

Personal Information

Legal Status: U.S. Citizen
Address: 816 Department of Mathematics, UC Berkeley
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Education

- Ph.D. in Mathematics at UC Berkeley (in progress)
- B.S. in Mathematics at University of Florida (2010-2014)
 - Major GPA: 4.0 (Summa Cum Laude)
 - Minor in Computer Sciences

Research Interest: Algebra and Combinatorics

Scientific Publications and Preprints

1. *Tilings and matroids on the lattice points of a regular simplex* (submitted)
2. *Positroids induced by rational Dyck paths* (submitted)
3. *Puiseux monoids and transfer homomorphisms*, Journal of Algebra (to appear)
4. *The elasticity of Puiseux monoids* (with C. O’Neill), Journal of Commutative Algebra (to appear)
5. *On Positroids induced by rational Dyck paths* (Extended Abstract), Sminaire Lotharingien de Combinatoire (to appear)
6. *Minimal presentations of shifted numerical semigroups*. (with R. Conaway, J. Horton, C. O’Neill, R. Pelayo, M. Williams, and B. Wissman), International Journal of Algebra and Computation, Vol. 28 (2018) 53–68.
7. *Dyck paths and positroids from unit interval orders* (with A. Chavez), Journal of Combinatorics Theory Series A, Vol. 154 (2017) 507–532.
8. *Atomicity and boundedness of monotone Puiseux monoids* (with M. Gotti), Semigroup Forum, Vol. 95 (2017) 1–17.
9. *Dyck paths and positroids from unit interval orders* (Extended Abstract) (with A. Chavez), Sminaire Lotharingien de Combinatoire, Vol. 78B (2017) 12pp.
10. *On the atomic structure of Puiseux monoids*. Journal of Algebra and Its Applications Vol. 16 (2017) 20pp.
11. *On delta sets and their realizable subsets in Krull monoids with cyclic class groups*. (with S. Chapman and R. Pelayo) Colloquium Mathematicum, Vol. 137 (2014), pp 137–146.

Selected Talks

- *Positroids induced by rational Dyck paths*. Formal Power Series and Algebraic Combinatorics (FPSAC) Dartmouth College (summer 2018)
- *Tilings and matroids on the lattice points of a regular simplex*. California Alliance Conference, UC Berkeley (spring 2018)
- *Systems of sets of lengths of Puiseux monoids*. Conference of Rings and Factorizations at Graz, Austria (spring 2018)
- *Dyck paths and positroids from unit interval orders*. Formal Power Series and Algebraic Combinatorics (FPSAC) at London, UK (summer 2017)
- *Positroids Induced by Unit Interval Orders*. Combinatorics Seminar, University of Miami (spring 2017).
- *Dyck Paths and Positroids from Unit Interval Orders*. Combinatorics Seminar, UC Berkeley (spring 2017).
- *Toric Algebra: Semigroup Rings*. Combinatorial Commutative Algebra Seminar, UC Berkeley (spring 2017).
- *Monomial Ideals: Stanley-Reisner Ideals*. Combinatorial Commutative Algebra Seminar, UC Berkeley (spring 2017).
- *Puiseux Monoids and Their Atomic Structure*. IMNS 2016, Levico Terme, Italy.
- *Incidence Algebras and Möbius Inversion Formula*. Student Combinatorics Seminar, UC Berkeley (spring 2016).
- *A Friendly Introduction to Numerical Semigroups*. PURE Math 2015 Symposium, University of Hawaii at Hilo.
- *On Realizable Delta Sets of Block Monoids of Cyclic Class Groups*. PURE Math 2013 Symposium, University of Hawaii at Hilo.

Teaching Experience

- Graduate Student Instructor (GSI) at UC Berkeley (Math Department) (spring 2017)
- Graduate Student Instructor (GSI) at UC Berkeley (Math Department) (fall 2016)
- Research Assistant at University of Hawaii at Hilo (PURE Math) (summer 2015)
- Teacher Assistant at University of Florida (Math Department) (fall 2013)
- Teacher Assistant at University of Havana (Math Department) (spring 2008)
- Teacher Assistant at University of Havana (Biology Department) (fall 2008)

Employment History

- Graduate Student Researcher (GSR) at UC Berkeley (spring 2018)
- Graduate Student Researcher (GSR) at UC Berkeley (fall 2017)
- Graduate Student Instructor (GSI) at UC Berkeley (spring 2017)
- Graduate Student Instructor (GSI) at UC Berkeley (fall 2016)
- Research Assistant at University of Hawaii at Hilo (summer 2015)
- Software Developer at Ultimate Software (summer 2014)
- Teacher Assistant at University of Florida (fall 2013)
- Student Researcher at University of Hawaii at Hilo (summer 2013)
- Student Researcher at CSU at Chico (summer 2012)

Other Professional Experiences & Skills

- Participant in the Summer Program in Analysis and Geometry at Princeton University (summer 2012)
- Programming/Computer Languages Learned: C#, Java, JavaScripts, Latex, Sage

Honors and Awards

- NSF-AGEP Fellowship
- UC Berkeley Chancellor Fellowship
- UC Berkeley Mathematic Department Fellowship

Membership: AMS, MAA, SACNAS, BSN (Berkeley Science Network)