Jan Cameron

March 9, 2017

Vassar College
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Education

Ph.D. Mathematics, Texas A&M University, 2009.

M.A. Mathematics, Wayne State University, 2004.

A.B. Philosophy, Kenyon College, 1999.

Employment

Vassar College, Department of Mathematics and Statistics

- Associate professor 2016-
- Assistant professor 2009-2016
- Class of 1951 chair, 2014-2016

Texas A&M University, Graduate assistant, 2004-2009

Wayne State University, Graduate assistant, 2002-2004

Detroit Project SEED, Mathematics Specialist (Detroit Public Schools), 2000-2002

University of Toledo, Scott Park Campus, Mathematics Instructor, 1999-2000

Fellowships, Grants, Honors

Simons Foundation Collaboration Grant for Mathematicians #319001, 2014-2019

Vassar College Class of 1951 Chair, 2014-2016

Vassar College CCAS Keeping Current grant, July 2014

Woodrow Wilson Career Enhancement Fellowship Competition, honorable mention, 2012

AMS-Simons Foundation Research Travel Grant, 2011-2013 (extended to 2014)

MAA Project NExT (New Experiences in Teaching) Fellow, 2009-2010

AMS Graduate Student Travel Grant, January 2009

Fields Institute Fellowship, for thematic program in operator algebras, Fall 2007

U.S. Department of Education GAANN Fellowship, 2007-2009

Texas A&M Graduate Diversity Fellowship, 2004-2007

Graduate Student Teaching Excellence Award, Wayne State University, 2004

Togo Nishiura award, for studies in analysis, Wayne State, 2004

Karl and Helen Folley endowed math scholarship, Wayne State, 2003
(highest student prize for scholarship in mathematics department)

McGregor Fund summer research grant, Kenyon College, Summer 1998

Kenyon College African American/Latino Honor Scholarship, 1995-1999

Research Visits

Indian Institute of Technology, Madras August 2015

Siena College, NY (several one-day visits since 2010)

University of Michigan at Dearborn January 2015

University of Copenhagen, Denmark May 2014 January 2011

Texas A&M University January 2012 January 2015

University of Leeds, UK April 2012

University of Glasgow, UK April 2012 June 2010

Fields Institute, Toronto, Canada October-December 2007

Publications

1. J. Cameron, J. Fang, K. Mukherjee. Mixing and weak mixing abelian subalgebras of II_1 factors, *Journal of Functional Analysis*, to appear.
2. J. Bannon, J. Cameron, K. Mukherjee. Noncommutative joinings, *International Math. Res. Notices*, to appear.
3. J. Cameron, R. Smith. Bimodules and intermediate subalgebras of crossed products of general von Neumann algebras, *International Journal of Mathematics*, to appear.
4. J. Cameron, E. Christensen, A. Sinclair, R. Smith, S. White, A. Wiggins. Structural properties of close II_1 factors, *Munster Journal of Mathematics*, to appear.
5. J. Bannon, J. Cameron, K. Mukherjee. The modular symmetry of Markov maps, *Journal of Mathematical Analysis and Applications* (2016) 439(2), pp. 701-708.
6. J. Cameron, R. Smith. Bimodules in crossed products of von Neumann algebras, *Advances in Mathematics* (2015) 274 (9), pp. 539-561.
7. J. Cameron, E. Christensen, A. Sinclair, R. Smith, S. White, A. Wiggins. Kadison-Kastler stable factors, *Duke Mathematical Journal* (2014) 163(14), pp. 2639-2686
8. J. Cameron, E. Christensen, A. Sinclair, R. Smith, S. White, A. Wiggins. A remark on the similarity and perturbation problems, *Comptes Rendus Mathematiques de l'Académie des Sciences. La Société Royale du Canada.* (2013) 35 (2), pp. 70-76

