ASHLEIGH ADAMS

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EDUCATION

University of California, Davis — *October 2020 - Present*
Ph.D. Mathematics

University of Minnesota, Twin Cities — *May 2017 - May 2020*
Bachelor of Arts, Mathematics

General Assembly, New York City — *January 2015 - April 2016*
Certificate
Immersive Web Development Bootcamp

University of Minnesota, Twin Cities — *September 2008 - December 2014*
Bachelor of Music Performance
Vocal Performance

Hanns Eiser Hochschule für Musik, Berlin, Germany — *May 2012 - May 2015*

VI: International Gesangsakademie, Hessen, Germany — *June 2014-August 2014*

German Language School (GLS), Berlin, Germany — *June 2012-August 2014*
German Language Goethe-Certificate C1

MATHEMATICS RELATED AWARDS AND FELLOWSHIPS

- UC Davis Travel Research Grant — *2023*
- UC Davis Department Fellowship — *2024*
- UC Davis Travel Research Grant — *2022*
- National Science Foundation Graduate Research Fellowship — *2020*
- University of Minnesota Department of Mathematics Undergraduate Travel Grant — *2019*
- Outstanding Poster Award, Joint Math Meetings — *2018*
- Dean's List, multiple semesters at University of Minnesota
- Outstanding Talk at Mathematics Project at Minnesota — *2017*

PUBLICATIONS AND PREPRINTS

A. Adams, V. Reiner, "A colorful Hochster formula and universal parameters for face rings." *Journal of Commutative Algebra* **15.2** (2023), 151–176.

A. Adams, C. Hall, and E. Stucky, "Classifications of ℓ-Zero-Sumfree Sets." *The PUMP Journal of Undergraduate Research* **2** (2019), 179-198.

SOFTWARE DEVELOPMENT

A. Adams, RESOLUTIONSOFSTANLEYREISNERRINGS. A MACAULAY2 package (2020).

CONFERENCES - TALKS - POSTERS

TALKS:

To be determined. — *December 2023*
Graduate Online Combinatorics Colloquium (GOCC), virtual.

Stanley-Reisner Theory, a Two Part Lecture Series: Who? What? When? Where? Huh? — *July 2023*
Informal Algebra and Discrete Math Seminar, UC Davis.

The Complex Grassmaniann and Kleinman's transversality theorem November 2020
Informal Algebraic Geometry Seminar, UC Davis.

A colorful Hochster formula and parameters for special face rings October 2020
Graduate Research Seminar, UC Davis.

A colorful Hochster formula and universal parameters for face rings August 2020
Graduate Online Combinatorics Colloquium (GOCC).

Group actions on Stanley and Stanley-Reisner Rings January 2020
AMS Contributed Paper Session on Combinatorics and Graph Theory, III
Joint Math Meetings, Denver, CO

Group actions on Stanley and Stanley-Reisner rings November 2019
University of Minnesota Graduate Student Combinatorics and Algebra Seminar, Minneapolis, MN

Introduction to LaTeX October 2019
University of Minnesota Math Club, Minneapolis, MN

Simplicial Complexes of Zero-Sumfree Sets January 2019
(poster presentation)
MAA Undergraduate Poster Session
Joint Math Meetings, Baltimore, MD

Zero-Sumfree Sets, Hilbert Series, and Stanley-Reisner Rings October 2018
University of Minnesota Graduate Student Combinatorics and Algebra Seminar, Minneapolis, MN

Simplicial Complexes of Zero-free Sumsets October 2018
University of Minnesota Undergraduate Mathematics Research Seminar, Minneapolis, MN

Simplicial Complexes of Zero-free Sumsets September 2018
Midwest Conference on Combinatorics and Computing (MCCC), Duluth, MN

Simplicial Complexes of Zero-free Sumsets August 2018
(poster presentation)
Undergraduate Research Expo, University of Minnesota, Minneapolis, MN

Young Diagrams and Zero-Sumfree Sets April 2018
Central States Mathematics Undergraduate Conference (CeSMUR)
University of Nebraska, Lincoln, NE

The Catalan Numbers March 2018
University of Minnesota Undergraduate Mathematics Research Seminar, Minneapolis, MN

The Catalan Numbers January 2018
Association for Women in Mathematics: Mathematics Project at Minnesota (MPM),
University of Minnesota, Minneapolis, MN

CONFERENCES/WORKSHOPS:

Graduate Student Guest (IMPRS) *October-December 2022*
 Max Planck Institute for Mathematics, Bonn, Germany.

Matroids: Combinatorics, Algebra and Geometry *2022 - 2023*
 Fields Institute, Remote.

Mini-Workshop: Quantization of Complex Symplectic Varieties *September 2022*
 Mathematisches Forschungsinstitut Oberwolfach, Germany.

OPAC: Open Problems for Algebraic Combinatorics *May 2022*
 University of Minnesota, Twin Cities.

ICERM: Combinatorial Algebraic Geometry Semester *February-May 2021*
Brown University, Remote.

eCARs: Early Commutative Algebra Researchers *June 2020*
Princeton University, Remote.

Matroids Day *December 2019*
University of Wisconsin, Madison, WI

Formal Power Series and Algebraic Combinatorics (FPSAC) *July 2019*
University of Ljubljana, Ljubljana, Slovenia

Mid-Atlantic Algebra, Geometry, and Combinatorics (MAAGC) Workshop *May 2019*
University of Pennsylvania and Drexel University, Philadelphia, PA

OUTREACH, CAMPUS INVOLVEMENT, & ACTIVITIES

Speaker at Superposition Fremont's STEAM Week *September 2023*
- Gave a 30 minute interactive presentation with middle- and high-school women and minorities aimed towards inspiring them to enter STEAM fields

Graduate Student Organizer *May 2022-present*
- Developed and moderated a Discord server together in order to foster connectivity, collaboration, and community during the Formal Power Series and Algebraic Combinatorics 2023 (FPSAC)
- Collaborated with the planning committee to organize two social events for international conference of 300 people
- Worked with outside businesses to negotiate a fair price for the best options
- Lead one of the groups of 80 people

Graduate Student Combinatorics Group *November 2022-present*
- Founder and Moderator of an online Discord server of 500 people to connect all graduate students studying combinatorics

Directed Reading Program (DRP), UC Davis *November 2020-2021*
Founder, Organizer, & Mentor
- Developed marketing strategy and built the website
- Appropriately paired undergraduates with graduate mentors
- Organized monthly meet-up sessions for the undergraduate mentees and graduate mentors as well as a quarterly presentation session for students to present their work
- Directed a reading on simplicial complexes with an undergraduate

Chair of the AMS Contributed Paper Session on *January 2020*
Combinatorics and Graph Theory, III
Joint Math Meetings, Denver, Colorado

SIAM supported outreach event, UMN *March 2019*
- Set up and tore down event at a Minneapolis high school for students with disrupted educations
- Connected students with different math based interactive stations

Taekwondo Club, UMN *January 2018-May 2020*

Math Club, UMN *June 2017-May 2020*
Officer
- Maintained the instagram account
- Organized panels, talks, and activities for the weekly club meeting

Math Club: Study Group, UMN *June 2017-May 2020*
Officer: Organizer and Founder

Social Coding Club, UMN *September 2017-May 2018*
- Designed and developed a mobile app

Welcome to the Math Major Event, UMN *January 2018,2020,*
- Gave a talk on undergraduate research and funding opportunities *October 2019*
and directed readings

External Review for the Department of Mathematics, *October 2019*
University of Minnesota, Twin Cities
Panel member