Hannah Friedman

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EDUCATION

University of California, Berkeley   Expected May 2028
PhD in Mathematics
Harvey Mudd College   May 2023
BS in Mathematics with High Distinction, Honors in Mathematics
Thesis advised by Michael Orrison

RESEARCH

– The Two Lives of the Grassmannian (with Bernd Sturmfels, Karel Devriendt, and Bernhard Reinke), submitted to *Acta Universitatis Spientiae, Mathematica*; see https://arxiv.org/abs/2401.03684.
– Likelihood Geometry of Determinantal Point Processes (with Bernd Sturmfels and Maksym Zubkov), to appear in *Algebraic Statistics*; see https://arxiv.org/abs/2307.13486.
– Long Increasing Subsequences (advised by Michael Orrison), senior thesis. https://tinyurl.com/friedman-senior-thesis.
– An Interpretable Joint Nonnegative Matrix Factorization-Based Point Cloud Distance Measure (with Amani R. Maina-Kilaas, Julianna Schalkwyk, Hina Ahmed, and Jamie Haddock), conference paper at the 57th Annual Conference on Information Science and Systems; see https://arxiv.org/pdf/2207.05112v2

PRESENTATIONS

– Likelihood Geometry of Determinantal Point Processes, Algebra-Geometry-Combinatorics Afternoon at SFSU, November 2023.
– Long Increasing Subsequences, Harvey Mudd Thesis Presentation Days; see minutes 12:20 to 25:30 of https://tinyurl.com/hmc-senior-thesis-talk.
– A New Basis for k-Local Class Functions, Pi Mu Epsilon Contributed Session on Research by Undergraduates at the 2023 Joint Math Meetings.
– An Interpretable Joint Nonnegative Matrix Factorization-Based Point Cloud Distance Measure, poster at the Southern California Applied Mathematics Symposium, June 2022.

AWARDS & HONORS

Chancellor's Fellowship, UC Berkeley   2023
Alvin White Prize, Harvey Mudd College   2023
Presented to a student or students who have contributed greatly to the humanistic side of the Harvey Mudd College Mathematics Community.
Giovanni Borrelli Mathematics Fellowship, Harvey Mudd College   2021 - 2022
Conferred on one or two junior mathematics majors in recognition of the ability to complete high quality research independently or in tandem with a faculty advisor.
Courtney S. Coleman Prize, Harvey Mudd College   2021
Awarded to three rising juniors who excel in mathematics.

TEACHING & MENTORSHIP

– Graduate Student Instructor at UC Berkeley:
    – Math 1A: Calculus I, Spring 2023
– UC Berkeley Directed Reading Program Mentor, Spring 2023
– President of Women in Math at Harvey Mudd College, Fall 2022-Spring 2023
– Teaching Assistant at Harvey Mudd College, Spring 2021 - Spring 2023

SKILLS

– Programming Languages: Python, MatLab, Macaulay2, Java, C++, R, Julia
– Languages: English (fluent), German (fluent), Mandarin (proficient), Hebrew (proficient)