Angela GIBNEY

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Education

2000	Ph.D.	Mathematics	University of Texas, Austin
1993	B.S	Mathematics	University of California, Santa Barbara

Employment

2013 -	Associate Professor	University of Georgia
2009-2013	Assistant Professor	University of Georgia
2004-08	Assistant Professor	University of Pennsylvania
2003-04	Gibbs Assistant Professor	Yale University
2000-03	VIGRE Assistant Professor	University of Michigan

Visiting Research Positions (with funding)

Feb, April 2009	Jumbo Semester in Algebraic Geometry	MSRI, Berkeley

Research Interests

Moduli of Curves and Generalizations;
Vector Bundles on Curves and their Moduli;
Vector Bundles of Conformal Blocks;
Nef and Effective Cycles on Projective Varieties.

Individual Research Grants: Principal Investigator

2016-19   National Science Foundation Grant DMS-1601909
Vector bundles of conformal blocks on $\overline{\mathcal{M}}_{g,n}$

2012-16   National Science Foundation Grant DMS-1201268
Conformal blocks and positive cycles on the moduli space of curves

2005-09   National Science Foundation Grant DMS-0509319
The birational geometry of the moduli spaces of curves

Conference Funding: Principal Investigator

2015   National Science Foundation Grant DMS - 1500652
            Bootcamp for the 2015 Algebraic Geometry Summer Research Institute;

2015   National Security Administration - 141006
            Bootcamp for the 2015 Algebraic Geometry Summer Research Institute;

2011-15   National Science Foundation Grant DMS-1139200
            The Georgia Algebraic Geometry Symposium;

2010   National Science Foundation Grant DMS-1028536
            Compact Moduli and Vector Bundles Conference; $35,164

External Funding: Co-Principal Investigator

2015-18   National Science Foundation Grant DMS-1522813
            The Georgia Algebraic Geometry Symposium;

2014-19   National Science Foundation Grant DMS-1344994
            Algebraic Geometry, Algebra, and Number Theory RTG Grant;

2010-15   National Science Foundation VIGRE Grant DMS-0738586;

Internal Funding

2017   UGA Office of the Vice President for Research Conference Grant,

2017   UGA President's Venture Fund Conference Grant,

2014   UGA Office of the Vice President for Research Conference Grant,

2014   UGA President's Venture Fund Conference Grant,

2012   UGA Office of the Vice President for Research Conference Grant,

2012   UGA President's Venture Fund Conference Grant,

2010   UGA Office of the Vice President for Research Conference Grant,

2010   UGA President's Venture Fund Conference Grant,

Past Service as a Conference Co-Organizer

2015   The graduate student 'Bootcamp' for the Algebraic Geometry Institute
Salt Lake City, Utah, (with I. Coskun, T. DeFernex, and M. Lieblich)

AWM Research Symposium, Special Session in Algebraic Geometry, UM
(with L. Chen)

2014   The Georgia Algebraic Geometry Symposium
(with V. Alexeev, N. Giansiracusa, and D. Krashen)

2013   The Georgia Algebraic Geometry Symposium
(with V. Alexeev, E. Izadi, and D. Krashen)

2012   VIGRE Summer School and Georgia Algebraic Geometry Symposium
(with V. Alexeev and E. Izadi, and D. Krashen)

2010   Mathematical Research Communities Workshop, Snowbird, Utah
(with D. Abramovich, I. Coskun, J. McKernan and T. deFernex)

The Compact Moduli and Vector Bundles Conference at UGA
(with V. Alexeev and E. Izadi)

2009   The Connections for Women Workshop at MSRI
(with D. Maclagan and J. Sidman)

2007   Combinatorial Algebraic Geometry, (AMS meeting, Hoboken, NJ)
(with D. Maclagan)

2002   Curves and their Moduli, (AMS meeting, Ann Arbor, MI)
(with G. Farkas and R. Lazarsfeld)

Current Service as a Conference Co-Organizer

2016   The Moduli Workshop, (Combinatorial Algebraic Geometry), Fields Institute
(with D. Abramovich, I. Coskun, G. Smith, and M. Stillman)

The Georgia Summer Workshop in Algebraic Geometry at UGA
(with A. Deopurkar, J. Kass, and N. Tarasca)

The Georgia Algebraic Geometry Symposium at UGA
(with V. Alexeev, D. Krashen, and D. Lorenzini)

