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**Employment:**

(2009–2012) VIGRE Postdoctoral Fellow, University of California Davis.

**Education:**

(2009) Doctor of Philosophy, Mathematics, University of Minnesota. Advisor: Victor Reiner.  
Thesis: Symmetries of Tensors.  
(2004) Bachelor of Science, Mathematics (magna cum laude), University of Minnesota.  
Thesis: The critical group of a regular line graph.

**Research Interests:**

Combinatorics, algebra and geometry.

**Papers:**

10. Projective invariants of vector configurations (with Alex Fink). In progress.
9. Cyclic sieving for finite Grassmannians and flag varieties (with Jia Huang). To appear in *Discrete Mathematics* (2011).
8. Two results on the rank partition of a matroid. To appear in *Portugaliae Mathematica* (2011).
7. Equality of symmetrized tensors and the coordinate ring of the flag variety. To appear in *Linear Algebra and its Applications* (2011).
6. Constructions for cyclic sieving phenomena (with Sen-Peng Eu and Victor Reiner). To appear in *SIAM Journal of Discrete Math.* (2011).
5. The critical group of a line graph (with Andrew Manion, Molly Maxwell, Aaron Potechin and Victor Reiner). To appear in *Annals of Combinatorics* (2010).
4. Tableaux in the Whitney module of a matroid. *Séminaire Lotharingien de Combinatoire* 63 (2010), Article B63f.
3. Symmetries of Tensors. Ph.D. Thesis University of Minnesota (2009).
2. Products of Linear Forms and Tutte Polynomials. *European Journal of Combinatorics*. Volume 31, Issue 7, (2010), pp. 1924-1935
1. A short proof of Gamas's theorem. *Linear Algebra and Its Applications* 430 (2009) pp. 791-793

**References:**

4. Paper [4] above is referenced by Andrea Brini and Francesco Regonati in *Whitney algebras and Grassmann's regressive products*, (2010).
3. Paper [6] is referenced by Bruce Sagan in *The cyclic sieving phenomenon: A survey*, (2010).
2. Paper [5] is referenced by Lionel Levine in *Sandpile groups and spanning trees of directed line graphs*. To appear in *J. Comb. Theory (A)*, (2010).
1. Paper [2] is referenced by Federico Ardila and Alexander Postnikov in *Combinatorics and geometry of power ideals*. To appear in *Trans. AMS*, (2009).

**Invited Talks:**

21. AMS Special Session on Algebraic Combinatorics (Manoa, HI). March 2012.
20. Combinatorics Seminar, UCLA. January 2012.
19. Colloquium, San Jose State University. November 2011.
18. AMS Special Session on Matroids (Wake Forest, NC). September 2011.
18. North Carolina State University Algebra and Combinatorics Seminar. September 2011.
17. Rocky Mountain Math. Consortium Summer School, guest lecture. June 2011.
16. AMS Special Session on Recent Developments in Schubert Calculus (Iowa City, IA). March 2011.
15. AMS Special Session on Algebraic and Geometric Combinatorics (Statesboro, GA). March 2011.
14. San Francisco State University AGC Seminar. October 2010.
13. CMS Special Session on Algebraic Combinatorics (Fredericton, CA). June 2010.
12. Bay Area Discrete Math Day. April 2010.
11. AMS Special Session on Geometric Combinatorics (Albuquerque, NM). April 2010.
10. University of California, Berkeley Combinatorics Seminar. March 2010.
9. University of Minnesota, Combinatorics Seminar. March 2010.
8. University of California, Davis Discrete Math Seminar. October 2009.
7. AMS Special Session on Matroids in Algebra and Geometry. (San Francisco, CA) April 2009.
6. University of Illinois Algebra-Geometry-Combinatorics Seminar. January 2009.
5. Université Pierre et Marie Curie Séminaire Combinatoire Algébrique et Géométrique (Paris 6) October 2008.
4. Centro de Estruturas Lineares e Combinatórias (Lisbon, PT) October 2008.
3. AMS Special Session on Combinatorial Representation Theory (Vancouver, CA). October 2008.
2. University of Kansas Combinatorics Seminar. September 2008.
1. University of Minnesota Combinatorics Seminar. April 2008.

**Teaching:**

9. (2012) Instructor for Math 16B at UC Davis. Second quarter calculus for students in the liberal arts.
8. (2011) Instructor for Math 12 at UC Davis. Precalculus.
7. (2011) Instructor for Math 67 at UC Davis. This is course in linear algebra designed so that students start to see higher level mathematics.
6. (2010) Instructor for Math 290 at UC Davis. This is a course for graduate students introducing them to some of the theory of matroids. This course has about 12 graduate students, one professor, one postdoc and two undergraduates.
5. (2010) Instructor for Math 145 at UC Davis. This is an introductory course on combinatorics. The course had about 50 students.
4. (2009) Instructor for Math 16C at UC Davis. This is the third quarter of Calculus I. This course had about 200 students.
3. (2008) Teaching Assistant for Math 3283W at UMn. This is a writing intensive course which introduces undergraduates to higher level mathematics.
2. (2004 – 2007) Teaching Assistant at UMn for Calculus I and II (calculus of a single variable).
1. (2003 – 2009) Grading at UMn for advanced undergraduate courses in enumerative combinatorics, graph theory, algebra and real analysis.

**Editorial duties:**

- Editor for a special issue of *Annals of Combinatorics*, “In celebration of ten years of BAD Math Day”.
- Referee for *J. Algebraic Combinatorics*, *Trans. of the AMS*, *J. Combinatorics Theory, Series A*, *Acta Mathematica Sinica*, *Discrete Applied Mathematics*.

**Conferences Organized:**

- Principal organizer of the *23rd Bay Area Discrete Math Day*, a biyearly one-day conference. This had about 70 attendees and a budget of \$3000.

**Service:**

10. (2012) Organizer of UC Davis Discrete Math seminar.
9. (2011) One-day outreach to northern California high school.
8. (2010–2012) Organizing committee for five Bay Area Discrete (BAD) Math Days.
7. (2011) Organizer of UC Davis Discrete Math seminar.
6. (2010–2011) Organized a VIGRE funded Research Focus Group on matroids and their applications. This consists of faculty, postdocs, graduate students and undergraduates collaborating in year-long projects supported by a seminar series, mini-courses and discussion groups based on a particular topic.
5. (2010–2011) Mentored UCLeads student in an effort to support increased participation of underrepresented groups in math.
4. (2010) Mentored four undergraduate students in summer research.
3. (2010) Spoke at the UC Davis Math Circle, a talk aimed at grade school students.
2. (2007–2008) Organizer of the UMn Student Combinatorics Seminar.
1. (2006–2007) Council of Graduate Students Representative for the UMn Mathematics Department.