

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 K_3 surfaces and structures on their 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 Ingimarsen, 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 International Congress of Mathematicians

2026 ICM Satellite Conference: Conformal Geometry, Einstein Manifolds, and Minimal Submanifolds (Penn State)

2026 Triangle Area Graduate Mathematics Conference (UNC)

2026 Geometry Festival (Duke)

2025 University of Antwerp summer school in Non-Commutative Algebraic Geometry

2024 Palmetto Number Theory Series (Wake Forest)

2024	Graduate Student Topology and Geometry Conference (Michigan State)
2024	Triangle Area Graduate Mathematics Conference (UNC)
2023	Joint Mathematics Meetings
2022	UTC Fall Research Conference
2022	Joint Mathematics Meetings
2021	Gulf Coast Undergraduate Research Symposium (Rice)
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

Summer 2026	Instructor; MATH 152 (Calculus for Business and Social Sciences)
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)
Winter 2022	Teaching assistant; MATH 20C (Calculus and Analytic Geometry for Science and Engineering)
Fall 2021	Teaching assistant; MATH 20C (Calculus and Analytic Geometry for Science and Engineering)

Directed Reading Program

Spring 2026	Mentored 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 pre-

sentation 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)

Last updated: July 20, 2026