

Curriculum Vitae

Brendan Hassett

Department of Mathematics
Rice University, MS 136
6100 South Main Street
Houston, Texas 77005 USA
(713) 348-5261
hassett@rice.edu

Positions

Chair, Department of Mathematics, Rice University, from July 2009

Professor of Mathematics, Rice University, from July 2006

Associate Professor of Mathematics, Rice University, July 2003 to July 2006

Professeur Invité, Université Paris-Sud, Orsay, March to April 2005

Assistant Professor of Mathematics, Rice University, July 2000 to July 2003

Visiting Scholar, Institute of Mathematical Sciences, Chinese University of Hong Kong, August 2000 to August 2001

Dickson Instructor of Mathematics, University of Chicago, October 1996 to September 2000

Visitor at the Institut Mittag-Leffler, Stockholm, January to March 1997

Education

Harvard University, M.A., 1994, and Ph.D., 1996 (supervised by Joe Harris)

Yale College, B.A. in mathematics, *summa cum laude*, 1992

Grants, Awards, and Fellowships

National Science Foundation Grant 0968349: July 1, 2010-June 30, 2013;

FRG: Collaborative Research: Arithmetic and geometry of rational curves on K3 surfaces (lead PI for a Focused Research Group involving three universities)

Charles W. Duncan Jr. Achievement Award for Outstanding Faculty, Rice University, 2009

National Science Foundation Grant 0901645: July 1, 2009-June 30, 2012; Birational geometry, symplectic varieties, and moduli spaces (PI)

National Science Foundation Grant 0554491: July 1, 2006-June 30, 2010; Collaborative Research: FRG: Geometry of moduli spaces of rational curves with applications to Diophantine problems over function fields (lead PI for a Focused Research Group involving four universities)

Alfred P. Sloan Research Fellow: September 15, 2003-September 14, 2006

National Science Foundation Grant 0134259: July 1, 2002-June 30, 2008; CAREER: Algebraic Geometry of Moduli Spaces (PI)

National Science Foundation Grants 0070537 and 0196187: October 1, 2000-June 30, 2004; Rational Points on Algebraic Varieties and Geometry of Curves and Surfaces (PI)

National Science Foundation Fellowship 9705879: June 1, 1997-May 31, 2001; Mathematical Sciences Postdoctoral Research Fellowship

Sloan Dissertation Fellowship, 1995-1996

National Science Foundation Graduate Fellowship, 1992-1995

Editorial

Editor for the journals *Experimental mathematics* and *Central European Journal of Mathematics*

Publications

Books

Arithmetic Geometry, proceedings of the 2006 Clay Mathematics Institute

Summer School, edited with H. Darmon, David Ellwood, and Y. Tschinkel, Clay Mathematics Proceedings **8**, American Mathematical Society, Providence, 2009

Introduction to algebraic geometry, Cambridge University Press, 2007

Papers

Failure of the Hasse principle on general K3 surfaces, with Anthony Várilly-Alvarado, submitted for publication (2011)

Hodge theory and Lagrangian planes on generalized Kummer fourfolds, with Yuri Tschinkel, submitted for publication (2010)

Log minimal model program for the moduli space of stable curves: First flip, with Donghoon Hyeon, submitted for publication (2008)

Spaces of sections of quadric surface fibrations over curves, with Yuri Tschinkel, to appear in *Compact moduli and vector bundles*, Valery Alexeev et al. eds., Contemporary Mathematics series of the American Mathematical Society

Weak approximation and rationally connected varieties over function fields of curves, to appear in the series *Panoramas et synthèses* of the Société Mathématique de France

Characterizing projective spaces on deformations of Hilbert schemes of K3 surfaces, with David Harvey and Yuri Tschinkel, *Communications on Pure and Applied Mathematics* **65** (2012), no. 2, 264-286

Transcendental obstructions to weak approximation on general K3 surfaces, with Anthony Várilly-Alvarado and Patrick Varilly, *Advances in Mathematics* **228** (2011), no. 3, 1377-1404

