

Eleanor S. A. Farrington

CONTACT INFORMATION

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RESEARCH INTERESTS

Algebraic geometry, algebraic number theory, theta functions.

EDUCATION

Boston University, Boston, Massachusetts USA

Doctoral Student, Mathematics, August 2003 (expected graduation date: May 2010)
• Advisor: Emma Previato

Smith College, Northampton, Massachusetts USA

B.A., Mathematics, May 2003
• Magna cum laude
• Phi Beta Kappa

HONORS AND AWARDS

Outstanding Teaching Fellow Award, 2007-2008.

Ann Kirsten Pokora Prize for senior students in Mathematics, Smith College 2003.

ACADEMIC AND PROFESSIONAL EXPERIENCE

Boston University, Boston, Massachusetts USA

Graduate Student
Includes research, Ph.D. and Masters level coursework.

August 2003 - Present

Instructor: MA142: Introduction to Linear Algebra (Summer 2009) and MA124: Calculus II (Summer 2005)

Teaching Assistant: for MA 113: Basic Statistics (Fall 2003), MA 115: Statistics I (Spring 2006), MA 120: Applied Mathematics for Social and Management Sciences (Fall 2004), MA121: Calculus I for Life and Social Sciences (Fall 2006, Spring 2004), MA 123: Calculus I (Spring 2005), MA124: Calculus II (Spring 2008, Fall 2007, Fall 2005), MA225: Calculus III (Fall 2009, Spring 2009, Fall 2008, Spring 2007), and MA411: Advanced Calculus (Fall 2007). Responsibilities included teaching discussion sections, holding office hours, tutoring room hours, writing weekly quizzes and grading exams.

Mathematics Research Student

September-December 2006

Worked under the guidance of Professor Emma Previato.

- Began work researching a genus 3 arithmetic-geometric mean for Klein's Quartic Curve.
- Supported by NSA-MDA904-03-1-0119 (PI Emma Previato).

Counselor for PROMYS for Teachers Program

Summer 2006 and Summer 2007

Grader for MA 293: Discrete Mathematics

September 2003 - December 2003

Smith College, Northampton, Massachusetts USA

Mathematics Research Student

Summer 2002

Worked under the guidance of Professor James Henle.

- Developed examples for the multivariable calculus section of "Calculus: The Language of Change".

Peer Tutor and grader

September 2002-May 2003

Mathematics Research Student

May-July 2001, January-May 2003

Worked under the guidance of Professor Ileana Streinu.

- Programmed in Mathematica for animating the convexification of polygons.

Mathematics Research Student

September 1999-May 2001, Summer 2002

Worked under the guidance of Professors Christophe Gole and Pau Atela.

- Worked on the Smith Phylloaxis website (www.math.smith.edu/phylo/), developing applets and working extensively with digital images of plants, including operation of a scanning electron microscope to view primordial magnolia buds. Experimented with Mathematica to find periodic orbits.

PAPERS

“A Complete Arithmetic-Geometric Mean for E/\mathbb{C} ,” submitted to Archiv der Mathematik.

“Higher Weierstrass Points of Klein’s Quartic,” submitted to Algebra Colloquium.

SEMINARS AND
CONFERENCE
PRESENTATIONS

Five College Number Theory Seminar, *A Complete Arithmetic-Geometric Mean for E/\mathbb{C}* , November 2009.

Boston University Science Day, *A generalized Arithmetic-Geometric Mean for Elliptic Curves*, March 2009.

Clay Mathematics Institute Workshop: Automorphic Forms in Moduli Problems of Schottky and Brill-Noether Type, *On Automorphisms and the Higher-Order Weierstrass points of Klein’s Quartic Curve*, March 2008, Cambridge, MA.

Boston University Science Day, *On Automorphisms and the Higher-Order Weierstrass points of Klein’s Quartic Curve*, March 2008.

SMath: A Conference of Smith mathematicians, *Theta Functions*, September 2007, Northampton, MA.

Boston University Geometry Lunch Seminar, *Triple Covers in Algebraic Geometry*, March 2007.

Boston University Number Theory Student Seminar, *Eisenstein Series and Theta Functions as Modular Forms*, Fall 2005.

Boston University Number Theory Student Seminar, *The Problem with Small Numbers*, Fall 2003.

CONFERENCES AND
WORKSHOPS
ATTENDED

Women in Mathematics in New England, September 2008, Northampton, MA. Session Chair.

MSRI Summer Graduate Workshop: A Window into Zeta and Modular Physics, June 2008, Berkeley, CA. NSF supported.

Developments in Algebraic Geometry: Symposium to Honor David Mumford on the Occasion of his 70th Birthday, June 2007, Providence, RI. NSF supported.

OUTREACH

Presenter for SET (Science, Engineering and Technology) in the City program for high school girls, June 2009.

Boston University Graduate Women in Science and Engineering

- Organizing Committee 2008-2009
- Treasurer/Information Officer 2009-2010
- Organizer of Dissertation Writers’ Support Group 2009-2010