Activities Promoting Elementary and High-School Education

2014, 16   UGA MathCamp, organized 5 days of activities at UGA for high-school students
             A program for high school students that involved coordinating UGA undergrads,
             grad students, postdocs, and faculty. Co-organized with D. Krashen
2010-11   Mentoring and Advice for Talented High-school Students program,
             involving UGA grad students, and Co-organized with D. Krashen
2009-10   UGA Summer Stem Academy, lectures for high-school students
2009   Barrow Elementary School Career Day, presentation
2000-01   King/Chavez/Parks Workshop, activities for 7th graders from inner-city Detroit

Activities Promoting Undergraduate Education (since at UGA)

2014, 16   UGA MathCamp, Co-organized with D. Krashen
2011   UGA Math Club Talk
2010   Organized lunch and talk for students by David Saltman, director of IDA
             topic: Nonacademic Math Jobs in the Defense Industry
2010   UGA Math Club talk
             UGA Math Major Fair Presenter

Activities Promoting Graduate Education

2016   RTG Summer Coordinator for the RTG grant
             Academic Year Coordinator for the RTG grant
2015   'Bootcamp' for the Algebraic Geometry Institute, Salt Lake City, Utah
             (Co-Organizer with I. Coskun, T. DeFernex, and M. Lieblich)
             Graduate Student Mock AMS Conference, UGA
2012   Algebraic Geometry Summer School at UGA (with V. Alexeev and D. Krashen)
2010 - 14   VIGRE Summer Program Coordinator
             Graduate Student Mock AMS Conference, UGA
2010-11   M.A.T.H. Students program,
2010   Organized lunch and talk for students by David Saltman, director IDA
             Topic: Nonacademic Math Jobs in the Defense Industry
2009   Connections for Women, Co-Organizer, with Diane Maclagan, MSRI
2007   Institute for Advanced Study, Women's program, Princeton, NJ
2005   mentor, 'Bootcamp', Summer Institute in Algebraic Geometry
2004   AMS Presentations By Young Researchers Conference,
             MRC Program, ed working group on moduli spaces, Snowbird, Utah
2002   Learning Stacks and Computational Methods through Problem Solving,
             University of Illinois at Urbana Champagne

Service on a Thesis Committee

2015	Xiayan Hu, PhD, University of Georgia
2011-16	Natalie Hobson, PhD, (Advisor), University of Georgia
2011	Noah Giansiracusa, PhD, Brown University
2010-13	Gulden Cinar, Masters Degree, (Advisor), University of Georgia
2010	Paul Larsen, PhD, Humboldt University, Berlin
2008	David Swinarski, PhD, Columbia University
2005	Damiano Testa, PhD, MIT

Service as a Postdoctoral Advisor

2016-19	Anand Deopokur, research co-advisor with V. Alexeev
	Michael Schuster, research advisor
2017-19	Nicola Tarasca, research advisor
2015-16	Julian Rosen, teaching advisor
2013-16	Anna Kazanova, Research Advisor
2012-15	Amber Russell, teaching advisor
2011-13	Han-Bom Moon, Research Advisor
2008-11	David Swinarski, Research Co-Advisor with V. Alexeev

Other Advising (since at UGA)

2015-16	Academic Advisor for undergraduate students
	K. Boe, K. A. Hoyt, E. Quinche, and N. Mendrano
2014-15	Academic Advisor for under-graduate student Noemy Mendrano
2013-14	Preliminary Academic Advisor for graduate student Daniel McKenzie
2012-13	Academic Advisor for undergraduate students
	M. Edwards, E. T. LaPaquette, and A. McMillan
	Teaching mentor to Jacob Hicks
2011-12	Preliminary Advisor for graduate students
	Maren Turbow and Gülden Cinar
	Academic Advisor for undergraduate students
	E. T. LaPaquette, G. Mabon, A. McMillan, T. Purvis
2010-11	Teaching Mentor to graduate students
	Jacob Hicks and Joshua Wood
	Academic advisor for undergraduate students
	Devon Harvey and Brandy Seilre
2009-10	Academic Advisor for undergraduate student Elizabeth Wang

Activities Benefitting Women and Girls in Mathematics

2010-16	Co-Organizer AWM events at UGA
2015	AWM Research Symposium, Algebraic Geometry Special Session,
	(Co-Organizer with Linda Chen), University of Maryland
2009	Connections for Women Conference, MSRI
	(Co-Organizer, with Diane Maclagan)
2007	IAS Women's program, Women in Science Seminar Speaker, Princeton, NJ
2005	EDGE (Enhancing Diversity in Graduate Education), Follow Up Mentor
	Helped with *Algebraic Geometry, Symplectic Geometry and Theoretical Physics:*
	(organized by A. Grassi), University of Pennsylvania
2004-08	Co-Organizer (with A. Grassi) of AWM events at UPenn
2002	Expanding Your Horizons in Science and Engineering, presenter

