

Research Interest: Algebra and Combinatorics. In algebra, I am mostly interested in the study of the phenomenon of non-uniqueness of factorizations into irreducibles in integral domains and finite-rank monoids using techniques of linear algebra, combinatorics, and number theory. My research in combinatorics focuses on matroids and posets. I am also interested in cluster algebras and polyhedral geometry.

Invited Talks at Conferences and Seminars

32. TU Graz, Conference on Rings and Polynomials
Graz, Austria (Summer 2021)
31. Joint Mathematics Meetings (JMM), Session on Commutative Rings: Ideals, Modules, and Factorizations
Washington DC (Spring 2021)
30. *On Strongly Primary Monoids, with a Focus on Puiseux Monoids*
University of Sharjah, 3rd International Conference on Mathematics and Statistics
Dubai, United Arab Emirates (Spring 2020).
29. *Application of Puiseux Monoids in Commutative Algebra*
Florida Atlantic University (FAU), Algebra Seminar
Boca Raton, FL (Spring 2020)
28. *Geometry and Combinatorics of Positive Lattice Submonoids*
Stanford University, 3rd California Alliance Conference
Palo Alto, CA (Fall 2019).
27. *Atomic Properties of Monoid Algebras*
University of Florida (UF), Algebra Seminar
Gainesville, FL (Fall 2019)
26. *The Elasticity of Atomic Monoids and Domains*
Sam Houston State University, Algebra Colloquium
Sam Houston, TX (Fall 2019)
25. *The Rational-infinite Elasticity Property and Some Related Conjectures*
University of Florida (UF), Algebra Seminar
Gainesville, FL (Fall 2019)
24. *Philosophical and Mathematical Notion of Atomicity*
Tokyo Institute of Technology (TIT), Bright Future Conference
Tokyo, Japan (Summer 2019)
23. *A Class of Primary Monoids and the Atomicity of Their Monoid Algebras*
University of Graz, Algebra Seminar
Graz, Austria (Summer 2019)
22. *On the Atomicity of Monoid Algebras of Finite Characteristic*
University of Hawaii, AMS Sectional Meeting: Arithmetic Properties of Integral Domains and Monoids
Honolulu, HI (Spring 2019)
21. *On Transfer Properties of Monoid Algebras*
University of South Florida (USF), Discrete Mathematics Seminar
Tampa, FL (Spring 2019)

20. *A Question by Gilmer on the Atomicity of Monoid Domains*
University of Florida, Algebra Seminar
Gainesville, FL (Spring 2019)
19. *Factorizations in Puiseux Algebras*
Joint Mathematics Meetings (JMM), Session on Algebra
Baltimore, MD (Spring 2019)
18. *On Monoid Algebras with Rational Exponents*
University of Florida, Algebra Seminar
Gainesville, FL (Fall 2018)
17. *On a None-finitely Generated Generalization of Semigroup Algebras*
International Meeting on Numerical Semigroups (IMNS)
Cortona, Italy (Fall 2018)
16. *Positroids Induced by Rational Dyck Paths*
Dartmouth College, Formal Power Series and Algebraic Combinatorics (FPSAC)
Hanover, NH (Summer 2018)
15. *Generalized Affine Semigroups: Their Sets of Lengths and Elasticity*
UC Davis, Algebra and Discrete Mathematics Seminar
Davis, CA (Spring 2018)
14. *Tilings and Matroids on the Lattice Points of a Two-dimensional Simplex*
UC Berkeley, California Alliance Conference
Berkeley, CA (Spring 2018)
13. *Systems of Sets of Lengths of Puiseux Monoids*
University of Graz, Conference of Rings and Factorizations
Graz, Austria (Spring 2018)
12. *On Tilings and Matroids on the Lattice Points of a Regular Simplex*
University of Miami (UM), Combinatorics Seminar
Coral Gables, FL (Spring 2018)
11. *Dyck Paths and Positroids from Unit Interval Orders*
Queen Mary University of London, Formal Power Series and Algebraic Combinatorics (FPSAC)
London, United Kingdom (Summer 2017)
10. *Positroids Induced by Unit Interval Orders*
University of Miami (UM), Combinatorics Seminar
Coral Gables, FL (Spring 2017).
9. *Dyck Paths and Positroids from Unit Interval Orders*
UC Berkeley, Combinatorics Seminar
Berkeley, CA (Spring 2017)
8. *Toric Algebra: Semigroup Rings*
UC Berkeley, Combinatorial Commutative Algebra Seminar
Berkeley, CA (Spring 2017)
7. *Monomial Ideals: Stanley-Reisner Ideals*
UC Berkeley, Combinatorial Commutative Algebra Seminar
Berkeley, CA (Spring 2017)

6. *Puiseux Monoids and Their Atomic Structure*
International Meeting on Numerical Semigroups (IMNS)
Levico Terme, Italy (Summer 2016)
5. *Algebra of Symmetric Functions*
UC Berkeley, Student Combinatorics Seminar
Berkeley, CA (Spring 2016)
4. *Incidence Algebras and Möbius Inversion Formula*
UC Berkeley, Student Combinatorics Seminar
Berkeley, CA (Spring 2016)
3. *A Friendly Introduction to Numerical Semigroups*
University of Hawaii, PURE Math Symposium
Hilo, HI (Summer 2015)
2. *On Realizable Delta Sets of Block Monoids of Cyclic Class Groups*
University of Hawaii, PURE Math Symposium
Hilo, HI (Summer 2013)
1. *An Isomorphism Theorem of Completely Semisimple Inverse Semigroup*
California State University at Chico, Researcher Experience for Undergraduates and Teachers
Chico, CA (Summer 2012)