Constructing rational curves on K3 surfaces, with Fedor Bogomolov and Yuri Tschinkel, *Duke Mathematical Journal* **157** (2011), no. 3, 535-550

Stable varieties with a twist, with Dan Abramovich, *Classification of algebraic varieties*, proceedings of the 2009 conference at Schiermonnikoog the Netherlands, Carel Faber, Gerard van der Geer, and Eduard J.N. Looijenga eds., 1-38, European Mathematical Society, Zürich, 2011

Intersection numbers of extremal rays on holomorphic symplectic varieties, with Yuri Tschinkel, *Asian Journal of Mathematics* **14** (2010), no. 3, 303-322

Flops on holomorphic symplectic fourfolds and determinantal cubic hypersurfaces, with Yuri Tschinkel, *Journal of the Institute of Mathematics of Jussieu* **9** (2010), no. 1, 125-153

Stability computation via Gröber bases, with Donghoon Hyeon and Yongnam Lee, *Journal of the Korean Mathematical Society* **47** (2010), no. 1, 41-62

Rational surfaces over nonclosed fields, *Arithmetic Geometry*, proceedings of the 2006 Clay Mathematics Institute Summer School, Clay Mathematics Proceedings **8**, 155-210, American Mathematical Society, Providence, 2009

Moving and ample cones for holomorphic symplectic fourfolds, with Yuri Tschinkel, *Geometric and Functional Analysis* **19** (2009), no. 4, 1065-1080

Log canonical models for the moduli space of curves: The first divisorial contraction, with Donghoon Hyeon, *Transactions of the American Mathematical Society* **361** (2009), 4471-4489

Weak approximation for hypersurfaces of low degree, with Yuri Tschinkel, *Algebraic Geometry–Seattle 2005*, D. Abramovich et al. eds., Proceedings of Symposia in Pure Mathematics **80**, no. 2, 937-955, American Mathematical Society, Providence, 2009

Potential density of rational points for K3 surfaces over function fields, with Yuri Tschinkel, *American Journal of Mathematics* **130** (2008), no. 5, 1263-1278

Log Fano varieties over function fields of curves, with Yuri Tschinkel, *Inventiones mathematicae* **173** (2008), no. 1, 7-21

Approximation at places of bad reduction for rationally connected varieties, with Yuri Tschinkel, *Pure and Applied Mathematics Quarterly* **4** (2008), no. 3, 743-766

Weak approximation over function fields, with Yuri Tschinkel, *Inventiones mathematicae* **163** (2006), no. 1, 171-190

Classical and minimal models of the moduli space of curves of genus two, *Geometric methods in algebra and number theory*, F. Bogomolov and Y. Tschinkel

eds., 169-192, Progress in mathematics **235**, Birkhäuser, Boston, 2005

Improving conformational searches by geometric screening, by Ming Zhang, R. Allen White, Liqun Wang, Ronald Goldman, Lydia Kavradi, and Brendan Hassett, *Bioinformatics* **21** (2005), no. 5, 624-630

Universal torsors and Cox rings, with Yuri Tschinkel, *Arithmetic of higher-dimensional varieties*, B. Poonen and Y. Tschinkel eds., 149-173, Progress in mathematics **226**, Birkhäuser, Boston, 2004

Reflexive pull-backs and base extension, with Sándor Kovács, *Journal of Algebraic Geometry*, **13** (2004), 233-247

Integral points and effective cones of moduli spaces of stable maps, with Yuri Tschinkel, *Duke Mathematical Journal*, **120** (2003), no. 1, 577-599

Potential density of rational points on algebraic varieties, *Higher Dimensional Varieties and Rational Points*, K.J. Böröczky, J. Kollár, T. Szamuely eds., Bolyai Society Mathematical Studies, Vol. 12, Springer Verlag, Heidelberg, 2003

Moduli spaces of weighted pointed stable curves, *Advances in Mathematics*, **173** (2003), Issue 2, 316-352

On the effective cone of the moduli space of pointed rational curves, with Yuri Tschinkel, *Topology and Geometry: Commemorating SISTAG*, A.J. Berrick, M.C. Leung, and X.W. Xu eds., Contemporary mathematics **314**, 83-96, American Mathematical Society, Providence, 2002

