

Curriculum Vitae

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Education

Ph.D. Degree, Duke University, December 1999

Dissertation – Hypergeometric Functions and Mirror Symmetry in Toric Varieties

Advisor – Prof. David R. Morrison

European Exchange Student, Tempus Program, University of Dortmund, Germany, 1992–93

Bachelor's Degree in Mathematics, Ranked first in graduating class, University of Bucharest, Romania, June 1992

Current and Previous Appointments

Tenure Track Assistant Professor, Oklahoma State University, September 2005– present

Marsden Postdoctoral Fellow, The Fields Institute for Research in Mathematical Sciences, August 2004– July 2005

Assistant Professor, University of Michigan, Ann Arbor, September 2001– August 2004

Member, School of Mathematics, Institute for Advanced Study, Princeton, NJ, September 2000–June 2001

Researcher, Max-Planck-Institut Für Mathematik, Bonn, Germany, May 2000–December 2000

Lecturer in Mathematics, Duke University, January 2000–April 2000

Professional Activities

ESI Research Conference on Homological Mirror Symmetry, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, July 12-22, 2006

Workshop on Convex and Algebraic Geometry, Oberwolfach, January 29– February 4, 2006

Mini-Workshop on Heterotic Strings, Derived Categories, and Stacks, Oberwolfach, Germany, November 13–19, 2005

2005 Workshop in Algebraic Geometry and Physics, Moduli spaces and superpotentials, UPenn, Philadelphia, October 20–24, 2005

Workshop on D-modules and Hypergeometric Functions, Lisbon, Portugal, July 11–14, 2005

Workshop on Arithmetic and Geometry of Higher Dimensional Varieties with Special Emphasis on Calabi-Yau Varieties and Mirror Symmetry, Toronto, Canada, March 2005

Workshop on Derived Categories, Quivers and Strings, Edinburgh, UK, August 2–6, 2004

AMS-IMS-SIAM Summer Research Conference, Conference on String Geometry, Snowbird, Utah, June 5–11, 2004

2004 AMS Spring Eastern Section Meeting, Lawrenceville, NJ, April 17–18, 2004

Miniprogram in Geometry, Topology, and Strings, Kavli Institute for Theoretical Physics, University of California, Santa Barbara, July–August 2003

2003 School and Workshop on Algebraic Geometry and Physics, Salamanca, Spain, June 2003

Institut des Hautes Études Scientifiques, Bures-sur-Yvette, France, May–June 2003

2002 Workshop on Algebraic Geometry and Physics, Genova, Italy, June 2002

Program in Higher Dimensional Complex Geometry, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, June 2002

Summer Institute in Quantum Field Theory and Algebraic Geometry, IAS/Park City Mathematics Institute, July 2001

Duality Workshop: A Math–Physics Collaboration, Institute for Theoretical Physics, University of California, Santa Barbara, June 2001

Clay Mathematical Institute in Mirror Symmetry, Harvard University, June 2000

Workshop on Geometry and Physics, Institute for Theoretical Physics, University of California, Santa Barbara, July–August 1999

Winter School in Mirror Symmetry and Lagrangian Fibrations, Harvard University, January 1999

Summer School in Symplectic Geometry and Topology, IAS/Park City Mathematics Institute, 1997

Quantum Field Theory Program, IAS, Princeton, 1996–97

Santa Cruz Algebraic Geometry Conference, July 1995

Summer School in Geometry, Perugia, Italy, August 1992

I reviewed for the Mathematical Reviews and I refereed papers for the Journal of the AMS, Crelle’s Journal, the Duke Mathematical Journal, Advances in Theoretical and Mathematical Physics.

Selected Awards and Fellowships

Dean's Incentive Grant, Oklahoma State University, Summer 2006

Marsden Postdoctoral Fellowship, Fields Institute for Research in Mathematical Sciences, Toronto, Canada, 2004–2005 Thematic Program “Geometry of String Theory”

Institute for Advanced Study, Princeton, NJ, 2000–2001 stay supported by NSF grant DMS 97-29992

European Tempus Program Scholarship, 1992–93

First Prize in the Balkan Mathematical Olympiad, 1986

Selected Talks

ESI Research Conference on Homological Mirror Symmetry, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, July 17, 2006

University of Wisconsin, Madison, Algebraic Geometry Seminar, March 2006

University of Massachusetts, Amherst, Colloquium, February 2006

Ohio State University, Colloquium, February 2006

Workshop on Convex and Algebraic Geometry, Oberwolfach, Germany, February 1, 2006

Mini-Workshop on Heterotic Strings, Derived Categories, and Stacks, Oberwolfach, Germany, November 15, 2005

Workshop on D-modules and Hypergeometric Functions, Lisbon, Portugal, July 11–14, 2005

