

Sarah Mayes

CONTACT INFORMATION	Department of Mathematics University of Michigan 530 Church St. Ann Arbor, MI 48109	Office: 4848 East Hall Phone: 734-904-4804 E-mail: mayess@umich.edu www-personal.umich.edu/~mayess/Home.html
CITIZENSHIP	Canada	
EDUCATION	University of Michigan , Ann Arbor, Michigan USA Ph.D. Mathematics, expected May 2013 Thesis advisor: Prof. Karen Smith M.S. Mathematics, April 2011 Queen's University , Kingston, Ontario Canada B.Sc. (Honours) in Mathematics with Distinction, June 2008	
SCHOLARSHIPS AND AWARDS	Allen L. Shields Memorial Fellowship, University of Michigan Rackham One-Term Dissertation Fellowship, University of Michigan NSERC Postgraduate Scholarship D Cameron & John Courtney Scholarship, University of Michigan NSERC Postgraduate Scholarship M NSERC Canada Graduate Scholarship M <i>Declined: could not take award outside of Canada</i> Ontario Graduate Scholarship <i>Declined: could not take award outside of Ontario</i> NSERC Undergraduate Student Research Award Susan Near Prize in Mathematics, Queen's University The Nan Skelding Scholarship, Queen's University Nellie & Ralph Jeffery Award in Mathematics, Queen's University Principal's Scholarship, Queen's University	2013 2012 2010-2012 2009 2008-2010 2008 2008 2007 2006 2006 2005, 2007 2004-2006
RESEARCH FIELDS	Computational commutative algebra and algebraic geometry	
PUBLICATIONS	The Limiting Polytope of the Generic Initial System of a Complete Intersection, arXiv:1202.1317 , <i>Communications in Algebra</i> , to appear.	
PREPRINTS	The Asymptotics of Symbolic Generic Initial Systems of Six Points in \mathbb{P}^2 , <i>submitted</i> , arXiv:1210.8203 . The Symbolic Generic Initial System of Points on an Irreducible Conic, Preprint.	

The Asymptotic Behaviour of Symbolic Generic Initial Systems of Points in General Position, *submitted*, (2012), [arXiv:1210.1622](#).

The Generic Initial Ideals of Powers of a 2-complete Intersection, *submitted*, [arXiv:1206.5750v1](#).

RESEARCH TALKS **Special Session on Commutative Algebra**, AMS Southeastern Section Meeting Spring 2013

Commutative Algebra Seminar, University of Michigan

- *Asymptotic Behaviour of Generic Initial Systems* Fall 2012

Algebraic Geometry Seminar, University of Michigan

- *Asymptotic Behaviour of Generic Initial Systems* Winter 2012

Student Commutative Algebra Seminar, University of Michigan

- *The Eliahou-Kervaire Resolution* Fall 2012
- *Deformations from Gröbner Basis Theory* Fall 2012
- *Linear Resolutions and Componentwise Linear Ideals* Winter 2012
- *Monomial Ideals and Gröbner Bases* Winter 2012
- *An Introduction to Generic Initial Ideals* Fall 2011
- *Generic Initial Ideals, Regularity, and Saturation* Winter 2011

Student Algebraic Geometry Seminar, University of Michigan

- *An Introduction to Asymptotic Multiplier Ideals* Winter 2011

TEACHING
EXPERIENCE

University of Michigan, Ann Arbor, Michigan

Grader, Math 631: Introduction to Algebraic Geometry Fall 2012

- Graded weekly homework assignments

Graduate Student Instructor, Math 385: Math for Elementary School Teachers Fall 2011

- Assisted in teaching this inquiry-based learning course
- Provided detailed feedback on presentations and weekly homework assignments
- Administered oral exams

Graduate Student Instructor, Introductory Calculus Program 2008-2011

- Math 115 Differential Calculus: Fall 2008, Winter/Fall 2009
- Math 116 Integral Calculus: Winter/Fall 2010, Winter 2011
- Primary instructor for classes consisting of approximately 30 students
- Prepared and delivered lessons, wrote quizzes, and maintained section website
- Graded weekly group homework assignments and quizzes

Queen's University, Kingston, Ontario

Course Assistant 2007-2008

- Math 314 Galois Theory: Winter 2008
- Math 121 Introductory Calculus: Fall 2007 to Winter 2008
- Math 281 Introductory Analysis: Winter 2007
- Led tutorials and graded homework assignments
- Worked at the University's Math Help Centre

WORK EXPERIENCE	Service Canada, Government of Canada , Chatham-Kent, Ontario <i>Lead Summer Employment Officer</i>	Summer 2006
	<ul style="list-style-type: none"> Supervised delivery of federal youth employment services in Chatham-Kent Led team of five university students 	
SERVICE ACTIVITIES	Student Commutative Algebra Seminar, University of Michigan <i>Co-organizer (with Luis Núñez-Betancourt)</i>	2012
	Student Team on Alumni Relations, Queen's University <i>Committee Co-chair (2007-2008); Team Member (2006-2007)</i>	2007-2008
	Mathematics and Statistics Department Student Council, Queen's University <i>Council Co-chair (2007-2008); Council Member (2005-2007)</i>	2005-2008
	Canadian Cancer Society, Kingston Regional Cancer Centre <i>Chemo Room Patient Companion (2006-2008); Greeter (2005-2006)</i>	2005-2008
	Food Advisory Committee, Queen's University <i>Student Representative</i>	2006-2008
	Residences Peer Judicial Board, Queen's University <i>Board Member</i>	2004-2006
CONFERENCES ATTENDED	Route 81 Conference (Kingston, Ontario)	Oct. 2012
	MSRI Connections for Women (Berkeley, California)	Aug. 2012
	Canadian Mathematical Society Summer Meeting (Regina, Saskatchewan)	June 2012
	Workshop on Connections Between Algebra and Geometry (Regina, Saskatchewan)	May 2012
	Canadian Mathematical Society Winter Meeting (Toronto, Ontario)	Dec. 2011
	MSRI Summer Graduate Workshop: Commutative Algebra (Berkeley, California)	June 2011
EDUCATION COURSES AND SEMINARS	Department of Education , University of Michigan <ul style="list-style-type: none"> Mathematics Curriculum: Research and Development (EDUC 783) Research in Mathematics Education (EDUC 711) 	Winter 2012 Fall 2008
	Center for Research on Learning and Teaching , University of Michigan <ul style="list-style-type: none"> Graduate Teaching Certificate Training for Multicultural Classroom Facilitation (six sessions) Teaching Undergraduates in the Archives Using Technology to Save Time and Enhance Learning 	Fall 2012 Fall 2011 Winter 2010 Winter 2010