

# Shanshan Ding

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## CONTACT INFORMATION

Department of Mathematics  
University of Pennsylvania  
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## PERSONAL

Citizenship: USA

## RESEARCH INTERESTS

Discrete probability, stochastic processes, representation theory, analytic and computational number theory

## EDUCATION

**University of Pennsylvania** (2008-present), Philadelphia, PA, USA

Candidate for Ph.D. in Mathematics

- Advisor: Robin Pemantle
- Passed oral qualifying examination in April 2010. Topics: probability (major), algebraic number theory (minor)

**Columbia University** (2004-2008), New York, NY, USA

B.A. with honors in Mathematics, B.A. in Economics, *cum laude*, May 2008

- Senior thesis: *Fourier Analysis in Number Theory*. Advisor: Patrick Gallagher

## HONORS AND AWARDS

Benjamin Franklin Fellowship, University of Pennsylvania, 2008-present

Presidential Fellowship, University of Pennsylvania, Summer 2009

## PUBLICATIONS

*Smallest irreducible of the form  $x^2 - dy^2$* , Int. J. Number Theory, 5 (2009), pp 449-456

## TALKS

“Fourier-analytic Proof of Szemerédi’s Theorem” (in two parts), Additive Combinatorics Seminar, University of Pennsylvania, March 2011

“Number Field Sieve Factorization”, Prime Numbers Seminar, University of Pennsylvania, November 2010

“Markov Chains in Baseball”, Graduate Student Combinatorics Seminar, University of Pennsylvania, November 2010

“Probabilistic Number Theory”, Graduate Student Combinatorics Seminar, University of Pennsylvania, February 2010

“Primes of the form  $x^2 + ny^2$ ”, Undergraduate Mathematics Society, Columbia University, April 2008

“Splitting primes and irreducibles of the form  $x^2 - dy^2$ ”, REU presentation, University of Wisconsin-Madison, July 2007

## CONFERENCES ATTENDED

10th Northeast Probability Seminar, New York University, November 2011

7th Cornell Probability Summer School, Cornell University, July 2011

Columbia-Princeton Probability Day, Princeton University, April 2011

9th Northeast Probability Seminar, CUNY Graduate Center, November 2010

4th Graduate Student Probability Conference, Duke University, April-May 2010

TEACHING  
EXPERIENCE

**University of Pennsylvania**

Instructor, Math 240: Calculus III, Summer 2011

Teaching assistant, Math 203: Proving Things - Algebra, Spring 2011

Grader, Math 500: Geometry and Topology I, Fall 2010

Teaching assistant, Math 240: Calculus III, Spring 2010

Teaching assistant, Math 114: Calculus II, Fall 2009

Mentor, Undergraduate Mathematics Seminar, Fall 2009 and Spring 2010

Extensive private tutoring

**Other**

Counselor, Program in Mathematics for Young Scientists, Boston University, Summer 2008

Grader, Math E1210: ODE, Columbia University, Fall 2007 and Spring 2008

SERVICE

Master TA, Departmental TA Training Program, University of Pennsylvania, 2011-present

Organizer, Additive Combinatorics Seminar, University of Pennsylvania, Spring 2011

Organizer, Undergraduate Mathematics Seminar, University of Pennsylvania, 2010-2011

Department representative to the graduate student government of the School of Arts and Sciences, University of Pennsylvania, 2009-2011

MEMBERSHIPS

American Mathematical Society, Association for Women in Mathematics

COMPUTER SKILLS

Working knowledge of C++, Java, Maple, Mathematica, Stata,  $\text{\LaTeX}$ , and HTML

LANGUAGES

Fluent in English and Chinese, conversant in French and German