The weak Lefschetz principle is false for ample cones, with Hui-Wen Lin and Chin-Lung Wang, *Asian Journal of Mathematics* **6** (2002), no. 1, 95-100

Density of integral points on algebraic varieties, with Yuri Tschinkel, *Rational Points on Algebraic Varieties*, (Points rationnels des variétés algébriques, Luminy, 1999), E. Peyre and Y. Tschinkel eds., 165-197, Progress in mathematics **199**, Birkhäuser, Boston, 2001

Rational curves on holomorphic symplectic fourfolds, with Yuri Tschinkel, *Geometric and Functional Analysis* **11** (2001), no. 6, 1201-1228

Brauer groups and quotient stacks, with Dan Edidin, Andrew Kresch, and Angelo Vistoli, *American Journal of Mathematics* **123** (2001), no. 4, 761-777

Stable limits of log surfaces and Cohen-Macaulay singularities, *Journal of Algebra* **242** (2001), no. 1, 225-235

Abelian fibrations and rational points on symmetric products, with Yuri Tschinkel, *International Journal of Mathematics* **11** (2000), no. 9, 1163-1176

Local stable reduction of plane curve singularities, *Journal für die Reine und Angewandte Mathematik* **520** (2000), 169-194

Special cubic fourfolds, *Compositio Mathematica* **120** (2000), no. 1, 1-23

Geometry of equivariant compactifications of \mathbb{G}_a^n , with Yuri Tschinkel, *International Mathematical Research Notices* **1999**, no. 22, 1211-1230

Stable log surfaces and limits of quartic plane curves, *manuscripta mathematica* **100** (1999), no. 4, 469-497

Some rational cubic fourfolds, *Journal of Algebraic Geometry* **8** (1999), no. 1, 103-114

Correlation for surfaces of general type, *Duke Mathematical Journal* **85** (1996), no. 1, 95-107

Special Cubic Hypersurfaces of Dimension Four, Harvard University thesis, 1996

Papers which have not yet appeared in print are available at:
<http://www.math.rice.edu/~hassett>.

Research Students and Fellows

Postdoctoral Fellows

Brian Lehmann (NSF Postdoctoral Fellow, 2011-present)

Evan Bullock (VIGRE-Lovett Instructor, 2009-present)

Anthony Várilly-Alvarado (Evans Instructor, 2009-present)

Kelly McKinnie (Evans Instructor and NSF Postdoctoral Fellow, 2007-2009),
tenure-track assistant professor, University of Montana

Sabin Cautis (Evans Instructor, 2006-2008), Ritt assistant professor, Columbia University

Olivier Wittenberg (Visiting Evans Instructor, 2006-2007), Chargé de recherches, Centre National de la Recherche Scientifique

Chris Rasmussen (Evans instructor, 2004-2007), tenure-track assistant professor at Wesleyan University (Connecticut) and JSPS Postdoctoral Fellowship at the Research Institute for Mathematical Sciences at Kyoto University

James Spencer (VIGRE-Lovett instructor, 2003-05), adjunct assistant professor at UCLA

Donghoon Hyeon (Evans instructor, 2001-2004), tenure-track assistant professor at Northern Illinois University

Thesis Students

Letao Zhang (doctoral student 2009-present)

Zhiyuan Li (doctoral student 2008-present)

Benjamin Waters (doctoral student 2008-present)

Fei Xu (Ph.D. 2011)

Shuijing Li (Ph.D. 2010), Baker Hughes

Christian Bruun (M.A. 2009)

Matthew Simpson (Ph.D. 2008), postdoctoral fellow at the University of Michigan Mathematics Department

Bradley Duesler (M.A. 2008)

Amanda Knecht (Ph.D. 2007), postdoctoral fellow at the University of Michigan Mathematics Department

Dajiang Liu (M.A. 2006), doctoral student at the Rice statistics department

Jun Zhang (Ph.D. 2005), postdoctoral researcher at the Rice statistics department

