

Marisa J Hughes

Curriculum Vitae

Contact Information

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Education

Cornell University, Ph.D. Mathematics (<i>expected</i>)	<i>Summer 2012</i>
Cornell University, M.S. Mathematics	<i>May 2009</i>
Binghamton University, B.S. Mathematics	<i>May 2005</i>

Awards

Center for Teaching Excellence Graduate Teaching Assistant Fellow	<i>2011-2012</i>
Cornell Center for Teaching Excellence Workshop Certificates:	
• Enhancing Teaching with Technology	<i>Spring 2011</i>
• Creating an Engaging Classroom	<i>Spring 2011</i>
Helen P. Beard Award for Excellence in Undergraduate Mathematics	<i>2004</i>

Research Interests

Combinatorics, Topology, Matroid Theory

Undergraduate Research Experience

REU at SUNY Potsdam in Knot Theory	<i>Summer 2003</i>
REU at The University of Tennessee at Knoxville in Topologies of Knot Complements	<i>Summer 2004</i>

Research Talks

Tori Acting on Spheres

Binghamton University Graduate Conference in Algebra and Topology Nov. 2011

Quotients of Spheres and the Tutte Polynomial

Cornell University Discrete Geometry and Combinatorics Seminar Oct. 2011

Binghamton University Combinatorics Seminar Oct. 2011

Finding Homologies of Sphere Quotients

Binghamton University Graduate Conference in Algebra and Topology Nov. 2009

Matroids: A Brief Introduction

Mid-Hudson Mathematics Conference for Undergraduates Oct. 2009

Exploring Knot Complements

MAA Seaway Section Meeting at Canisius College Nov. 2004

Teaching Talks

Engaging Approaches to Quantitative Courses

Center for Teaching Excellence Graduate Workshop Series Oct. 2011

What is the Center for Teaching Excellence?

Cornell Mathematics Teaching Seminar April 2011

Teaching Important Calculus Concepts

Cornell Mathematics Teaching Seminar Dec. 2010

What to do in section? Creative Ways to Cover Material

Cornell Mathematics Teaching Seminar Sept. 2007

Expository Talks

Living in a Quotient Space

Enhancing Diversity in Graduate Education (EDGE) Reunion Weekend June 2011

Bard College Math, Computer Science, and Physics Seminar April 2011

Binghamton University Undergraduate Math Club April 2011

Orbifolds Are My Friends

Olivetti Club (Cornell Graduate Student Seminar) December 2010

Matroids, Invariants, and Colorings

Bard College Math, Computer Science, and Physics Seminar April 2010

<i>Binghamton University Undergraduate Math Club</i>	<i>April 2010</i>
Lattices, Shellings, and Matroids- Oh My!	
<i>Olivetti Club (Cornell Graduate Student Seminar)</i>	<i>February 2010</i>
The Tutte Polynomial	
<i>Olivetti Club (Cornell Graduate Student Seminar)</i>	<i>April 2009</i>
Matroids and Binary Spherical Quotients	
<i>Binghamton U. Graduate Conference in Algebra and Topology</i>	<i>November 2008</i>
Matroid Prime: Binary Spherical Quotients	
<i>Olivetti Club (Cornell Graduate Student Seminar)</i>	<i>September 2008</i>
Panelist, Graduate School Panel	
<i>Mid-Hudson Mathematics Conference for Undergraduates</i>	<i>October 2009</i>

Teaching Experience

Instructor:

Each independent lecture has approximately 25 students and follows a common syllabus. Instructors assign their own section scores, and assist in writing exams.

Calculus I (two occasions)

Calculus II (two occasions)

Czar's Assistant:

The Czar's Assistant for a multisectional course runs the course website, manages the undergraduate graders, organizes conflict exams, and assists with other administrative tasks.

Calculus II

Teaching Assistant:

TA's run recitations 1-2 times a week, grade homework, and assist in exam grading.

Calculus II For Engineers

Calculus III for Arts & Sciences

Linear Algebra

Grader:

In addition to grading weekly assignments, graders hold office hours to interact with students

Combinatorics I

Combinatorics II

Classical Geometries

Graduate Algebraic Topology

Departmental Service

Cornell Mathematics Teaching Seminar

Co-Organizer 2010-2011

Cornell Math Prospective Student Weekend

Co-Organizer 2007, 2008

Committee Member 2010, 2011

Olivetti Club (Weekly Graduate Student Seminar)

Co-Organizer Fall 2008

Binghamton University Undergraduate Math Club

President 2004-2005

Mentoring Activities

Enhancing Diversity in Graduate Education (EDGE)

EDGE is a summer program for women who will be entering a graduate math program in the fall. The program includes courses in algebra and analysis, and is designed to reduce the attrition rate among women and minorities in graduate mathematics.

Participant Summer 2005

Graduate Student Mentor Summer 2011

Cornell Center for Teaching Excellence (CTE) Graduate Teaching Assistant Fellow Program

CTE Graduate Fellows help develop the teaching skills of other graduate students across the University. Primary duties include running microteaching sessions, and facilitating evening teaching workshops.

Graduate Teaching Assistant Fellow 2011-2012

Cornell University Math Department Teaching Assistant Training Program

A weekend-long program to orient and advise new graduate students and TA's.

Graduate Student Trainer August 2011

Community Outreach

For more information these outreach programs, please see: <http://www.math.cornell.edu/~mjbelk/outreach.htm>

Cornell Numb3rs Project

Webpage/Activity Developer

Summer 2007

Organizational Assistant

Spring 2007

Center for Talented Youth Workshops

“Playing with Polyhedra” (Workshop Designer)

October 2010

“Tilings!”

October 2009

“Fibonacci Numbers in Nature”

October 2007

4-H Career Exploration Camp

“Hands-on Mathematics”

June 2007-2009

Expanding Your Horizons.

“Breaking the Incan Code”

April 2010

Rural Schools Mathematics Tutoring Program.

On-Site After-School Tutor

2009-2010

References

Dr. Edward Swartz, Cornell University

Dr. Maria Terrell, Cornell University

Dr. Thomas Zasflasky, Binghamton University

Dr. Louis Billera, Cornell University