

Alan Goldfarb

University of California, Berkeley
Department of Mathematics and Statistics
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Email: alangoldfarb@berkeley.edu

Languages spoken: English (Fluent), Spanish (Fluent), French (Elementary proficiency)

Citizen of: United States, Mexico, Venezuela, France, Belgium

Current Positions

Ph.D. Student in Mathematics, University of California, Berkeley

Graduate Research Fellow, National Science Foundation

Research Interests

Representation theory, p-adic geometry, mathematical physics

Previous Research Positions

2022 *Summer Geometry Institute Research Fellow*, Massachusetts Institute of Technology

2020-2022 *Student Researcher*, University of Southern California

2021 *Visiting Undergraduate Research Fellow*, California Institute of Technology

2020 *Research Intern*, National Oceanic and Atmospheric Administration

Education

2023 B.S. in Mathematics, University of Southern California
(*Summa Cum Laude*, *Department Honors*, *Phi Beta Kappa*)

Papers & Other Writing

2023 Goldfarb, Alan, (2023). On \mathbb{P}_{Berk}^1 and Coarse-Grainings on Non-Archimedean Product Spaces.
[arXiv:2306.10227](https://arxiv.org/abs/2306.10227).

2022 Goldfarb, Alan (2022), "Approximating the All-Pairs Geodesic Matrix," *MIT Summer Geometry Initiative Blog*. summergeometry.org/sgi2022/approximating-the-all-pairs-geodesic-matrix/

2020 Goldfarb, Alan (2020). Snowfall Prediction Models from Natural Radiation.

Talks Given

2023 "Introduction to Non-Archimedean Geometry for p-adic AdS/CFT,"
Chinese-American Academic Exchange at Qiuzhen College of Tsinghua University

2021 "The Berkovich Projective Line as a Coarse Graining of Non-Archimedean Space,"
Caltech SFP Seminar

Seminar Organization

Spring 2024 *Introduction to Geometric Representation Theory*, UC Berkeley

Grants, Honors, & Awards

2023 NSF GRFP
2023 UC Berkeley Chancellor's Fellowship
2023 Zobrist Senior Award for Excellence in Mathematics
2023 Caltech Presidential Graduate Fellowship (Declined)
2023 USC Discovery Scholars Distinction
2022 MIT SGI Fellowship
2022 Zobrist Junior Award for Excellence in Mathematics
2021 Dennis Estes Undergraduate Research Award
2021 Caltech VURP Fellowship
2019 USC Presidential Scholarship
2019 USC University Scholarship
2019 National Merit Scholar
2018 National Hispanic Recognition Scholar

Teaching Assistantships

Fall 2022 Math 118 *Fundamentals of Calculus*, University of Southern California
Spring 2022 Math 226 *Calculus III*, University of Southern California

Service to the profession

2022-2023 *Volunteer Bilingual Math Tutor*, Math on the Border
2022 *Co-President*, University of Southern California Undergraduate Math Club
2021-2022 *Vice President*, University of Southern California Undergraduate Math Club
2019-2021 *Mentorship Director*, University of Southern California Undergraduate Math Club
2016-2018 *Volunteer Math and Science Tutor*, Kid Power D.C.

Other work experience

2021-2022 *Math Center Assistant*, University of Southern California
2020-2021 *Policy Debate Coach*, Chaminade College Preparatory
2019-2020 *Policy Debate Coach*, C.K. McClatchy High School
2018-2019 *Assistant Manager*, Mama Lucia's, Bethesda
2018 *Cashier*, Mama Lucia's, Bethesda

Other information

Amateur guitarist
Avid skateboarder
Competent programmer (C, C++, Python, HTML, CSS)
Philosophy enthusiast
Washington Wizards fan