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Education

Dartmouth College , Hanover, NH	Sep 2019 – June 2024
- Ph.D., Mathematics	
- Thesis Advisor: Sergi Elizalde	
Lafayette College , Easton, PA	Sep 2015 – May 2019
- B.S. Mathematics with Honors	
- Minor Computer Science	

Professional Experience

Villanova University , Villanova, PA	August 2025 – Present
- Visiting Assistant Teaching Professor, Department of Mathematics and Statistics	
Florida Gulf Coast University , Fort Myers, FL	August 2024 – May 2025
- Visiting Assistant Professor, Department of Mathematics	

Papers

Publications

4. *Counting Boolean intervals in the weak Bruhat order of a finite Coxeter group* (with J. Elder, P. E. Harris, J. C. Martínez Mori) <https://doi.org/10.47443/dml.2024.163> *Discrete Math. Lett.* 15 (2025) 52-59
3. *On the Order of P-Strict Promotion on $V \times [\ell]$* <https://doi.org/10.37236/13044> *Electron. J. Combin.* 32(2) (2025) #P2.8
2. *Coloring Groups* (with A. Wilson) *Discrete Math & Theoretical Computer Science* vol. 26:2 (2024) <https://doi.org/10.46298/dmtcs.12753>
1. *Rowmotion on 321-avoiding permutations* (with S. Elizalde) *Electron. J. Combin.* 30(3) (2023) #P3.5 <https://doi.org/10.37236/11792>

Preprints and In Preparation

- *Parking Cascades: From the simplest sequence to Motzkin and Catalan* (with J. Elder, P. E. Harris, M. Lynch, J. C. Martínez Mori) (submitted)
- *Dimensions of toggleability spaces* (with S. Daugherty, N. Mayers) <https://doi.org/10.48550/arXiv.2508.14974> (submitted)
- *The poset of maximal tubings of the cycle graph is a lattice* (with E. Barnard, M. Hlavacek, B. Kagy, N. Lesnevich, G. D. Nasr, K. Waddle) <https://doi.org/10.48550/arXiv.2510.09429>

Presentations

Invited Research Presentations

- Title to be determined *AMS Special Session on Dynamical Algebraic Combinatorics* at AMS Spring Central Sectional April 2026 (Upcoming)
- Title to be determined *AMS Special Session on Algebraic Combinatorics* at AMS Spring Southeastern Sectional March 2026 (Upcoming)
- “Pattern avoiding Parking Functions” *Special Session on Permutation Patterns* at Joint Math Meetings January 2026 (Upcoming)
- “On the Toggleability Spaces of Diagrams” *AMS Special Session on Dynamical Algebraic Combinatorics* at AMS Spring Eastern Sectional April 2025
- “On the Order of P-Strict Promotion on $V \times [\ell]$ ” *AMS Special Session on Enumerative and Dynamical Combinatorics* at AMS Spring Southeastern Sectional March 2025
- “Avoiding a Single Pattern in the Bruhat Order”, *AMS Special Session on Permutation Patterns* at AMS Fall Eastern Sectional October 2024
- “Rowmotion on 321-Avoiding Permutations”, *AMS Special Session on Algebraic and Bijective Methods in Permutation Enumeration* at Joint Math Meetings April 2022

Contributed Research Presentations

- “Avoiding a Single Pattern in the Bruhat Order” (Poster), *Permutation Patterns* July 2025
- “Boolean intervals in the weak Bruhat order of a finite Coxeter group” *Graduate Student Combinatorics Conference* March 2024
- “Coloring Groups” (Poster), *Combinatorial Algebra meets Algebraic Combinatorics* January 2024
- “Rowmotion on 321-Avoiding Permutations” (Poster), *Formal Power Series and Algebraic Combinatorics* July 2023
- “Rowmotion on 321-Avoiding Permutations”, *Permutation Patterns* July 2023
- “On the Order of P-Strict Promotion on $V \times [\ell]$ ”, *Graduate Student Combinatorics Conference* March 2023

Seminar Talks

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| Drexel University (CAGE seminar) | May 2025 |
| University of Florida | April 2025 |
| Kennesaw State University | April 2025 |
| University of Wisconsin – Milwaukee | April 2024 |
| Graduate Online Combinatorics Colloquium | November 2023 |
| LACIM at Université du Québec à Montréal | November 2023 |
| Michigan State University | November 2023 |
| North Dakota State University | November 2023 |
| Dartmouth College | May 2022 |
| University of Vermont | April 2022 |

Other Conferences and Workshops Attended

- Webs in Algebra, Geometry, Topology and Combinatorics at ICERM	December 2025
- BIRS 5-Day Workshop on Lattice Theory	January 2025
- Collaborate @ ICERM	January 2025
- AMS MRC in Algebraic Combinatorics	June 2024
- Richard Stanley 80th Birthday Conference	June 2024
- ALCOVR Workshop in Dynamical Algebraic Combinatorics	May 2024
- AMS Spring Eastern Sectional	April 2024
- 48th Annual New York State Regional Graduate Mathematics Conference	April 2023
- Permutation Patterns	June 2022
- BIRS 5-Day Workshop on Dynamical Algebraic Combinatorics (Virtual)	November 2021
- Permutation Patterns (Virtual)	April 2021

Teaching

Instructor Villanova University

- MAT 1320 Calculus 1 for Liberal Arts Majors	Fall 2025
- MAT 1500 Calculus 1 (2 Sections)	Fall 2025

Instructor Florida Gulf Coast University

- MAC 2233 Elementary Calculus 1 (2 Sections)	Spring 2025
- MAS 3105 Linear Algebra	Spring 2025
- MAT 1033 Intermediate Algebra (2 Sections)	Fall 2024
- MAC 1147 Precalculus	Fall 2024

Instructor Dartmouth College

- Math 28 Introduction to Combinatorics	Winter 2024
- Math 9 Multivariable Calculus with Linear Algebra	Fall 2022
- Math 3 Introduction to Calculus	Fall 2021

Teaching Assistant, Dartmouth College

- Math 28 Introduction to Combinatorics	Winter 2023
- Math 3 Introduction to Calculus	Winter 2021 online over Zoom
- Math 108 Topics in Combinatorics	Fall 2020 online over Zoom
- Math 10 Introductory Statistics	Spring 2020 online over Zoom
- Math 8 Calculus of Functions of one and Several Variables	Fall 2019

Service and Outreach

- Dartmouth Combinatorics Seminar Co-organizer	Fall 2022 – Spring 2024
- Dartmouth College <i>Directed Reading Program</i> Co-organizer	Winter 2023 – Winter 2024
- Florida Gulf Coast University Colloquium Committee	August 2024 – May 2025

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- Florida Gulf Coast University ASPiRE Committee

August 2024 – May 2025

Referee For

Electronic Journal of Combinatorics (x2), European Journal of Combinatorics