

Ian A. Sullivan

Limited-Term Assistant Professor
University of Georgia, Athens
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

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|----------------------------|---|
| September 2021 - June 2026 | 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

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|--------------------------|---|
| August 2026 - | University of Georgia, Athens
Limited-Term Assistant Professor |
| September 2021 - Present | University of California, Davis, CA
Associate Instructor and Teaching Assistant |

Papers & Preprints

4. I. Montague, I. A. Sullivan, *Handle decompositions and the 1-dimensional inputs skein lasagna module*, (Preprint 2026)
3. Q. Ren, I. A. Sullivan, P. Wedrich, M. Willis, M. Zhang, *Khovanov skein lasagna modules with 1-dimensional inputs*, (Preprint 2025)
2. I. A. Sullivan, *Bar-Natan skein lasagna modules and exotic surfaces in 4-manifolds*, (Preprint 2025)
1. I. A. Sullivan, M. Zhang, *Kirby belts, categorified projectors, and the skein lasagna module of $S^2 \times S^2$* , (Accepted for publication in *Quantum Topology* 2025)

Invited Talks

- UCSB Topology Seminar - UC Santa Barbara (April 2026)
- Joint UGA/GA Tech Geometry Topology Seminar - GA Tech (April 2026)
- String Math Seminar - Berkeley (November 2025)
- UT Austin Topology Seminar (October 2025)
- Summer School on Modern Developments in Low-Dimensional Topology, International Centre for Theoretical Physics (Teaching Assistant - June 2025)
- 2025 AMS Spring Western Sectional Meeting - "Knotted surfaces and 4-manifolds"
- Stanford Topology Seminar (April 2025)
- Harvard Topology & Gauge Theory Seminar (April 2025)
- SPECTRA Lavender Seminar (Fall 2024)
- 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 (2023-2024-2025)
- 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

- Alice Leung Scholarship in Mathematics (2025)
- L&S Dean Graduate Summer Support Award (2024)

Teaching Experience

- **Instructor of record:**

- Math 16A: Short Calculus (Summer 2022)

- **Teaching Assistant:**

- Math 215A: Graduate Algebraic Topology (Fall 2025)
- 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)