Served on doctoral thesis committees of Seunghun Lee (University of Illi-

nois, Chicago), Anders Buch (University of Chicago), Aaron Heap (Rice), David Madore (Université Paris-Sud), Ning Song (Rice computer science), David Smyth (Harvard), Adam Ginensky (University of Chicago), David Jensen (U.T. Austin), Frederick van der Wyck (Harvard), Alexander Duncan (University of British Columbia), David Kahle (Rice statistics), Brian Katz (University of Texas, Austin), and Olivier Benoist (Université Paris Diderot)

Served on masters thesis committees of Steve Wallace (Rice) and Ning Song (Rice computer science)

Undergraduate Research

Henry Gorman and Thomas Motter (summer 2010); Mike Clendenen, Ira Jamshidi, Lauren Kirton, and David Lax (summer 2009); Chris Fraser, Robert Kuvinka, Paul Munger, and Marjorie Scherf (summer 2008); Ian Feldman and Patrocínio Rivera (summer 2007); David Eng, Ian Feldman, Robbie Fraleigh, Itamar Gal, Daniel Glasscock, Taylor Goodhart, Dugan Hammock, Aaron Hallquist, Patrocínio Rivera, and Jonathan Skowera (summer 2006); Thomas Murphy and Abraham Taicher (summer 2005); Stefan Allan, Harding Brumby, Christian Bruun, and Joe Vavra (summer 2004)

Meetings and Conferences Organized

Workshop on ‘Brauer groups and obstruction problems: Moduli spaces and arithmetic’, American Institute of Mathematics in Palo Alto (with A. Auel, A. Várilly-Alvarado, and B. Viray), February 25-March 1, 2013

Workshop on ‘Log minimal model program for moduli spaces’, American Institute of Mathematics in Palo Alto (with J. Alper, M. Fedorchuk, and D. Smyth), December 10-14, 2012

Simons Symposium: Geometry over non-closed fields (with F. Bogomolov and Y. Tschinkel), St. John, U.S. Virgin Islands, February 26-March 3, 2012

A Celebration of Algebraic Geometry: A Conference in Honor of Joe Harris’ 60th Birthday (scientific advisory committee), Harvard University, August 25-28, 2011

FRG Workshop: Holomorphic symplectic varieties (with F. Bogomolov, J.

Kollár, and Y. Tschinkel), Courant Institute, New York University, June 4-5, 2011

Moduli spaces and moduli stacks (with J. Alper, J. de Jong, J. Starr, and M. Thaddeus), Columbia University, May 23-27, 2011

Texas Algebraic Geometry Symposium, Rice University (with E. Bullock and T. Várilly-Alvarado), April 22-24, 2011

Spaces of curves and their interaction with diophantine problems, FRG conference, Columbia University, (with A.J. de Jong, J. Starr, and Y. Tschinkel), June 1-5, 2009

Jumbo semester program on ‘Algebraic geometry’ at the Mathematical Sciences Research Institute in Berkeley (with William Fulton, Joe Harris, Robert Lazarsfeld, János Kollár, Sándor Kovács, and Ravi Vakil), Spring 2009

Introductory workshop ‘Classical algebraic geometry today’ at the Mathematical Sciences Research Institute (with Lucia Caporaso, James McKernan, Mircea Mustață, and Mihnea Popa), January 26-30, 2009

Workshop on ‘Connections: Algebraic geometry and related fields’ at the Mathematical Sciences Research Institute (with Angela Gibney, Sándor Kovács, Diane Maclagan, Jessica Sidman, and Ravi Vakil), January 22-24, 2009

‘Texas Algebraic Geometry Seminar’, Rice University (with Sabin Cautis), April 11-13, 2008

Workshop on ‘Rational Curves and Diophantine Problems over Function Fields’, Clay Mathematics Institute (with Johan de Jong, David Ellwood, Jason Starr, and Yuri Tschinkel) November 2-4, 2007

Workshop on ‘Rational curves on algebraic varieties’, American Institute of Mathematics in Palo Alto (with Sándor Kovács), May 7-11, 2007

