

Andrew Paul

University of North Carolina at Chapel Hill
Department of Mathematics
Phillips Hall 417
120 E. Cameron Avenue
Chapel Hill, N.C. 27599 USA

Email: anpa@unc.edu
URL: <https://anpaul.weebly.com>

Areas of specialization

Geometry, topology, and mathematical physics. Especially complex geometry, Hodge theory, algebraic topology, and interactions between these areas.

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

Research

2022 UT Chattanooga Mathematics REU

2021 UC Santa Barbara Mathematics REU

2020–2021 Computational Astrophysics; PI: Thomas Siebert

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

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

Teaching

UNC Chapel Hill

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 2024	Mentored Yiyang Fan in a reading course on topology and differential geometry, with a final presentation on the Whitney embedding theorem.
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Saret & Co. Education

2023–Present	Specialized tutor
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San Diego Math Circle

2020–2024	Cauchy-group instructor
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Independent Tutoring

2022–Present	Tutor
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Mathnasium

2018	Tutor
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Other employment

UNC Chapel Hill

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: April 21, 2025