

Andrew Paul

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Department of Mathematics
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Areas of specialization

My training is primarily in geometry and topology, especially complex geometry. My current study is focused on structures on Hilbert schemes of points.

Education

- 2023–Present PH.D. Mathematics; University of North Carolina at Chapel Hill
- Advisor: Justin Sawon
- 2019–2023 B.S. Mathematics; University of California, San Diego
- Honors with Distinction
 - Thesis title: *Chern Classes and Lines on a Cubic Surface*; thesis advisor: Dragos Oprea

Papers

- 2024 *Weak convergence of spectral shift functions revisited* with Carson Connard, Benjamin Ingimmarson, and Roger Nichols; *Pure and Applied Functional Analysis* Volume 9(4), 2024, pages 1023–1051. [arXiv: [2211.14970](https://arxiv.org/abs/2211.14970)]
- 2023 *Topological Properties of Almost Abelian Groups* with Zhirayr Avetisyan, Oderico-Benjamin Buran, and Lisa Reed. [arXiv: [2308.08059](https://arxiv.org/abs/2308.08059)]

Attended Conferences, Workshops, and Summer Schools

- 2026 Geometry Festival
- 2025 University of Antwerp summer school in Non-Commutative Algebraic Geometry
- 2024 Palmetto Number Theory Series
- 2024 Graduate Student Topology and Geometry Conference
- 2024 Triangle Area Graduate Mathematics Conference
- 2023 Joint Mathematics Meetings
- 2022 UTC Fall Research Conference

- 2022 Joint Mathematics Meetings
- 2021 Gulf Coast Undergraduate Research Symposium
- 2021 Young Mathematicians Conference
- 2021 Southern California Math REU Conference

Organizational Roles

- 2026–2027 Co-organizer of the UNC Graduate Mathematics Association Seminar.
- 2025–Present Organizer of the UNC graduate student algebraic geometry reading group.

Research Experiences

- 2022 UT Chattanooga Mathematics REU
- 2021 UC Santa Barbara Mathematics REU
- 2020–2021 Computational Astrophysics; PI: Thomas Siebert

Teaching

UNC Chapel Hill

- Spring 2026 Teaching assistant; MATH 231 (Calculus of Functions of One Variable I)
- Summer 2025 Instructor; MATH 231 (Calculus of Functions of One Variable I)
- Spring 2025 Teaching assistant; MATH 231 (Calculus of Functions of One Variable I), MATH 548 (Combinatorial Mathematics)
- Fall 2024 Teaching assistant; MATH 232 (Calculus of Functions of One Variable II), MATH 233 (Calculus of Functions of Several Variables)
- Spring 2024 Teaching assistant; MATH 231 (Calculus of Functions of One Variable I), MATH 233 (Calculus of Functions of Several Variables)
- Fall 2023 Teaching assistant; MATH 231 (Calculus of Functions of One Variable I)

UC San Diego

- Winter 2023 Teaching assistant; MATH 20B (Calculus for Science and Engineering II)
- Fall 2022 Teaching assistant; MATH 20A (Calculus for Science and Engineering I)
- 2021–2022 Teaching assistant; MATH 20C (Calculus and Analytic Geometry for Science and Engineering);
Fall 2021, Winter 2022

Directed Reading Program

- Spring 2026 Mentoring Luke Davis in a reading course on algebraic topology, with a final presentation on the fundamental group of the genus g orientable surface.
- Fall 2025 Mentored Zhouyi Wu in a reading course on combinatorics and representation theory.
- Spring 2024 Mentored Yiyang Fan in a reading course on topology and differential geometry, with a final presentation on the Whitney embedding theorem.

Saret & Co. Education

- 2023–Present Specialized tutor

Chapel Hill Math Circle

2025–Present Advanced-group instructor

San Diego Math Circle

2020–2024 Cauchy-group instructor

Independent Tutoring

2022–Present Tutor

Mathnasium

2018 Tutor

Other academic positions

UNC Chapel Hill

Spring 2026 Grader; MATH 381 (Discrete Mathematics), MATH 522 (Advanced Calculus II)

Spring 2025 Grader; MATH 548 (Combinatorial Mathematics)

Fall 2023 Grader; MATH 381 (Discrete Mathematics)

UC San Diego

Fall 2022 Grader; MATH 150A (Differential Geometry)

Spring 2022 Grader; MATH 20D (Introduction to Differential Equations)