Angela GIBNEY

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Education

2000	Ph.D. Mathematics University of Texas, Austin
1994	B.S Mathematics University of California, Santa Barbara
1993-94	Mathematics Research Institute, The Netherlands (study abroad)
1992	Budapest Semesters in Mathematics (study abroad)

Employment

2017-	Professor	Rutgers University
2017 -2017	Professor	University of Georgia
2013 – 2017	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 Agency – 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;

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,

Other Honors and Awards

2000   Clay Mathematics Institute, Liftoff Fellow
2000   American Association of University Women, Dissertation Fellowship, offered
2001   Outstanding Doctoral Dissertation Award, University of Texas at Austin
2006   Teaching Award, University of Pennsylvania

Publications and Preprints

- *On factorization of conformal blocks from vertex algebras*
  (with C. Damiolini, and N. Tarasca), in preparation

- *Conformal blocks from vertex algebras and their connections on $\overline{\mathcal{M}}_{g,n}$*
  (with C. Damiolini, and N. Tarasca), submitted
  https://arxiv.org/abs/1901.06981

- *Basepointfree cycles on $\overline{\mathcal{M}}_{0,n}$ from Gromov-Witten theory*
  (with P. Belkale), submitted
  http://arxiv.org/abs/1809.02986

- *On higher Chern classes of vector bundles of conformal blocks*
  (with S. Mukhopadhyay), submitted
  https://arxiv.org/abs/1609.04887

- *On finite generation of the section ring of the determinant of cohomology line bundle*
  (with P. Belkale), Transactions of the AMS, Dec 2018
  https://www.ams.org/journals/tran/0000-000-00/S0002-9947-2018-07564-X/

- *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

- *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
  https://link.springer.com/article/10.1007/s00031-015-9357-2

- *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
  https://algebraicgeometry.nl/Content/6.html

- *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
  https://doi.org/10.1017/S0013091513000941

- *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
  https://projecteuclid.org/euclid.mmj/1387226162

- *Conformal blocks divisors and the birational geometry of $\overline{M}_{g,n}$*
  Oberwolfach Reports, Moduli Spaces in Algebraic Geometry, 2013
  https://www.mfo.de/document/1306b/OWR_2013_06.pdf

- *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
  https://academic.oup.com/imrn/article-abstract/2012/7/1634/757371

- *Lower and upper bounds for nef cones*
  (with D. Maclagan)
  Int. Math. Res. Not., Number 14, 3224–3255, 2012
  https://doi.org/10.1093/imrn/rnr121

- *The cone of type A, level one conformal blocks divisors*,
  (with N. Giansiracusa)
  Adv. Math. Volume 231, Number 2, 798–814, 2012
  https://doi.org/10.1016/j.aim.2012.05.017

- *On extensions of the Torelli map*
  Geometry and arithmetic, EMS Ser. Congr. Rep., Eur. Math. Soc., Zrich, 2012
  https://www.ems-ph.org/qsearch.php

- *Equations for Chow and Hilbert Quotients*
  (with D. Maclagan),
  Algebra and Number Theory, Volume 4, Number 7, 855–885, 2010
  https://msp.org/ant/2010/4-7/p03.xhtml

- *Numerical criteria for a divisor in $\overline{\mathcal{M}}_g$ to be ample*,
  Compos. Math., Volume 145, Number 5, 1227–1248, 2009; https://doi.org/10.1112/S0010437X09004047

- *Pointed trees of projective spaces*,
  (with L. Chen and D. Krashen)
  J. Algebraic Geom., Volume 18 , Number 3, 477–509, 2008
  https://doi.org/10.1090/S1056-3911-08-00494-3

- *Mori cones of moduli spaces of curves of small genus*,
  (with G. Farkas)
  Trans Amer Math Soc, Volume 355, Number 3, 1183–1199, 2003 https://doi.org/10.1090/S0002-9947-02-03165-3

- *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
  https://doi.org/10.1090/S0894-0347-01-00384-8

Publications and Preprints: Editorial

- *Introducing the Early Career Section*
  (associate editor, with editor Erica Flapan)
  Notices of the American Math. Soc., Jan 2018
  https://www.ams.org/journals/notices/201901/rnoti-p28.pdf

- Surveys on Recent Developments in Algebraic Geometry
  (editor, with I. Coskun, T. de Fernex, and M. Lieblich),
  Proc of Symposia in Pure Mathematics, American Math. Soc., Jul 2017
  https://bookstore.ams.org/pspum-95/

- *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
  https://www.ams.org/books/conm/564/

