

**Professional Information**

Department of Mathematics  
Swarthmore College  
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**Personal Information**

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**Education:**

Northwestern University  
2007 Ph.D in Mathematics  
Dissertation Title: Results on Polynomial Ergodic Averages  
Advisor: Bryna Kra

Pennsylvania State University  
2004 MA in Mathematics  
Thesis Title: Applications of Ergodic Theory to Geometric Ramsey Theory  
Advisor: Bryna Kra

University of the Pacific  
2002 BS in Mathematics and BM in Music Education

**Teaching Experience:**

2008- current Visiting Assistant Professor at Swarthmore College  
2007-2008 Lecturer at Temple University  
2007 Instructor at Northwestern University  
2004-2006 Teaching Assistant at Northwestern University  
2003-2004 Instructor at Pennsylvania State University  
2000-2001 Teaching Assistant at University of the Pacific

**Courses Taught:**

College Math, Integral Calculus, Multivariate Calculus, Linear Algebra, Ordinary and Partial Differential Equations, Game Theory, and p-adic Analysis.

**Publications:**

*Convergence of Polynomial Ergodic Averages of Several Variables for some Commuting Transformations* (submitted)

*Powers of Sequences and Convergence of Ergodic Means*, Joint work with Nikos Frantzikinakis, Emmanuel Lesigne, and Mate Wierdl (submitted)

**Awards, Fellowships, and Honors:**

2008	MSRI Research Member; Ergodic Theory and Additive Combinatorics
2006-2007	Two Quarters Fellowship Support at Northwestern University
2006	Northwestern University Travel Grant
2003-2004	VIGRE Fellowship, Pennsylvania State University
2003	Summer Fellowship Support Pennsylvania State
2002-2003	Eberly College of Science Fellowship, Pennsylvania State University
2002	Magna Cum Laude Graduate, University of the Pacific
2002	Univ. of the Pacific's Outstanding Graduating Senior in Mathematics
2002	Phi Kappa Phi Honor Society
2001	Mathematics Advanced Study Semesters at Pennsylvania State
2001	Summer REU Program at Pennsylvania State University

**Talks and Presentations:**

- Relating Dynamical Systems to Arithmetic Progressions, Math Department Colloquium, Fort Lewis College, Oct 16, 2008
- Relating Dynamical Systems to Arithmetic Progressions, Math Department Colloquium, Swarthmore College, April 7, 2008
- Recurrence and Convergence Results in Ergodic Theory, Discrete Math/Combinatorics Seminar, Temple University Nov 6 and Nov 27, 2007
- Convergence of some commuting polynomial averages, Workshop on Dynamical Systems, University of Maryland March 19, 2007
- Frequency of the Leading Digit of  $2n$ , Northwestern University's Elementary Math Challenges Seminar Nov 3, 2006
- Convergence of Polynomial Ergodic Averages of Several Variables for some Ergodic Averages, AMS Central Section, Cincinnati, OH Oct 22, 2006
- Polynomial extensions of Szemerdis and Van der Waerdens Theorems, UCLA Summer School in Analysis and Ergodic Theory Sept 18-22, 2006
- Applications of Ergodic Theory in the field of Combinatorics, Northwestern University's Graduate Student Seminar Feb 7, 2005

**Department Service and Other Activities:**

2008-current	Sigma Xi Honor Society Faculty Liaison
2008-current	Coach for Swarthmore College Putnam Team and Organizer of Swarthmore College "Klein Bottle" Competition
2008- current	Member of Swarthmore College Wind Ensemble
2007-2008	Principal Clarinet in Philadelphia Doctors Orchestra
2006-2007	Member of Klein Four mathematics a cappella group
2005-2007	Coach for Northwestern University Putnam Team and lead organizer for 2nd annual Northwestern/Wisconsin Traveling Math competition
2005	Participant in Northwestern University Dance Marathon
2005	Participant in the Chicago Marathon

**Conference Attendance:**

- 2008 Introduction to Ergodic Theory and Additive Combinatorics at MSRI  
 2008 Broader Connection: Ergodic Theory and Additive Combinatorics at MSRI  
 2007 Semi-Annual Workshop in Dynamical Systems at University of Maryland  
 2006 AMS Fall Central Section Meeting at Cincinnati  
 2006 Summer School in Analysis and Ergodic Theory at UCLA  
 2006 Conference on Harmonic Analysis and Ergodic Theory at Depaul University  
 2005 Northwestern Dynamics Symposium at University of Victoria  
 2004 Conference on Harmonic Analysis, Ergodic Theory and Probability at  
 Stanford University  
 2004 Multi-thematic meeting in Ergodic Theory at CIRM in Luminy, France  
 2004 Semi-Annual Workshop in Dynamical Systems at the Penn State University  
 and University of Maryland

**References:**

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 Temple University  
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