

Curriculum Vitae

FU LIU

Office Address: 3220 Mathematical Science Building
Department of Mathematics
University of California, Davis, CA 95616
(530) 754-9381 (office), (530) 753-2376 (home)
fuliu@math.ucdavis.edu, <http://www.math.ucdavis.edu/~fuliu>
Date of Birth: Oct. 10th, 1978, Shanghai, P. R. China
Citizenship: P. R. China

Education/Employment:

2007 – Assistant Professor, University of California, Davis.
2007 Spring Krener Assistant Professor, University of California, Davis.
2006 Fall Postdoc Fellow, Member of the program *Computational Applications of Algebraic Topology*.
2002 – 2006 Ph.D. in Mathematics, Massachusetts Institute of Technology.
1999 – 2002 B.S. in Mathematics, California Institute of Technology.
1999 – 2002 B.S. in Engineering and Applied Science, concentrated in Computer Science, California Institute of Technology.

Scientific/Academic Honors:

2006 Clay Mathematics Institute Liftoff Fellowship
2006 Charles W. and Jennifer C. Johnson Prize, MIT
2002 Yao T. Li Fellowship, MIT
2002 Scott Russell Johnson Undergraduate Prize, Caltech
2001 Superior Performance on the 62nd William Lowell Putnam Mathematical Competition
2001 Herbert J. Ryser Scholarship, Caltech
2001 Summer Undergraduate Research Fellowship, Caltech
1997 – 1999 Yuxi Scholarship, Peking University
1996 Bronze medal in the 37th International Mathematical Olympiad

Research Interests:

Enumerative Combinatorics and algebraic combinatorics.

Thesis Title:

Contributions to the Theory of Ehrhart polynomials

Published or Accepted papers:

available at <http://www.math.ucdavis.edu/~fuliu>

1. (with Brian Osserman) *Mochizuki's indigenous bundles and Ehrhart polynomials*, Journal of Algebraic Combinatorics **23** (2006), no. 2, 125–136.
2. *Ehrhart polynomials of cyclic polytopes*, Journal of Combinatorial Theory Ser. A **111** (2005), no. 1, 111–127. [arXiv:math.CO/0409337](https://arxiv.org/abs/math.CO/0409337).
3. (with Rosena R. X. Du) *(k, m)-Catalan numbers and hook length polynomials for plane trees*, European Journal of Combinatorics **28** (2007), no. 4, 1312–1321. [arXiv:math.CO/0501147](https://arxiv.org/abs/math.CO/0501147).
4. *Hook length polynomials for plane forests of a certain type*, accepted by Annals of Combinatorics. [arXiv:math.CO/0511055](https://arxiv.org/abs/math.CO/0511055).
5. *Ehrhart polynomials of lattice-face polytopes*, Transactions of the AMS **360** (2008), no. 6, 3041–3069. [arXiv:math.CO/0512616](https://arxiv.org/abs/math.CO/0512616).

6. (with Brian Osserman) *The irreducibility of certain pure-cycle Hurwitz spaces*, American Journal of Mathematics **130** (2008), no. 6, 1687–1708. arXiv:math.AG/0609118.
7. (with Jesus A. De Loera and Ruriko Yoshida) *Formulas for the volumes of the polytope of doubly-stochastic matrices and its faces*, accepted by Journal of Algebraic Combinatorics. arXiv:math.CO/0701866.
8. *A note on lattice-face polytopes and their Ehrhart polynomials*, accepted by Proceedings of the AMS. arXiv:0810.4655.

Preprints:available at <http://www.math.ucdavis.edu/~fuliu>

1. *Combinatorial bases for multilinear parts of free algebras with two compatible brackets*. arXiv:0808.3439.
2. *Moduli of crude limit linear series*. arXiv:0902.4289.

Invited Talks:

- 2008 Dec. *Combinatorics Seminar*, East China Normal University, Shanghai, P.R.China.
 Dec. *Combinatorics and Discrete Dynamical Systems*, SMS-AMS meeting, Fudan University, Shanghai, P.R. China.
- 2007 Apr. *Bay Area Discrete Math Day*, San Francisco State University.
 Apr. *Colloquium*, University of California, Davis.
 Mar. *Algebra-Geometry-Combinatorics Seminar*, San Francisco State University.
- 2006 Nov. *Special Session on Algebraic Combinatorics*, AMS meeting, University of Arkansas, Fayetteville.
 Oct. *Topological Combinatorics Seminar*, MSRI.
 Sep. *Postdoc Seminar*, MSRI.
 Jun. *Formal Power Series and Algebraic Combinatorics*, University of California, San Diego.
 Apr. *Special Session on Enumerative Aspects of Polytopes*, AMS meeting, San Francisco State University.
 Jan. *Discrete Mathematics & Representation Theory Seminar*, University of California, Davis.
- 2005 Jun. *Formal Power Series and Algebraic Combinatorics*, University of Messina, Italy.
 Jun. *P-doc Seminar*, Institut Mittag-Leffler, Sweden.
 May *Institute Seminar*, Institut Mittag-Leffler, Sweden.
 Apr. *Algebra-Geometry-Combinatorics Seminar*, San Francisco State University.
 Feb. *Combinatorics seminar*, University of California, Berkeley.
- 2004 Jun. *Kyoto University/RIMS joint Number Theory Seminar*, Kyoto, Japan.
 May *Combinatorics Seminar*, Massachusetts Institute of Technology.

Professional Activities:

- Journals refereed:

Annals of Combinatorics	Ars Combinatoria
Bulletin of ICA	Discrete Mathematics
Linear Algebra and Its Applications	SIAM Journal on Discrete Mathematics

Teaching Activities:

- 2008 Fall **Intro to Abstract Math** at the University of California, Davis. Responsible for the entire course.
- 2008 Spring **Short Calculus B, Section 002** at the University of California, Davis. Responsible for the entire course.

- 2007 Fall **Math and Computers** at the University of California, Davis. Responsible for the entire course.
- 2007 Spring **Calculus III, Sections C01-C03** at the University of California, Davis. Responsible for the entire course.
- 2007 Spring **Calculus: Vector Analysis, Sections A01-A02** at the University of California, Davis. Responsible for the entire course.
- 2006 Spring **Teaching assistant, linear algebra** at MIT.
- 2005 Jan. **Teaching assistant, calculus** at MIT.
- 2004 Fall **Teaching assistant, linear algebra** at MIT.

Professional Membership:

- 2002 – American Mathematical Society.
- 2001 – Tau Beta Pi.