

# Ji Li

Department of Mathematics, The University of Arizona, 617 N. Santa Rita Ave., Tucson, AZ 85721-0089, USA

Cell: (520) 222-2165 Fax: (520) 621-8322 [email: jli@math.arizona.edu](mailto:jli@math.arizona.edu)

## CURRENT POSITION

**Postdoc** 2007-  
**[Arizona Teacher Initiative](#)**, Institute of Mathematics and Education, The University of Arizona, AZ, USA

## EDUCATION

**Ph.D. in Mathematics, Brandeis University, MA, USA** 2007  
*Dissertation: Counting point-determining graphs and prime graphs.*  
Thesis advisor: Professor Ira M. Gessel

**B. S. in Mathematics, Nankai University, Tianjin, China** 1994

## TEACHING AT THE UNIVERSITY OF ARIZONA

(Math 124) **[Calculus I](#)** 2007  
(Math 129) **[Calculus II](#)** 2008  
(Math 215) **[Introduction to linear algebra](#)** 2009  
(Math 223) **[Vector calculus](#)** 2009  
(Math 447/547) **[Combinatorial mathematics for undergraduate and graduate students](#)** 2009  
(Math 505c) **[Algebra for middle school teachers](#)** 2008, 2009  
(Math 505e) **Number senses for middle school teachers** 2009

## TEACHING AT BRANDEIS UNIVERSITY

(Math 5a) **Precalculus mathematics** 2003  
(Math 8a) **Introduction to probability and statistics** 2005  
(Math 10a) **Techniques of calculus (a)** 2004, 2005  
(Math 10b) **Techniques of calculus (b)** 2004

## SERVICE TO THE PROFESSION

**Facilitator of [Tucson Teachers' Circle](#)**, Institute of Mathematics and Education, The University of Arizona. 2008-  
**Organizer of Mathematics Instruction Colloquium**, The University of Arizona. 2008-  
**Mentor for Arizona Teacher Initiative**, The University of Arizona. 2007-  
**Teaching Coach in the Extended Apprenticeship Program**, Brandeis University. 2004-2006  
**Tutoring Mentor**, Department of Mathematics, Brandeis University. 2004-2007  
**Contributor** to the Solution Manual of *Calculus: Early Transcendental Functions* by Smith and Minton, 3rd edition. 2006  
**Graduate Representative**, Department of Mathematics, Brandeis University. 2003-2004  
**Tutor for the TYP Program**, Transitional Year Program, Brandeis University. 2005-2007

## RESEARCH AREA

Enumerative combinatorics and algebraic combinatorics. More specifically, I study the combinatorial theory of species which involves P'olya's enumeration theory and symmetric functions for enumeration of graphs.

**PUBLICATIONS**

- Prime graphs and exponential composition of species**, J. Li *J. Combin. Theory Ser. A*, 115(2008): 1374-1401. **2008**
- Enumeration of point-determining graphs**, I.M..Gessel and J.Li, *in preparation*.

**REFERRALS****Professor Ira M Gessel***Ph.D. dissertation advisor*

Department of Mathematics, Brandeis University, MS 050, 415 South Street, Waltham, MA 0245409110, USA  
 Phone: (781) 736-3060 Fax: (781) 736-3085 [email: gessel@brandeis.edu](mailto:gessel@brandeis.edu)

**Professor William G McCallum***Head of Department of Mathematics..*

Department of Mathematics, The University of Arizona, 617 N. Santa Rita Ave., Tucson, AZ 85721-0089, USA  
 Phone: (520) 621-6697 Fax: (520) 621-8322 [email: wmc@math.arizona.edu](mailto:wmc@math.arizona.edu)

**Professor Daniel Madden***P.I. of Arizona Teacher Initiative.*

Department of Mathematics, The University of Arizona, 617 N. Santa Rita Ave., Tucson, AZ 85721-0089, USA  
 Phone: (520) 621-4665 Fax: (520) 621-8322 [email: madden@math.arizona.edu](mailto:madden@math.arizona.edu)

**Professor Theodore W Laetsch***(Former) Supervisor of teaching postdocs*

Department of Mathematics, The University of Arizona, 617 N. Santa Rita Ave., Tucson, AZ 85721-0089, USA  
 Phone: (520) 621-6860 Fax: (520) 621-8322 [email: laetsch@math.arizona.edu](mailto:laetsch@math.arizona.edu)

**SELECTED MATHEMATICS TALKS**

- Counting point-determining graphs using Joyal's theory of species**, *Joint Mathematics Meetings*, New Orleans. **2007**
- Arithmetic product of species and Cartesian product of graphs**, *MIT Combinatorics Semina*, MIT. **2007**
- A bijection for counting bi-point-determining graphs**, *Combinatorics Seminar*, Brandeis University. **2007**
- Enumeration with species theory**, *CombinaTexas*, University of Texas at El Paso. **2008**
- Fibonacci composition**, *CombinaTexas*, The University of Houston. **2009**

**SELECTED MATHEMATICS EDUCATION TALKS**

- Not only about mathematics tutoring**, *Mathematics Instruction Colloquium*, The University of Arizona. **2007**
- Smith college diploma problem**, *University Teaching Assistant Seminar*, The University of Arizona. **2008**
- Ropin' in the mathematics**, [Tucson Teachers' Circle](#), The University of Arizona. **2009**
- An algebra course for middle school teachers**, *Joint Mathematics Meetings*, San Francisco. **2010**

**CONFERENCES ATTENDED**

- Retrospective in Combinatorics: Honoring Richard Stanley's 60th Birthday, MIT **2004**
- Joint Mathematics Meetings, New Orleans. **2007**
- CombinaTexas, University of Texas at El Paso. **2008**
- Joint Mathematics Meetings, Washington DC. **2009**
- CombinaTexas, The University of Houston. **2009**
- Joint Mathematics Meetings, San Francisco. **2010**

**SKILLS**

Computer: Mac, Windows, LaTeX, Maple, Matlab, Xfig, iWork, Microsoft Office.  
 Language: Native speaker in Chinese. Fluent in English. Basic knowledge of French.