Salvador P. Barone

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Personal

United States Citizen.

Education

Ph.D. Mathematics, Purdue University, 2013. Advisor: Dr. Saugata Basu.

M.A. Mathematics, Bowling Green State University, 2006.

B.S. Mathematics, Bowling Green State University, 2004.

Employment

2013–	Georgia Institute of Technology Hale Post-doctoral fellow
2006–2013	Purdue University Bisland Dissertation Fellowship, June 2012 - May 2013 Research Assistant, June 2009 - May 2012 Teaching Assistant, August 2006 - May 2019
2004–2016	Bowling Green State University Teaching Assistant

Honors and awards

Bilsland Dissertation Fellowship (BDF), 2012-2013.

Publications

On the real Waring rank of bivariate forms (with G. Blekherman), in preparation.

Refined bounds on the Betti numbers of sign conditions (with S. Basu), in preparation.

On the homotopy types of limits of semi-algebraic sets and additive complexity of polynomials (with S. Basu), J. Eur. Math. Soc., Vol 16, 1527-1554, 2014.

Some Quantitative Results in Real Algebraic Geometry, arXiv preprint arXiv:1234.5678 [math.AG], 2013.

On a real analogue of Bezout inequality and the number of connected of connected components of sign conditions (with S. Basu), arXiv preprint arXiv:1303.1577 [math.AG], 2013.

Refined bounds on the number of connected components of sign conditions on a variety (with S. Basu), Discrete and Comput. Geom., 47:577-597, 2012.

Invited Talks

Dagstuhl Seminar: Complexity of Symbolic and Numerical Problems, Schloss Dagstuhl, Germany 7 - 12 June, 2015.

FoCM 2014, Universidad de la República in Montevideo, Uruguay 11 - 20 December, 2014.

Algebraic Techniques for Combinatorial and Computational Geometry: Tools from Algebraic Geometry, IPAM at UCLA, April 2014.

Algebra Seminar, Georgia Institute of Technology, September 2013.

SIAM AG13, Algorithms in Real Algebraic Geometry and its Applications (Part III), 3 August 2013.

Real Algebraic Geometry Mini-conference, Purdue University, December 2012.

Student Colloquium, Purdue University, October 2012.

Real Algebraic Geometry Conference, Universite de Rennes, France, June 2011.

Student Commutative Algebra Seminar, Purdue University, March 2010.

Bridge to Research Seminar, Purdue University, February 2010.

Service

Co-Founder and Organizer, Georgia Tech Postdoctoral Association, Georgia Institute of Technology, October 2013 - present

Organizer of the Algebra Seminar, Georgia Institute of Technology, August 2013 - present.

Graduate student representative, Purdue University, Fall 2008 - Spring 2009.

Teaching Awards

Committee for the Education of Teaching Assistants "Excellence in Teaching Award", Purdue University, April 2012.

Department of Mathematics Excellence in Teaching Award, Purdue University, November 2011.

Title of Outstanding Graduate Instructor, Purdue Department of Mathematics, 2006 - 2013.

Recently Attended and Upcoming Conferences

Joint Mathematics Meetings, San Antonio, Texas 10-13 January 2015.

Algebraic Techniques for Combinatorial and Computational Geometry: Tools from Algebraic Geometry, IPAM at UCLA, 7-11 April, 2014.

Joint Mathematics Meetings Short Course on Geometry and Topology in Statistical Inference, Baltimore, MD, 13-14 January 2014.

AlgeCom9, Loyola University, Chicago, IL, November 9, 2013.

SIAM Conference on Applied Algebraic Geometry, Colorado State University, Fort Collins, CO 1-4 August 2013.

Joint Mathematics Meetings, San Diego, CA 9 - 12 January 2013.

Algebraic Geometry for Applications, IMA PI Summer Program for Graduate students, Georgia Institute of Technology, Atlanta, GA June 18 - July 6 2012.

Real-number complexity FoCM'11 Budapest, Hungary 4-6 July 2011.

Real Algebraic Geometry , Universite de Rennes 1, 20 - 24 June 2011.

Oberwolfach Seminar on "New Trends in Algorithms for Real Algebraic Geometry", Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany 22 - 28 November 2009.

References

Saugata Basu, Purdue University. email: sbasu@math.purdue.edu

Greg Blekherman, Georgia Institute of Technology. email: greg@math.gatech.edu

Andrei Gabrielov, Purdue University. email: agabriel@math.purdue.edu

Marie-François Roy, Université de Rennes 1. email: marie-francoise@univ-rennes1.fr

Mohab Safey El Din, Universite Pierre et Marie Curie. email: Mohab.Safey_El_Din@inria.fr

Nicolai Vorobjov, University of Bath. email: nnv@cs.bath.ac.uk