Queens University, Kingston, Ontario, Canada, Colloquium, April 2005

Workshop on Arithmetic and Geometry of Higher Dimensional Varieties with Special Emphasis on Calabi-Yau Varieties and Mirror Symmetry, Toronto, March 5–6, 2005

University of Western Ontario, London, Ontario, Canada, Algebra seminar, January 2005

The Fields Institute, String Theory Seminar, Toronto, Ontario, Canada, October 2004

Invited talk at the Workshop on Derived Categories, Quivers and Strings, Edinburgh, UK, August 2–6, 2004

Invited Speaker at the AMS-IMS-SIAM Summer Research Conference, Conference on String Geometry, Snowbird, Utah, June 5-11, 2004

Special Session in “Algebraic Geometry and Mirror Symmetry” at the AMS Meeting 997 at Rider University, Lawrenceville, NJ, April 17-18, 2004

Johns Hopkins University, Algebraic and Complex Geometry Seminar, March 2004

Princeton University, Geometry, Representation, and Moduli Seminar, February 2004

Northwestern University, Geometry and Physics Seminar, January 2004

University of Illinois at Urbana–Champaign, Math–Physics Seminar, November 2003

Invited talk at SWAGP 2003, Salamanca, Spain, June 2003

Université Paris VII, Jussieu Algebraic Geometry Seminar, May 2003

University of Utah, String Geometry Seminar, February 2003

University of Illinois at Chicago, Colloquium, November 2002

Invited talk at WAGP 2002, Genova, Italy, June 2002

Boston University, Geometry Seminar, May 2002

Indiana University, Geometry Seminar, March 2002

University of Minnesota, Algebraic Geometry Seminar, December 2001

Ohio State University, Algebraic Geometry Seminar, November 2001

University of Michigan, Algebraic Geometry Seminar, April 2001

Duke University, Algebraic Geometry Seminar, April 2001

Institute for Advanced Study, Princeton, Members Seminar, April 2001

Max–Planck–Institut Für Mathematik, Bonn, Germany, Geometry and Physics Seminar, May 2000

Duke University, Geometry/Topology Seminar, Spring 1999

Cornell University, Geometry Seminar, Spring 1995

Publications

- Lev A. Borisov, R. Paul Horja, *Mellin-Barnes integrals as Fourier-Mukai transforms*, Advances in Mathematics, **207** (2006), 876–927, [math.AG/0510486](#).
- Lev A. Borisov, R. Paul Horja, *On the K -theory of smooth toric DM stacks*, Snowbird lectures on string geometry, 21–42, Contemp. Math., **401**, Amer. Math. Soc., Providence, RI, 2006, [math.AG/0503277](#).
- Paul S. Aspinwall, R. Paul Horja, Robert L. Karp, *Massless D -Branes on Calabi-Yau Threefolds and Monodromy*, Comm. in Math. Physics, **259** (2005), 45–69, [hep-th/0209161](#).
- R. Paul Horja, *Derived category automorphisms from mirror symmetry*, Duke Mathematical Journal, **127** (2005), 1–34, [math.AG/0103231](#).

R. Paul Horja, *Hypergeometric functions and mirror symmetry in toric varieties*, preprint (1999), 103 pages, [math.AG/9912109](#).

Paul Horja, *On the number of geodesic segments connecting two points on manifolds of non-positive curvature*, *Trans. Amer. Math. Soc.* **349** (1997), 5021–5030.

G. Craciun, P. Horja, M. Prunescu, T. Zamfirescu, *Most homeomorphisms of the circle are semiperiodic*, *Arch. Math. (Basel)* **64** (1995), 452–458.

V. Boskoff, P. Horja, *The characterization of some spectral Barbilian spaces using the Tzitzeica construction*, *Stud. Cercet. Mat.* **46** (1994), 503–514.

Teaching Experience

Vector Calculus, Oklahoma State University, Fall 2006, Fall 2005; University of Michigan, Winter 2004, Winter 2003

Introductory Linear Algebra for Undergraduates, Oklahoma State University, Spring 2006; University of Michigan, Winter 2002

Introduction to Modern Algebra, University of Michigan, Winter 2004

Honors Vector Calculus, University of Michigan, Fall 2003

Advanced Calculus for Undergraduates, University of Michigan, Fall 2003

Honors Ordinary Differential Equations, University of Michigan, Winter 2003

Honors One Variable Calculus, University of Michigan, Fall 2002

Introductory Linear Algebra for Graduate Students, University of Michigan, Fall 2002

One Variable Calculus Laboratory Calculus, University of Michigan, Fall 2001

Laboratory Calculus, Duke University, Spring 1998, Fall 1997, Fall 1995

One Variable Calculus, Duke University, Fall 1999, Fall 1998

Vector Calculus, Duke University, Spring 1996

Teaching Assistant, University of Dortmund, Germany, 1992–93