

# Andrew Paul

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## Areas of specialization

Geometry; Topology; Mathematical Physics

## Education

- 2023–Present    Ph.D. Mathematics; University of North Carolina at Chapel Hill  
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

- 2023    *Topological Properties of Almost Abelian Groups* with Zhirayr Avetisyan, Oderico-Benjamin Buran, and Lisa Reed [arXiv: [2308.08059](#)]  
2022    *Weak convergence of spectral shift functions revisited* with Carson Connard, Benjamin Ingimarsen, and Roger Nichols; to appear in *Pure and Applied Functional Analysis* [arXiv: [2211.14970](#)]

## Conferences

- 2024    Graduate Student Topology and Geometry Conference  
2024    Triangle Area Graduate Mathematics Conference  
2023    Joint Mathematics Meetings  
2022    UTC Fall Research Conference

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

## Teaching

### UNC Chapel Hill

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|-------------|---|
| 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

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|-------------|--|
| 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);<br>Fall 2021, Winter 2022 |

### Directed Reading Program

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| Spring 2024 | Mentoring 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

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| 2023–Present | Specialized tutor |
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### San Diego Math Circle

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| 2020–2024 | Cauchy-group instructor |
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### Independent Tutoring

|              |       |
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| 2022–Present | Tutor |
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### Mathnasium

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| 2018 | Tutor |
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## Other employment

### UNC Chapel Hill

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|-----------|---|
| Fall 2023 | Grader; MATH 381 (Discrete Mathematics) |
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### UC San Diego

|             |   |
|-------------|---|
| Fall 2022   | Grader; MATH 150A (Differential Geometry)                 |
| Spring 2022 | Grader; MATH 20D (Introduction to Differential Equations) |

Last updated: March 3, 2024