

Kristen Dawson

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kdawson1@sfsu.edu

kdaws.github.io

Interests	algebraic statistics, applied algebraic geometry, nonlinear algebra, combinatorics	
Education	San Francisco State University	<i>San Francisco, CA</i>
	MA in Mathematics	expected May 2025
	Advisor: Serkan Hoşten	
	Thesis: Uniqueness of size-2 positive semidefinite matrix factorizations	
	BS in Applied Mathematics	Dec 2023
	Emphasis: Advanced Mathematics	
Research Experience & Activities	Relevant coursework: algebra (3 semesters), advanced linear algebra, matroid theory, optimization, combinatorics, computational linear algebra, topology, seminar course on applied algebraic geometry	
	Workshop for Women in Algebraic Statistics	<i>Oxford, UK</i>
	Mentor: Fatemeh Mohammadi	July 8-18, 2024
	Project: Conditional independence ideals with hidden variables	
	Encuentro Colombiano de Combinatoria (ECCO)	<i>Popayán, Colombia</i>
	Colombian Combinatorics Meeting	June 17-28, 2024
	Lawrence Berkeley National Laboratory	<i>Berkeley, CA</i>
	Mentors: Henry Boateng (SFSU), Xiaoye S. Li (LBNL)	July – Aug 2023
	Worked on a new, faster implementation of a randomized sketching algorithm for linear algebra computations.	June – Aug 2022
	Aalto University	<i>Espoo, Finland</i>
Publications	Mentor: Kaie Kubjas	June 2023
	Research on uniqueness of PSD factorizations.	
	Uniqueness of size-2 positive semidefinite matrix factorizations	
Presentations	K. Dawson, S. Hoşten, K. Kubjas, L. Metsälampi.	Oct 24, 2024
	<i>(arXiv:2410.18891)</i>	
	The Uniqueness of PSD Matrix Factorizations	
	Presentation: UC Berkeley Seminar on Nonlinear Algebra	Dec 12, 2024
	Presentation: SFSU Undergraduate Research Symposium	Dec 1, 2023
	Faster Sketching Algorithms for Linear Algebra Applications	
	Poster: LBNL CS Area Summer Poster Session	Aug 8, 2023
	Poster: Exascale Computing Project Annual Meeting	Jan 17-20, 2023
	Presentation: California State University JMM	Nov 11, 2022
	Poster: LBNL CS Area Summer Poster Session	Aug 2, 2022
Awards	ARCS Foundation Scholar \$12,000	2024-2025
	Miłowski Scholarship \$1,500	Fall 2024
Skills	Programming: Macaulay2, polymake, Python, MATLAB, Wolfram, Java	
Leadership	SIAM Student Chapter at SFSU <i>President</i>	Mar 2024 – Present
	<i>Vice President</i>	May 2023 – Mar 2024
	<i>Treasurer</i>	Aug 2022 – May 2023