Departmental service (since at UGA)

2016	Algebra Qualifying Exam Committee
2015-16	Personnel Committee
2014-15	University Council
2014	Graduate Committee
2013	Algebra Prelim Exam Committee
	Graduate Committee
2012	Graduate Committee
2010	Personnel Committee
2011	Algebra Qualifying Exam
	Cantrell Lecture Series
	Personnel Committees

Community Service (since at UGA)

2014-15	Member of the Mathematics Research Communities Advisory Board
2012-15	Served on funding panel for NSF
2009-16	Refereed for various journals

Teaching Experience, Courses taught

Michigan	2000	116	Calculus III
	2001	216	Introduction to Differential Equations
		731	Topics in Algebraic Geometry (The Moduli Space of Curves)
	2002	115	Calculus I
		116	Calculus III
Yale	2003	480b	Introduction to Algebraic Geometry
	2004	115a	Calculus II
Penn	2004	370	Algebra I
	2005	371	Algebra II
		520	Graduate topics course (Moduli of stable maps)
	2006	624	Graduate algebraic geometry I
	2007	103	Introduction to calculus
		312/402	Advanced linear algebra
		625	Graduate algebraic geometry II
	2008	724	Graduate topics course (Introduction to moduli spaces)
UGA	2009	2250	Calculus I for Science and Engineering (2 sections)
		2260	Calculus II for Science and Engineering
		3000	Linear Algebra
		8850	Directed Collaborative Research (VRG)
	2010	4000/6000	Modern Algebra and Geometry I
		8330	Topics in Algebraic Geometry (Toric Varieties)
		7005/9005	Graduate Student Seminar (Mock AMS Conference)
	2011	2260	Calculus II for Science and Engineering (2 sections)
		7005/9005	Graduate Student Seminar (Mock AMS Conference)
		8850	Directed Collaborative Research (VRG, Spring and Fall)
	2012	8000	Graduate Algebra
		8850	Directed Collaborative Research (VRG) (2 semesters)
	2013	2250	Calculus I for Science and Engineering (2 sections)
		8850	Directed Collaborative Research (VRG)
	2014	2260	Calculus II for Science and Engineering (2 sections)
		8850	Directed Collaborative Research (VRG)
		8330	Topics Alg Geometry (Quantum Cohomology)
		9000	Doctoral Research
	2015	2260	Calculus II for Science and Engineering (2 sections)
		8310	Geometry of Schemes
		8850	Directed Collaborative Research (VRG)
		8800	Directed Reading and/or Projects
		9000	Doctoral Research
	2016	2260	Calculus II for Science and Engineering (2 sections)
		8330	Topics Alg Geometry (Conformal Blocks, Spring)
		8800	Directed Reading and/or Projects

Lectures (not at UGA)

2001-05 (15 talks); 2006-10 (12 talks); 2011-15 (30 talks)

Select Talks

2017 GAeL (Geométrie Algébrique en Liberté), Bath University, UK (expected)

2016 Intro Workshop, Comb Alg Geom Program, Fields, CA (2 invited lectures)

American Institute of Mathematics, San Jose, CA

Algebraic Cycles and Moduli, CRM, Université de Montreal, CA

Intro Workshop for the Combinatorial Program at the Fields Institute, CA

2015 University of Maryland Colloquium

The second annual MAAGC workshop, Philadelphia, PA

Developments in Moduli and Geometric Invariant Theory, UNC

2014 Southern California Algebraic Geometry Seminar (SoCalAGS), USC

Algebraic Geometry Seminar, Warwick University, Coventry, England

Moduli and Automorphic Forms, Berlin, Germany

New connections for recent PhDs, University of Washington

2013 Workshop on Moduli Spaces in Algebraic Geometry, Oberwolfach, Germany

Universita Sapienza, Rome, Italy (5 invited lectures)

