

Curriculum Vitae of Adam Cohen

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Education

- 2020 - 2024

Reed College (Portland, OR)
B.A. Mathematics-Physics, Mathematics Subject GPA: 3.9
- 2024 - 2029

University of Minnesota (Minneapolis, MN)
PhD Mathematics (expected), GPA: 4.0

Advised Projects

- Summer 2022

Ram and Gopal Goel Reading Fellowship (Advisor: Kyle Ormsby):
Text: *Differential Forms in Algebraic Topology* by Raoul Bott and Loring Tu
- Summer 2023

Analysis REU at the University of Michigan Dearborn (Advisor: Yunus Zeytuncu):
Topic: [Spectral geometry of Cauchy-Riemann manifolds](#)
- Fall 2023

Undergraduate Thesis (Advisor: Robert Chang):
Title: [Calculus on Twisty Stuff: The Local Index Theory of Dirac Operators](#)

Miscellany

Awards and Positions

- 2020

Commendation for Excellence in Scholarship, Reed College
- Fall 2021

Teaching Assistant, Real Analysis
- Spring 2022

Course Grader, General Physics II
- Summer 2022

Ram and Gopal Goel Fellow, Reed College
- Fall 2022

Course Grader, Real Analysis
- Summer 2023

REU Participant, University of Michigan Dearborn
- 2024

Commendation for Excellence in Scholarship, Reed College
- Fall 2024

Teaching Assistant Calculus I (College of Liberal Arts)
- Spring 2025

Teaching Assistant Short Calculus
- Summer 2025

Summer Mathematics Fellow, University of Minnesota
- 2025 Academic Year

Vice Treasurer, AMS Student Chapter at UMN
- Fall 2025

Teaching Assistant, Calculus 1 (College of Science and Engineering)
- Spring 2026

Teaching Assistant, Calculus 2 (College of Science and Engineering)
- Course Grader**, Graduate Differential Geometry
- Course Grader**, Computational Algebraic Geometry

Writings

- In Preparation

Analysis of the Kohn Laplacian and Sub-Laplacian on Compact Quotients of Quadric Groups
(with Yash Rastogi, Samuel Sottile, Yunus Zeytuncu)
- Submitted for Publication

[Spectral Analysis of the Kohn Laplacian on Sphere Quotients](#)
(with Yash Rastogi, Samuel Sottile, Yunus Zeytuncu)
- [Calculus on Twisty Stuff: The Local Index Theory of Dirac Operators](#)

Miscellany (continued)

Seminars and Workshops

- [UMN Student Symplectic Geometry Seminar](#) Co-organizer
- [UMN Low-Dim Learning Seminar](#) Organizer
- [Rutgers Symplectic Summer School 2025](#) Attendee

Talks

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| July 2023 | ■ “Hearing the Shape of Spherical Manifolds”
(With Yash Rastogi)
Presented at the Summer Undergraduate Michigan Mathematics Research Conference 2023 |
| August 2023 | ■ “The Kohn Laplacian and Sub-Laplacian on Compact Quotients of Quadric Groups”
(With Yash Rastogi)
Presented at the Young Mathematicians Conference 2023 |
| October 2023 | ■ “Hearing the Shape of Spherical and Quadric Manifolds”
Presented at the Reed Mathematics Colloquium
■ “The Laplacian Eigenvalue Problem”
Presented at the Reed Mathematics Student Colloquium |
| January 2024 | ■ “Spectral Analysis of the Kohn Laplacian on Sphere Quotients”
(With Yash Rastogi, Yunus Zeytuncu)
Presented at the Joint Mathematics Meeting 2024
■ “Analysis of the Kohn Laplacian and Sub-Laplacian on Compact Quotients of Quadric Groups”
(With Yash Rastogi)
Presented at the Joint Mathematics Meeting 2024 |
| Spring 2025 | ■ “Linearization of the Floer Equation and the Fredholm Property”
Presented at the UMN Student Symplectic Geometry Seminar
■ “Spin Geometry and the Second Stiefel-Whitney Class”
Presented at the UMN Student Topology and Geometry Seminar |
| Summer 2025 | ■ “An Introduction to the Moduli of Stable Vector Bundles”
Presented at the UMN Student Symplectic Geometry Seminar
■ “Yang-Mills on Riemann Surfaces, Part 2”
Presented at the UMN Student Symplectic Geometry Seminar |
| Fall 2025 | ■ “Perturbative Expansion of Chern-Simons, Part 1”
Presented at the UMN Student Symplectic Geometry Seminar |
| Spring 2026 | ■ “Introduction to Low-Dim Topology and Heegard Splittings”
Presented at the UMN Low-Dim Learning Seminar
■ “The Mapping Class Group and Three-folds of Heegard Genus 1”
Presented at the UMN Low-Dim Learning Seminar |