Ian A. Sullivan

Ph.D. Student
University of California, Davis
Department of Mathematics

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Research Interests

I am interested in low-dimensional topology, Khovanov/Floer homology theories, and exotic 4-manifolds and knotted surfaces.

Education

September 2021 - Present **University of California, Davis**
Ph.D. in Mathematics
Advisors: Melissa Zhang & Eugene Gorsky

September 2017 - June 2020 **University of California, San Diego**
B.S. in Mathematics

Employment

September 2021 - Present **University of California**, Davis, CA
Associate Instructor and Teaching Assistant

Papers & Preprints

1. I. A. Sullivan, M. Zhang, *Kirby belts, categorified projectors, and the skein lasagna module of* $S^2 \times S^2$, (In revision)

Research Talks

- 2024 AMS Fall Sectional Meeting - "Link invariants and surfaces in 4-manifolds" (September 2024)
- 2024 Trisectors Workshop: Connections with Knotted Surfaces; University of Nebraska-Lincoln (June 2024)
- Australian Geometric Topology Webinar (May 2024)
- Graduate Student Topology and Geometry Conference 2024, Michigan State University (April 2024)
- Geometry & Topology Seminar, UC Davis (February 2024)
- Student-Run Research Seminar, UC Davis (November 2023)
- Student-Run Research Seminar, UC Davis (October 2022)

Outreach and Professional Activities

- Co-hosted the UC Davis Student Run Research Seminar (2023-2024)
- Directed Reading Program, UC Davis Mathematics Department (2022-2023)
  Undergraduate project on Khovanov homology.
- BAMO Grading Team (March 2023)
  Graded for the 24th annual Bay Area Mathematical Olympiad.
- Directed Reading Program, UC Davis Mathematics Department (2021-2022)
  Undergraduate project on category theory and sheaves.
- Member of the UC Davis Spectra chapter.

Awards

- L&S Dean Graduate Summer Support Award

Teaching Experience

- **Instructor of record:**
  - Math 16A: Short Calculus (Summer 2022)
- **Teaching Assistant:**
  - Math 150A: Abstract Algebra (Winter 2024)
  - Math 150A: Abstract Algebra (Fall 2023)
  - Math 108: Intro to Abstract Mathematics (Spring 2024)
  - Math 108: Intro to Abstract Mathematics (Winter 2024)