Clay Mathematics Institute Summer School ‘Arithmetic Geometry’, University of Göttingen (with Henri Darmon, David Ellwood, and Yuri Tschinkel), July 17-August 11, 2006

Undergraduate conference in algebraic geometry at Rice University (with Chris Rasmussen and Robert Hardt), February 10-12, 2006

Special session in algebraic geometry at the joint meeting of the American Mathematical Society (AMS), the Deutsche Mathematiker-Vereinigung, and the Österreichische Mathematische Gesellschaft (with Yuri Tschinkel) at Mainz, Germany, June 16-19, 2005

‘Texas Algebraic Geometry Seminar’, Rice University, founding meeting May 20-22, 2005

Workshop on ‘Compact moduli spaces and birational geometry’, American Institute of Mathematics (with Sándor Kovács), December 6-10, 2004

‘Texas Geometry and Topology Conference’, Rice University, October 31-November 2, 2003

University of Chicago Algebraic Geometry Seminar, 1997-2000

Service

Professional

Program Committee for the Central Section of the American Mathematical Society (February 2010 and 2011)

Panelist for the National Science Foundation (several times from 2004 to present)

Mail reviewer for the National Science Foundation, the National Security Agency, the Civilian Research and Development Foundation, the Natural Sciences and Engineering Research Council of Canada, and the NWO of the Netherlands

Referee for numerous journals and conference proceedings

University

Rice Library Committee (2011-)

Rice ADVANCE committee on retention and recruitment (2007-2009)

University Teaching Committee (2002-2008), chair (2006-2007)

Mathematics Department committees: Current Mathematics Seminar fac-

ulty advisor (2001-03), Evans Instructor Appointments (2002-2006), Appointments (2003-2009), Colloquium faculty advisor (2004-05)

Leader, Computational Algebraic Geometry group of the Rice University VIGRE program, (2003-present)

Presentations

2011

University of British Columbia Colloquium: Arithmetic of K3 surfaces
Geometry Seminar: Birational geometry of holomorphic symplectic varieties

Show-Me Algebraic Geometry Meeting at the University of Missouri at Columbia: Families of quartic del Pezzo surfaces

Ramification in Algebra and Geometry at Emory conference: Families of quartic del Pezzo surfaces

FRG Workshop on Holomorphic symplectic varieties at the Courant Institute, New York University: Hodge classes in the cohomology of Kummer fourfolds

A Celebration of Algebraic Geometry (Joe Harris 60th birthday conference), Harvard University: Families of quartic del Pezzo surfaces

2010

University of Houston Complex geometry seminar: Birational geometry of holomorphic symplectic varieties

Rice University School Mathematics Project Colloquium: Projective Geometry, Finite and Infinite

five hours of lectures at the summer school ‘Aspects arithmétiques des courbes rationnelles’ at the Institut Fourier, University of Grenoble: Rational curves on K3 surfaces

Oberwolfach meeting in Classical Algebraic Geometry: Cohomology of generalized Kummer varieties and Lagrangian Planes in Holomorphic Symplectic Varieties

Complex Algebraic Geometry conference at the Centre Emile Borel - Institut Henri Poincaré (Paris): Constructing Rational Curves on K3 surfaces

Texas A&M Geometry seminar: Lagrangian planes on holomorphic symplectic varieties

‘Compact moduli and vector bundles’ at the University of Georgia, Athens: Lagrangian planes on holomorphic symplectic varieties

2009

Stanford Colloquium: Approximation and density results for varieties of low degree

MSRI workshop on Modern Moduli: Rational curves on K3 surfaces and their higher-dimensional analogs

University of North Carolina at Chapel Hill Algebraic Geometry Seminar: Rational curves on K3 surfaces; Colloquium: Approximation and density results for varieties of low degree

‘Classification of Algebraic Varieties’ at Schiermonnikoog, The Netherlands: Twisted stable varieties

MSRI program in algebraic geometry Closing Lectures: Rational points of varieties over function fields

Columbia University conference ‘Spaces of curves and their interaction with diophantine problems’: Rational curves on K3 surfaces