**Invited talks 2001–05 (15 lectures); 2006–10 (12 lectures); 2011–14 (30 lectures);
Select talks since 2015:**

2019 Verlinde Algebras and the Grassmannian, Guangzhou, China, (expected);
      Facets in Algebraic Geometry, Ann Arbor, Michigan, (expected)
      Texas Algebraic Geometry Symposium, February, Austin, Texas

2018 School on the Geometry of Moduli Spaces of Curves, Trieste, ITALIA
      Algebraic Geometry Seminars at Columbia, Harvard/MIT, and Princeton

2017 Colloquium, and Undergraduate Colloquium, UPenn
      GAeL (Géométrie Algébrique en Liberté), Bath University, UK
      Texas Algebraic Geometry Symposium (TAGS), Rice U, TX,

2016 Canadian Maths Society Winter Meeting, "Comb. Alg. Geom"
      Colloquiua at Cornell, UCI, UCLA, University of Oregon, OSU, and Rutgers
      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

2015 University of Maryland Colloquium
      The second annual MAAGC workshop, Philadelphia, PA
      Developments in Moduli and Geometric Invariant Theory, UNC

Service as a Conference Co-Organizer

2018   Algebraic Geometry Northeast Sectional, AGNES
(with L.Borisov, A. Buch, and D.Krashen)

2017   The Georgia Algebraic Geometry Symposium
(with V. Alexeev, B. Bakker, D. Krashen, and D. Lorenzini)

2016   Combinatorial Moduli Spaces and Intersection Theory, The 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)

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)

Community service

2019- Associate Editor of the AMS Notices, Early Career Section
math.AG moderator for the arxiv
2004-18 Refereed for various journals, and served funding panels for NSF
2014-15 Member of the Mathematics Research Communities Advisory Board

Activities Benefitting Women and Girls in Mathematics

2019 group leader, ICERM Women in AG workshop July, 2020 (expected)
2018 speaker, Strength In Numbers, workshop, Queen's Univ., CA

speaker, Grad workshop in Algebraic Geometry
for Women & Mathematicians of Minority Genders
Harvard/MIT, February 17-18
2017 FEW Grant visit and talks at the University of Pennsylvania,

September 13-15, 2017
EDGE (Enhancing Diversity in Graduate Education), mentor
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:*

2004-08 Co-Organizer (with A. Grassi) of AWM events at UPenn

2002 Expanding Your Horizons in Science and Engineering, presenter

Service as a Postdoctoral Advisor

2018 Chiara Damiolini, Research advisor
2017-19 Nicola Tarasca, research advisor
2016-17 Anand Deopokur, research co-advisor with V. Alexeev
Michael Schuster, 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 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
1998-00	started and ran Junior Geometry At UT Austin (with D. Krashen)
	still running: https://www.ma.utexas.edu/research/seminars.php

Service on a graduate thesis committee

2017	Luca Schaffler, University of Georgia
2015	Xiayan Hu, PhD, University of Georgia
2011-17	Natalie Hobson, PhD, (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

Other Advising (since 2012)

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

Activities Promoting Undergraduate Education (since 2010)

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 Elementary and High-School Education

2014, 16, 18   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
1999-00   Saturday Morning Math Group, activities for highschool students in Austin, TX
                co-organizer https://www.ma.utexas.edu/news/newsletter/Outreach/.

Departmental and University service

AY 2019   Graduate Admissions Committee Rutgers
AY 2018   Algebra Qualifying Exam Committee Rutgers
AY 2016-17   Algebra Qualifying Exam, Personnel, University Council
                RTG Summer Coordinator (UGA)
AY 2015-16   Personnel, University Council, RTG Academic Year Coordinator (UGA)
AY 2014-15   University Council, VIGRE Co-director, RTG Summer Coordinator (UGA)
AY 2013-14   Algebra Qualifying Exam Committee, Graduate, VIGRE Co-director (UGA)
AY 2012-13   Algebra Qualifying Exam, Graduate, VIGRE Co-director (UGA)
AY 2010-11   Algebra Qualifying Exam, Cantrell Lecture Series, Personnel, VIGRE Co-PI (UGA)
AY 2006-07   Committee to increase number of math majors, Committee to write a
                VIGRE proposal (UPenn)
AY 2005-06   Committee to write a VIGRE proposal, Mathematics Graduate
                Admissions Committee (UPenn)

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)
	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)
		8330	Topics Alg Geometry (Moduli of Curves, Fall)
		8800	Directed Reading and/or Projects
	2017	4010/6010	Modern Alg and Geometry
		9000	Doctoral Research
Rutgers	2017		History of Math (fall)
	2018	552, 350	Graduate Algebra 2 (spring), Linear Algebra (fall)
	2019	552, 428	Graduate Algebra 2, Graph Theory (spring).