Algebraic Geometry Northeast Sectional Meeting (AGNES), Yale University

2012 Columbia University, Algebraic Geometry Seminar, New York, NY

2011 Institut Fourier, Université Grenoble I, France

Warwick Mathematics Institute, Coventry, England

Imperial College London MAGIC Seminar, England

Texas Algebraic Geometry Symposium, Rice, Houston, TX

Workshop on Moduli and Birational Geometry, Pohang, Korea

2010 Oberwolfach Moduli Spaces in Algebraic Geometry

Workshop on Moduli and Birational Geometry, Postech University, Korea,

Algebraic Geometry Seminar, Humboldt University, Berlin, Germany

2007 Harvard/MIT Algebraic Geometry Seminar

IAS Women's program, Women in Science Seminar, Princeton, NJ

2005 Presentations by Young Researchers, Joint Summer Research Conference

AMS Summer Institute in Algebraic Geometry graduate student Bootcamp

2004 University of Washington ADVANCE Colloquium

Temple University Mathematics Colloquium

Harvard/MIT Algebraic Geometry Seminar

Princeton University Algebraic Geometry Seminar

2003 Princeton University Algebraic Geometry Seminar

Publications

1. *Scaling of conformal blocks and generalized theta functions over $\overline{\mathcal{M}}_{g,n}$*
   (with P. Belkale and A. Kazanova), Mathematische Zeitschrift, 1-27, 2016;
   http://link.springer.com/article/10.1007/s00209-016-1682-1

2. *Nonvanishing of conformal blocks divisors on $\overline{M}_{0,n}$*
   (with P. Belkale and S. Mukhopadhyay),
   Transformation Groups, Volume 21, Issue 2, 329-353, 2016

3. *Vanishing and identities of conformal blocks divisors on $\overline{M}_{0,n}$*
   (with P. Belkale and S. Mukhopadhyay),
   Algebraic Geometry, Volume 2, Issue 1, 62-90, 2015

4. *Higher level conformal blocks divisors on $\overline{\mathcal{M}}_{0,n}$*
   (with V. Alexeev and D. Swinarski)
   Proc. Edinb. Math. Soc. (2), Volume 57, Number 1, 7–30, 2014

5. *Veronese quotient models of $\overline{M}_{0,n}$ and conformal blocks*
   (with D. Jensen, H-B. Moon, and D. Swinarski)
   Michigan Math. J. Volume 62, Number 4, 721– 751, 2013

6. *sl_n level 1 conformal blocks divisors on $\bar{M}_{0,n}$*
   (with D. Swinarski, J. Stankewicz and M. Arap)
   Int. Math. Res. Not., Number 7, 1634-1680, 2012

7. *Lower and upper bounds for nef cones*
   (with D. Maclagan)
   Int. Math. Res. Not., Number 14, 3224–3255, 2012

8. *The cone of type A, level one conformal blocks divisors*,
   (with N. Giansiracusa)
   Adv. Math. Volume 231, Number 2, 798–814, 2012

9. *On extensions of the Torelli map*
   Geometry and arithmetic, EMS Ser. Congr. Rep., 125–136, 2012

10. *Equations for Chow and Hilbert Quotients*
    (with D. Maclagan),
    Algebra and Number Theory, Volume 4, Number 7, 855–885, 2010

11. *Numerical criteria for a divisor in $\overline{\mathcal{M}}_g$ to be nef*,
    Compos. Math., Volume 145, Number 5, 1227–1248, 2009;

12. *Pointed trees of projective spaces*,
    (with L. Chen and D. Krashen)
    J. Algebraic Geom., Volume 18 , Number 3, 477–509, 2008

13. *Mori cones of moduli spaces of curves of small genus*,
    (with G. Farkas)
    Trans Amer Math Soc, Volume 355, Number 3, 1183–1199, 2003

14. *Towards the ample cone of $\overline{\mathcal{M}}_{g,n}$*,
    (with S. Keel, and I. Morrison)
    J. Amer Math Soc, Volume 15, Number 2, 273–294, 2002

Editorial

15. Proceedings of the 2015 Summer Institute Graduate Student Bootcamp,
    (editor, with I. Coskun, T. de Fernex, and M. Lieblich),

16. Proceedings of the 2010 conference at the University of Georgia, Athens,
    (editor, with V. Alexeev, E. Izadi, E. Looijenga, J. Kollár)
    Contemporary Mathematics, American Math. Soc., Volume: 564, 2011

Preprints

17. *On finite generation of the section ring of the determinant of cohomology line bundle*
    (with P. Belkale), submitted http://arxiv.org/abs/1606.08726

18. *On higher Chern classes of vector bundles of conformal blocks*
    (with S. Mukhopadhyay), http://www.angelagibney.org/

Expository

20. *Conformal blocks divisors and the birational geometry of $\overline{M}_{g,n}$*
    Oberwolfach Reports, Moduli Spaces in Algebraic Geometry, 2013

21. *Vector bundles of conformal blocks on $\overline{\mathcal{M}}_{g,n}$*
    124 pages, with references and index.
    available upon request.

22. *Combinatorial aspects of cones of positive cycles on $\overline{\mathcal{M}}_{g,n}$*
    45 pages, with references and index.
    lecture notes for the Fields Institute Talks
    available at http://bit.ly/2b9PSOU