Presentation at Rice University School Mathematics Project Mathematics Leadership Institute: Hilbert’s Tenth Problem or Undecidable Problems in Algebra

American Institute of Mathematics workshop ‘Rational curves and \mathbb{A}^1 homotopy’: Introduction to rationally connected varieties

Western Algebraic Geometry Symposium at UCLA: Birational geometry of holomorphic symplectic varieties

2008

Emory University Colloquium: Approximation results for varieties of low degree

University of Illinois at Chicago: Algebraic Geometry Seminar: Density of integral points over function fields

Special session in Birational Algebraic Geometry at the AMS sectional meeting in Bloomington Indiana: Flops and ample cones of holomorphic symplectic fourfolds

Princeton Algebraic Geometry Seminar: Towards a canonical model for the moduli space of curves

École Normale Supérieure Séminaire ‘Birational geometry’: Birational models of moduli spaces and geometric invariant theory

Université Louis Pasteur Strasbourg, Etats de la Recherche 2008 de la Société Mathématique de France ‘Variétés rationnellement connexes: aspects géométriques et arithmétiques’: Minicourse on Weak approximation over function fields

Oberwolfach meeting in Classical Algebraic Geometry: Rational curves on holomorphic symplectic varieties

De Giorgi Center at the Scuola Normale Superiore in Pisa, Italy, ‘Aspects of Moduli’ conference: Birational models of moduli spaces and geometric invariant theory

University of Michigan at Ann Arbor Colloquium: Approximation results for varieties of low degree; Student seminar: What is a K3 surface?; Algebraic geometry seminar: Rational curves on holomorphic symplectic varieties

University of Arizona at Tucson Colloquium: Approximation and density results for varieties of low degree

2007

University of Georgia Algebraic Geometry Seminar: Towards a canonical model for the moduli space of curves

University of Georgia Colloquium: Approximation results for varieties of low degree

University of Texas at Austin GADGET/Geometry Seminar: Rational points on K3 surfaces over function fields

CalTech Algebraic Geometry Seminar: Approximation for rationally connected varieties over function fields of curves

École Normale Supérieure Séminaire ‘Géométrie et Groupes’: Towards a canonical model for the moduli space of curves

Institut de Mathématiques de Jussieu Séminaire de géométrie algébrique: Rational points on K3 surfaces over function fields

Rice University School Mathematics Project, Mathematics Leadership Institute: Eccentricity, an algebraic geometer’s approach to conic sections

NATO Advanced Studies Institute ‘Geometry over finite fields’, University of Göttingen: K3 surfaces

Max-Planck-Institut für Mathematik, Bonn: Flops and ample cones of holomorphic symplectic fourfolds

Texas A&M College Station Geometry Seminar: Ample divisors on the moduli space of stable pointed rational curves and its contractions

Society for the Advancement of Chicano and Native American Scientists annual meeting in Kansas City: MSRI Workshop on Modern Mathematics—Finding rational curves through prescribed points; Undergraduate Mini-Course—Calculus of analytic critical points

SUNY Stony Brook Algebra, Geometry and Physics Seminar: Flops and ample cones of holomorphic symplectic fourfolds

Harvard/MIT Algebraic Geometry Seminar: Density of integral points over function fields

2006

Introductory Workshop for ‘Rational and Integral Points on Higher-Dimensional Varieties’ at MSRI, Berkeley: Rationally connected varieties; Potential density of rational points

Berkeley Algebraic Geometry Seminar: Compact moduli spaces for surfaces

of general type

U.T. Austin Geometry Seminar: Sections of rationally connected fibrations through prescribed points

Rice Undergraduate Mathematics Conference on Algebraic Geometry: Introduction to algebraic geometry and applications

Texas Geometry and Topology Conference, University of Houston: Compact moduli spaces for surfaces of general type

Géométrie Algébrique en Liberté at Bedlewo, Poland: Potential density (lecture series)

‘Recent Developments in Higher Dimensional Algebraic Geometry’ at Johns Hopkins University: Towards a canonical model for the moduli space of curves