9. J. Cameron, D. Pitts, V. Zarikian. Bimodules over Cartan masas in von Neumann algebras, norming algebras, and Mercer's theorem, *New York Journal of Mathematics* 19 (2013), 455-486.
10. J. Cameron, J. Fang, K. Mukherjee Mixing subalgebras of finite von Neumann algebras, *New York Journal of Mathematics* 19 (2013), 343-366.
11. J. Cameron, E. Christensen, A. Sinclair, R. Smith, S. White, A. Wiggins. Type II_1 factors satisfying the spatial isomorphism conjecture *Proceedings of the National Academy of Sciences, U.S.A.* (2012) 109 (52), 20338-20343.
12. J. Cameron. Structure results for normalizers of II_1 factors, *International Journal of Mathematics* (2011) **22** (7), 947-979.
13. J. Cameron, J. Fang, M. Ravichandran, S. White. The radial masa in a free group factor is maximal injective, *Journal of the London Mathematical Society* (2010) 82(3), 787-809.
14. J. Cameron. Hochschild cohomology of II_1 factors with Cartan masas, *Proceedings of the Edinburgh Mathematical Society* (2009) 52(02), 287-295.
15. Normalizers of finite von Neumann algebras, PhD Thesis, Texas A&M University, 2009.

In Preparation

16. J. Bannon, J. Cameron, S. White. *Weakly mixing correspondences and property T for II_1 factors.*

Research Talks

Scottish Operator Algebras Research Conference, University of Glasgow, March 2017

Workshop on C*-algebras and dynamical systems, CRM, Barcelona, March 2017

Pure Mathematics Seminar, Indian Institute of Technology, Madras, August 2015.

Conference on Operator Algebras and Applications, University of Copenhagen, May 2015.

Colloquium, University of Michigan at Dearborn, January 2015.

Special Session: "Von Neumann algebras and related topics," AMS Sectional Meeting, University of Wisonsin at Eau Claire, September 2014.

Oresund Symposium on Noncommutative Analysis and Noncommutative Geometry, Lund University, Sweden, May 2014.

Colloquium, University of Michigan at Dearborn, March 2013.

Mathematics-Physics-Computer Science joint seminar, Bard College, March 2012.

Special Session: "Recent progress on operator algebras," AMS Sectional Meeting, University of Nebraska at Lincoln, October 2011

Operator Algebras Seminar, University of Copenhagen, Denmark, January 2011

Great Plains Operator Theory Symposium, University of Denver, June 2010

Analysis Seminar, University of Glasgow, June 2010

Workshop on C*-algebras and dynamical systems, Sophus Lie Center, Norway, May 2010

Analysis Seminar, SUNY University at Albany, April 2010

Subfactor Seminar, Vanderbilt University, April 2009

Colloquium, Colorado College, January 2009

Colloquium, Bucknell University, January 2009

Special Session on Von Neumann Algebras, AMS/MAA Joint Mathematics Meetings, Washington, D.C., January 2009

Analysis Seminar, University of Houston, November 2008

Pure Mathematics Seminar, Lancaster University, UK, June 2008

Analysis Seminar, University of Glasgow, June 2008

Great Plains Operator Theory Symposium, University of Cincinnati, June 2008

Operator Algebras Seminar, Texas A&M, April 2008

Linear Analysis Seminar, Texas A&M University, April 2008

Great Plains Operator Theory Symposium, University of Nebraska at Lincoln, May 2007

Workshop: "Amenability Beyond Groups," Erwin Schrödinger Institute, Austria, March 2007

Educational Talks, Short Courses, and other Presentations

"The mathematics of voting: Are elections ever fair?" half day workshop, supervised presentation by Paige Ioppolo and Robin Lam (both Vassar '14), Vassar Science Scholars, April 2014.

"An invitation to the mathematics of voting," featured lecture, DUSO regional mathematics competition, March 2014.

"The mathematics of voting: Are elections ever fair?" two-day course, Vassar Transitions Program, August 2013.

"The mathematics of voting: Are elections ever fair?" two-day course, Vassar Transitions Program, August 2012.

"Symmetry", half day workshop, Vassar Science Scholars, December 2011.

