### Patrick Milano

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#### Interests

Algebraic geometry, algebraic number theory.

### **EDUCATION**

In progress	Ph.D., Mathematics, State University of New York at Binghamton
May 2013	M.A., Mathematics, State University of New York at Binghamton
May 2011	B.S., Mathematics, Mansfield University of Pennsylvania

#### Selected Courses Taken

Algebraic Geometry
Riemannian Geometry
Homological Algebra
Linear Representations of Finite Groups
Finite p-Groups
Characteristic Classes
Advanced Topics in Group Theory
Algebraic Number Theory

#### Selected Books Read

M. F. Atiyah and I. G. MacDonald, *Introduction to Commutative Algebra* J. W. S. Cassels and A. Frölich, *Algebraic Number Theory* (in progress)

Robin Hartshorne, Algebraic Geometry (in progress)

 $\label{eq:Neal-Koblitz} \mbox{Neal Koblitz}, \ p\mbox{-}adic \ Numbers, \ p\mbox{-}adic \ Analysis, \ and \ Zeta\mbox{-}Functions$ 

Serge Lang, Introduction to Arakelov Theory (in progress)

Jean-Pierre Serre, A Course in Arithmetic

### Honors

Spring 2011	Completed the Honors Program
Spring 2011	One semester on the President's List
Spring 2010	Award for Academic Excellence in Mathematics and Computer Science
Spring 2009	Award for Academic Excellence in Mathematics and Computer Science
Spring 2008	Award for Academic Excellence in Mathematics and Computer Science
Fall 2007-Fall 2010	Seven semesters on the Dean's List

### PRESENTATIONS

April 2015	Convolution structures and ghost-spaces (part 2 of the admission to candidacy exam),
	Arithmetic Seminar, Binghamton University
April 2015	Effectivity of Arakelov divisors (part 1 of the admission to candidacy exam), Arithmetic Seminar, Binghamton University
February 2015	Factorization in rings of integers of quadratic fields, Math Graduate Student Seminar,
	Binghamton University
January 2015	Introduction to elliptic curves, Mathematics, Computer Science and Statistics De-
	partment Seminar, SUNY Oneonta
November 2014	Pythagorean triples, Undergraduate Math Club, Binghamton University
October 2014	Elliptic curves and Mordell's theorem, Arithmetic Seminar, Binghamton University
October 2014	Elliptic curves and Mordell's theorem, Math Graduate Student Seminar, Binghamton
	University
February 2014	Polynomial maps over finite fields and residual finiteness of HNN extensions, Math
	Graduate Student Seminar, Binghamton University
September 2012	Transversality and related topics, Toeholds in Topology Seminar, Binghamton Uni-
	versity
March 2012	Sheafification, Toeholds in Topology Seminar, Binghamton University

### TEACHING EXPERIENCE

### **Teaching Assistant/Instructor**, State University of New York at Binghamton

Spring 2016	Linear Algebra (expected)
Fall 2015	Calculus I
Summer 2015	Linear Algebra
Spring 2015	Calculus II
Fall 2014	Calculus I
Summer 2014	Calculus I
Spring 2014	Calculus I (co-instructor)
Fall 2013	Calculus I
Summer 2013	Elementary Statistics for Biologists
Spring 2013	Elementary Statistics for Biologists (head teaching assistant)
Fall 2012	Calculus I
Spring 2012	Elementary Statistics for Biologists (teaching assistant)
Fall 2011	Mathematics in Action (teaching assistant)

## Conferences Attended

Fall 2015	Binghamton University Graduate Conference in Algebra and Topology
Spring 2015	Fifth Annual Upstate New York Number Theory Conference
Spring 2015	Arizona Winter School 2015: Arithmetic and Higher-Dimensional Varieties
Fall 2014	Binghamton University Graduate Conference in Algebra and Topology
Spring 2014	Fourth Annual Upstate New York Number Theory Conference
Fall 2013	Binghamton University Graduate Conference in Algebra and Topology
Spring 2013	Third Annual Upstate New York Number Theory Conference
Fall 2012	Binghamton University Graduate Conference in Algebra and Topology
Fall 2010	Binghamton University Graduate Conference in Algebra and Topology

# SERVICE AND OUTREACH ACTIVITIES

FALL 2014 FALL 2014-PRESENT SPRING 2014-PRESENT	Graduate Student Representative on the Graduate Council Graduate Student Organization Senator Co-organizer of the Binghamton University Math Graduate Student Seminar
Fall 2013-Spring 2014	Treasurer for the Math Graduate Student Organization
FALL 2012-FALL 2015	Co-organizer of the Binghamton University Graduate Conference in Algebra and Topology (BUGCAT)
FALL 2009-FALL 2010	Co-organizer of the Annual Mansfield University Mathematics Competition for High School Students