Oberwolfach meeting in Classical Algebraic Geometry: Approximation for rationally connected varieties

Clay summer school on ‘Arithmetic Geometry’ in Göttingen: Rational surfaces over algebraically closed fields; Effective cones of rational surfaces; Rational surfaces over non-closed fields; Singular Del Pezzo surfaces; Cox rings and universal torsors (lecture series)

University of Hannover Seminar: Rational points on K3 surfaces over function fields

Harvard/MIT Algebraic Geometry Seminar: Towards a canonical model for the moduli space of curves

Princeton Algebraic Geometry Seminar: Approximation for rationally connected varieties over function fields of curves

International Conference in Geometry, Chinese University of Hong Kong: Sections of rationally connected fibrations through prescribed points

Workshop on Geometry, Chinese University of Hong Kong: Towards a canonical model for the moduli space of curves

2005

Texas A&M Geometry Seminar: Sections of rationally connected fibrations through prescribed points

Séminaire d'Arithmétique et de Géométrie Algébrique, Université Paris-Sud: Moduli spaces of weighted pointed stable curves

École Normale Supérieure Séminaire 'Variétés rationnelles': Weak approximation for rationally connected varieties over function fields

Rice Colloquium: Interpolation in algebraic geometry

University of Hannover: Towards a canonical model for the moduli space of curves

Algebraic Geometry Boot Camp in Seattle: Density of Rational Points

AMS Summer Institute in Algebraic Geometry: Weak approximation for rationally connected varieties over function fields of curves; Density of rational points on K3 surfaces

Rice Department of Computational and Applied Mathematics Colloquium: Interpolation problems in algebraic geometry

MIT/Harvard Algebraic Geometry Seminar: Rational points of K3 surfaces over function fields

University of Miami Winter School 'Algebraic, Symplectic and Arithmetic Geometry': Weak approximation for rationally connected varieties over function fields of curves

2004

Brown University Geometry Seminar: Towards a canonical model for the moduli space of curves

Conference 'Diophantine Geometry' at the Mathematisches Institut, Göttingen: Equations of universal torsors and Cox rings I,II

Oberwolfach meeting in Classical Algebraic Geometry: Towards a canonical model for the moduli space of curves

Informal talk at American Institute of Mathematics workshop on Compact Moduli Spaces and Birational Geometry: Putting a twist on stable varieties

2003

Texas Geometry and Topology Conference, University of Houston: Flipping the moduli space of curves

Berkeley-Stanford Joint Algebraic Geometry Seminar: Towards a canonical model for the moduli space of curves

U.T. Austin Geometry Seminar: Towards a canonical model for the moduli space of curves

Chinese University of Hong Kong, Institute of Mathematical Sciences: Pointed rational curves and branched coverings (four expository lectures)

Australia National University, Special Year on Algebraic Geometry and Topology, Minimal Models Activity: Towards a canonical model for the moduli space of curves

U.T. Austin Algebra Seminar: Equations of universal torsors and Cox rings

Pacific Northwest Algebraic Geometry Seminar, Bellingham, Washington: Towards a canonical model for the moduli space of curves

Texas Christian University Colloquium: Compactifications of the moduli space of curves: old and new

Columbia University Algebraic Geometry Seminar: Towards a canonical model for the moduli space of curves

University of Miami Winter School 'Geometric Methods in Algebra and Number Theory': Towards a canonical model for the moduli space of curves

2002

Princeton Algebraic Geometry Seminar: On the effective cones of moduli spaces

SUNY Buffalo Colloquium: Rationality in algebraic geometry

University of Washington Colloquium: Density of rational points on K3 surfaces

ABC-KLM Network, Cambridge University: Moduli spaces of curves and the

minimal model program—On the effective cone of the moduli space of curves

Oberwolfach meeting on Classical Algebraic Geometry: Moduli spaces of curves and the minimal model program—On the effective cone of the moduli space of curves

University of Pennsylvania Algebra Seminar: Flipping the moduli space of curves

Duke University Algebraic Geometry Seminar: Flipping the moduli space of curves

University of Arizona conference ‘Geometry and Topology of Quotients’: Flipping the moduli space of curves

