

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

PUBLICATIONS

- Likelihood Geometry of Determinantal Point Processes (with Bernd Sturmfels and Maksym Zubkov), to appear in *Algebraic Statistics*; see <https://arxiv.org/abs/2307.13486v1>.
- 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.pdf>

PRESENTATIONS

- 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.

LEADERSHIP EXPERIENCE

President, Women in Math, Harvey Mudd College

Fall 2022 - Spring 2023

- Support women in mathematics and strengthen the mathematics community by fostering connections between underclassmen, upperclassmen, and alumni (as mentorship coordinator 21-22)
- Recruit new leadership members
- Host math department speakers and organize ushers for speaker events
- Organize social and networking events for women interested in math

Sustainability Director, Harvey Mudd College Student Government

Fall 2020 - Spring 2022

- Coordinated and supported teams of undergraduate volunteers on various projects focused on increasing campus sustainability

TEACHING EXPERIENCE

Tutor/Teaching Assistant, Harvey Mudd College

Spring 2021 - Spring 2023

- Help students develop intuition and answer questions about Calculus, Linear Algebra, Differential Equations, Discrete Math, Abstract Algebra I, Harmonic Analysis on Finite Groups, Data Science, and Principles of Computer Science

Grader, Harvey Mudd College

Fall 2020 - Spring 2023

- Grade weekly or biweekly homework sets for Calculus, Linear Algebra, Abstract Algebra I, and Harmonic Analysis on Finite Groups

SKILLS

Programming Languages: Python, MatLab, Macaulay2, Java, C++, R, Julia

Languages: English (fluent), German (fluent), Mandarin (proficient), Hebrew (proficient)