"An invitation to group theory, for young physicists," 90 min. workshop, Duke University Talent Identification Program at Texas A&M, June 2009.

"Frame theory and the uncertainty principle," Colloquium, Vassar College, January 2009.

"Frame theory and the uncertainty principle," Colloquium, Colorado College, January 2009.

"Frame theory and the uncertainty principle," Colloquium, Carleton College, February 2009.

"What to do when quantized," 60 min., Graduate Student Organization Seminar, November 2008.

"What would Galois do?" 60 min., Graduate Student Organization Seminar, March 2008.

"Groups and von Neumann algebras," 15 min., Graduate Recruitment Weekend, February 2008.

"Amenability and von Neumann algebras," 50 min., Group Theory Seminar, April 2007.

College Activity

Teaching

Math 399: Senior Independent Research: Measure and Fractal Geometry Spring 2011

Math 399: Senior Independent Study: Measure Theory and Fourier Analysis Spring 2017

Math 399: Senior Independent Study: Functional Analysis Spring 2011 (2 students)

Math 364: Advanced Linear Algebra Fall 2016

Math 328: Theory of Differential Equations and Dynamical Systems Spring 2013

Math 327: Advanced Topics in Real Analysis Spring 2010 (metric spaces) Spring 2014 (measure theory and integration)

Math 324: Complex Analysis Spring 2010 Spring 2011 Spring 2017

Math 321: Real Analysis Fall 2010 Fall 2011 Fall 2012 Fall 2013 Fall 2014

Math 301: Senior Seminar Spring 2014 (mathematics of voting)

Math 298: Independent Study: Topics in Operator Theory Fall 2013

Math 290: Field Work: Elementary School Tutoring in Poughkeepsie Fall 2015

Math 221: Linear Algebra Spring 2013 Fall 2015

Math 220: Multivariable Calculus Fall 2010 Fall 2011 Fall 2012 Spring 2017

Math 131: Freshman Writing Seminar: Number, Shape, Chance, and Change Fall 2015

Math 127: Calculus IIb (Sequences and Series) Fall 2014

Math 126: Calculus IIa (Functions and Integration) Fall 2014

Math 125: Topics in Single Variable Calculus Fall 2013

Math 122: Single-Variable Calculus II Spring 2011

Math 121: Single-Variable Calculus I Fall 2009

Departmental Service

Departmental liaison to the MAA Fall 2014, Fall 2015-present

Co-organizer of department colloquium, 2010-2011, Fall 2012-present

Department hiring: responsibilities include interviewing candidates at national conferences, reading/evaluating application materials, participating in telephone interviews 2010-present

Helped organize panel discussions on graduate school application process

College Service

HHMI grant application preparation team, Fall 2016.

Vassar new faculty orientation panel discussion: The first day of class, and Vassar's academic culture, August 2015.

QA subcommittee of CCP

Vassar Transitions program, 2012-13, 2013-14

Vassar international student host program, Fall 2011

Center for Collaborative Approaches to Science Committee, Spring 2011-Fall 2012

Mathematics major advising, Spring 2011-present.

Pre-major advising, Fall 2010-present.

Service to the Community

Vassar Science Scholars program, Fall 2011, Spring 2014

Other Professional Activity

National Alliance for Doctoral Studies in Mathematical Sciences: pre-doctoral mentor (for underrepresented students in mathematics)

Participant, Mellon 23 Workshop: "Learning and Teaching Physical Sciences in the Liberal Arts College and University: Identification of Supports for Student Success," Carleton College, November 2011.

Referee, various journals and conference proceedings.

Co-organizer and chair, "Mathematics for the Liberal Arts," panel discussion, Mathematical Association of America Mathfest, Pittsburgh, PA, August 2010.

Organizing committee, Midstates Conference on Undergraduate Research in Computer Science and Mathematics, October 2009.

Discussion leader, "Mathematics and the Arts," breakout session, Project NExT fellows conference at MAA Mathfest, Portland, OR, August 2009.