

Roya Beheshti Zavareh

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General Information Born: 1977, Esfahan, Iran
Citizenship: Iranian

Education Massachusetts Institute of Technology, Cambridge, Massachusetts.
Ph.D. in Mathematics, 1999-2003
Thesis Advisor: Prof. Johan de Jong

Sharif University of Technology, Tehran, Iran
B.S. in Mathematics, 1995-1999

Research Interests Algebraic geometry

Positions • Assistant Professor (tenure-track), Washington University in St. Louis, 2007 – present (on leave 2011–2012)
• Postdoctoral Fellow (Complementary Program), MSRI, Berkeley, 2006–2007
• Postdoctoral Fellow, Queen’s University, Kingston, Canada, 2004–2006
• Postdoctoral Fellow, Max-Planck-Institut für Mathematik, Bonn, Germany, 2003–2004

Short-term Visits • Columbia University, 2011–2012
• MSRI, Algebraic Geometry Program, February-May 2009
• Institut Mittag-Leffler, Sweden, June 2007
• Max-Planck-Institut für Mathematik, Germany, June-July 2006

Awards / Honors • Simons Collaboration Grants for Mathematicians, 2011-2016
• AWM travel grant, June 2010
• Fund for Scholarly and Professional Development (2006), Queen’s University
• Rosenblith Fellowship (Spring 2000), Department of Mathematics, MIT
• Liberty Mutual Fellowship (Fall 1999), Department of Mathematics, MIT
• International Olympiad in Informatics (Netherlands 1995), bronze medal
• International Mathematical Olympiad (Hong Kong 1994), silver medal

Publications

- Spaces of rational curves on hypersurfaces in homogeneous varieties
In preparation
- Spaces of rational curves in complete intersections (with Mohan Kumar)
submitted to Compositio Math.
- Fibers of projections and submodules of deformations (with D. Eisenbud)
Current Developments in Algebraic Geometry, MSRI Publications, 2010.
- Hypersurfaces with too many rational curves
preprint
- Fibers of generic projections of smooth varieties (with D. Eisenbud)
Oberwolfach Reports, 26 (2008)
- Fibers of generic projections (with D. Eisenbud)
Compositio Math., 146 (2010) no. 2, 435-456.
- Non-uniruledness results for spaces of rational curves on hypersurfaces
Algebra and Number Theory, to appear.
- Rational surfaces in index-one Fano hypersurfaces (with J. Starr),
J. Algebraic Geometry, 17 (2008) 255-274.
- Lines on projective hypersurfaces
J. Reine Angew. Math. (Crelle's Journal), 592 (2006), 1-21.
- Linear subvarieties of smooth hypersurfaces
Internat. Math. Res. Notices, 49 (2005), 3055-3063.
- Elliptic surfaces and Azumaya algebras (with A. J. de Jong, A. Ghitza, M. Lieblich, D. Testa), A book based on Johan de Jong's lectures on the same topic, *in preparation.*
- Lines on Fano hypersurfaces
Ph.D Thesis, MIT, May 2003.
- Elementary number theory, challenging problems (with M. Mirzakhani)
Fatemi Publishers, Tehran, Iran, 1999 (book in Farsi).

Recent Talks

- Algebraic Geometry Northern Series Workshop, Stony Brook University, November 2011
- The Brazilian meeting on Algebraic Geometry and Commutative Algebra, Sao Paulo October 2011
- 40 Years and Counting: AWM's Celebration of Women in Mathematics, Brown University September 2011
- Western Algebraic Geometry Symposium, Stanford University, April 2011
- KUMUNU, University of Nebraska-Lincoln, April 2011
- AMS joint meeting, special session on Moduli Spaces, New Orleans, January 2011
- V Iberoamerican Congress on Geometry, Pucon, Chile, December 2010
- ICM, satellite conference on complex geometry and group actions, Hyderabad, India August 2010
- University of Georgia Algebraic Geometry Seminar, January 2010
- University of Georgia VIGRE Seminar, January 2010
- Princeton Algebraic Geometry Seminar, December 2009

- University of Illinois at Chicago Algebraic Geometry Seminar, November 2009
- Caltech Algebraic Geometry Seminar, June 2009
- Workshop on spaces of curves and diophantine problems, Columbia University June 2009
- MSRI, Algebraic Geometry Program, April 2009
- Oberwolfach workshop on Classical Algebraic Geometry, Germany, June 2008
- Workshop on Geometry and Syzygies, Korea Advanced Institute of Science and Technology, November 2008
- SUNY Algebraic Geometry Seminar, October 2008
- UC Berkeley Commutative Algebra and Algebraic Geometry Seminar, March 2008
- The Show-me Algebraic Geometry Conference, University of Missouri, Columbia May 2008
- University of British Columbia Algebraic Geometry Seminar, October 2007
- Institute for Theoretical Physics and Mathematics, Tehran, Iran, July 2007
- Mittag-Leffler Institutue, Sweden, June 2007
- Chalmers University, Sweden, June 2007
- UC Berkeley Commutative algebra and Algebraic Geometry Seminar, April 2007
- Stanford University Algebraic Geometry Seminar, May 2007
- MSRI, Joint Postdoctoral Seminar, December 2006
- UC Berkeley Commutative Algebra and Algebraic Geometry Seminar, October 2006
- Washington University in St. Louis, Colloquium, February 2006
- University of Illinois at Urbana-Champaign Algebraic Geometry Seminar February 2006
- Workshop on Arithmetic and Geometry of Algebraic Varieties , The Fields Institute Toronto, March 2006
- Queen's University Curves Seminar November 2005
- Queen's University Algebraic Geometry Seminar November 2005
- University of Georgia Algebraic Geometry Seminar, February 2005
- Workshop on Arithmetic and Geometry of Algebraic Varieties, The Fields Institute, Toronto, March 2005
- Queen's University Algebraic Geometry Seminar, September 2004
- University of Genoa Projective Geometry Seminar, Italy, April 2004
- Max-Planck Institute Algebraic/Complex Geometry Seminar, Bonn, Germany March 2004
- Sharif University of Technology, Tehran, Iran, January 2004.
- Conference on Projective Varieties with Unexpected Properties, Siena, Italy, June 2004

**Teaching
Experience**

- Columbia University:
 - Multivariable Calculus (Fall 2011)
 - Calculus I (Spring 2012)
- Washington University:
 - Topics in Algebraic Geometry (Spring 2011)
 - Abstract Algebra (Spring 2011)
 - Linear Algebra (Fall 2010)
 - Graduate Algebra II (Spring 2010)
 - Graduate Algebra I (Fall 2009)
 - Complex Variables (Fall 2009)
 - Multivariable Calculus (Fall 2008)
 - Algebraic Geometry II (Spring 2008)
 - Algebraic Geometry I (Fall 2007)
- Queen's University:
 - Linear Algebra (Winter 2005, Winter 2006)
 - Algebraic structures with applications (Fall 2004, Fall 2005)
- M.I.T.
 - Summer Program in Undergraduate Research (MIT, Summer 2003)
 - Mentored two undergraduate students.
 - Research Science Institute (Summer 2000): Mentored two students at RSI organized by the Center for Excellence in Education (CEE).
- Mathematical Olympiad Preparation Camp (1996-1999)
 - Instructor of the Mathematical Olympiad Preparation Camp at Sharif University of Technology, Tehran, Iran.
- Farzanegan High School (1996-1998)