

# Hannah Friedman

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## EDUCATION

### University of California, Berkeley

Expected May 2028

PhD in Mathematics jointly advised by Bernd Sturmfels and Serkan Hoşten

### Harvey Mudd College

May 2023

BS in Mathematics with High Distinction, Honors in Mathematics

Thesis advised by Michael Orrison

## RESEARCH

- Hannah Friedman. Likelihood Geometry of the Squared Grassmannian. arXiv:2409.03730 (2024).
- Karel Devriendt, Hannah Friedman, Bernhard Reinke, Bernd Sturmfels. The Two Lives of the Grassmannian, to appear in *Acta Universitatis Spientiae, Mathematica*.
- Hannah Friedman, Bernd Sturmfels, Max Zubkov. Likelihood Geometry of Determinantal Point Processes. *Algebraic Statistics*, **15**, (2024) 15-25.
- Hannah Friedman. Long Increasing Subsequences, senior thesis advised by Michael Orrison. <https://tinyurl.com/friedman-senior-thesis>.
- Hannah Friedman, Amani R. Maina-Kilaas, Julianna Schalkwyk, Hina Ahmed, and Jamie Haddock. An Interpretable Joint Nonnegative Matrix Factorization-Based Point Cloud Distance Measure, *Proceedings of the Conference on Information Sciences and Systems (CISS)*, Baltimore, MD, March 2023.

## PRESENTATIONS

- Optimization over Two Embeddings of the Grassmannian, Codex seminar, July 2024.
- 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 2024
- UC Berkeley Directed Reading Program Mentor, Spring 2024
- 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)