Quantum Topology to study random knots under the guidance of Dr. Wade Bloomquist.

Georgia Tech School of Mathematics 2019 REU

May - July 2019

- Project Title: *Classification of Homomorphisms from the Braid and Symmetric Groups*
- Conducted original research on braid groups and totally symmetric sets under the mentorship of Professor Dan Margalit and Dr. Kevin Kordek.

Georgia Tech School of Mathematics Undergraduate Research

January 2019 - May 2019

- Project Title: *Antibiotic Cycling*
- Assisted with the modeling of innovative ways of antibiotic application under the guidance of Professor Howard Weiss.

TEACHING EXPERIENCE

University of California, Los Angeles

- TA, Math 33A, Linear Algebra (Summer 2024, Spring 2024)
- TA, Math 106, History of Mathematics (Winter 2024)
- TA, Math 32A, Calculus of Several Variables (Fall 2023)

Georgia Institute of Technology

- TA, Math 2551, Multivariable Calculus (Spring 2021)
- TA, Math 1554, Linear Algebra (Fall 2020, Fall 2021)
- Tutor, Georgia Tech Center of Academic Success (Spring 2020)
- Grader for Foundations of Mathematical Proof (Fall 2019)

HONORS AND AWARDS

Georgia HOPE Scholarship	<i>August 2018 - December 2021</i>
AMS Travel Grant	<i>January 2020</i>
Georgia Tech School of Mathematics Undergraduate Mathematics Prize	<i>April 2020, April 2021</i>
Outstanding Online TA	<i>April 2021</i>

PAPERS

- Finite quotients of braid groups, with Alice Chudnovsky, Kevin Kordek, and Lily Li, *Geometriae Dedicata* (2020)
- Upper bounds for totally symmetric sets, with Kevin Kordek and Lily Li, *Involve* (2021)
- Pseudo-Anosov homeomorphisms of punctured non-orientable surfaces with small stretch factor, with Sayantan Khan and Becca Winarski, *Algebraic & Geometric Topology* (2023)

CONFERENCES AND TALKS

- Finite Quotients of Braid Groups, with Lily Li, Tech Topology Conference, Lightning Talk *December 2019*
- Classification of Homomorphisms between the Braid and Symmetric Groups, with Alice Chudnovsky and Lily Li, Poster *January 2020*, Honorable Mention
- Minimal stretch factors for punctured non-orientable surfaces, University of Michigan REU Seminar , Talk *July 2020*
- Generalizing the Twisted Rabbit Problem, with Lily Li, Tech Topology Conference, Lightning Talk *December 2021*