American Institute of Mathematics conference ‘Rational and integral points on higher-dimensional varieties’: Equations of universal torsors; Weak approximation for function fields

2001

University of Hong Kong Workshop in Algebraic Geometry: Moduli of log surfaces and plane curve singularities

‘Perspectives of Mathematical Research in China for the 21st Century’ at the Chinese University of Hong Kong: Moduli spaces and the minimal model program

National University of Singapore and Japanese Society for the Promotion of Science Workshop on Algebra ‘Singapore-Warwick Workshop in Geometry & Topology’: Moduli spaces and the minimal model program

Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences ‘Higher dimensional varieties and rational points’ Instructional Conference: Density of rational points on K3 surfaces and their symmetric products (three lecture series)

University of Houston Colloquium: Rational points and geometry

Pacific Institute of Mathematical Sciences Seminar in Algebraic Geometry at Western Washington University: Moduli spaces and the minimal model program

University of Washington Algebra Seminar: Elementary constructions of moduli spaces of curves

Rice University Geometry and Analysis Seminar: Compact moduli spaces for surfaces of general type

Columbia University Algebraic Geometry Seminar: Moduli spaces and the minimal model program

Harvard/MIT Algebraic Geometry Seminar: Moduli spaces and the minimal model program

2000

University of Texas at Austin Colloquium: The locus of rational cubic hypersurfaces

University of North Carolina at Chapel Hill Colloquium: The locus of rational cubic hypersurfaces

Rice University Colloquium: The locus of rational cubic hypersurfaces

University of Utah Colloquium: The locus of rational cubic hypersurfaces

University of Michigan Seminar: Ample divisors on holomorphic symplectic fourfolds

Invited talk in the Algebraic Geometry Session at AMS meeting in South Bend, Indiana: Moduli spaces of weighted pairs

Invited talk in Singularities Session at AMS meeting in South Bend, Indiana: Simple plane curve singularities and log canonical thresholds

Hong Kong University of Science and Technology Geometry Seminar: Moduli of weighted pairs

National Center for Theoretical Sciences at Tsinghua University, Hsinchu Taiwan: Moduli of Weighted pairs (lecture series)

Chinese University of Hong Kong Complex Geometry Seminar: Cubic fourfolds, K3 surfaces, rationality, and unirationality (three lectures)

Chinese University of Hong Kong Colloquium: Rational points on algebraic

surfaces

Hua Loo-Keng Memorial Conference in Beijing: Birational transformations of moduli spaces of weighted pairs

1999

University of Illinois at Chicago Seminar: Equivariant Compactifications of Vector Groups

Institut Henri Poincaré–Centre Émile Borel, Diophantine Geometry Program: The geometry of equivariant compactifications of the additive group

UC Santa Barbara Seminar: Equivariant compactifications of the additive group

Harvard Algebraic Geometry Seminar: Moduli of stable log surfaces

MIT Algebraic Geometry Seminar: Equivariant compactifications of the additive group

University of Chicago Algebraic Geometry Seminar: Equivariant compactifications of the additive group

Western Algebraic Geometry Seminar at the University of Utah: Limits of plane curves and moduli of log surfaces

AMS meeting at Austin Texas: Rational curves on holomorphic symplectic manifolds, with applications to rational points and rationality problems

University of Texas at Austin Geometry Seminar: Ample divisors on holomorphic symplectic fourfolds

Luminy Conference ‘Points rationnels des variétés algébriques’: Rational curves on holomorphic symplectic manifolds, with applications to rational points and rationality problems

University of Pennsylvania Algebra Seminar: Geometry and arithmetic of symmetric products of K3 surfaces

Princeton Algebraic Geometry Seminar: Ample divisors on holomorphic symplectic fourfolds

Northwestern Seminar: Rational points on symmetric products of K3 surfaces

Harvard/MIT Algebraic Geometry Seminar: Ample divisors on holomorphic symplectic fourfolds

1998

University of Chicago Algebraic Geometry Seminar: Stable limits of plane curves

University of Illinois at Chicago Seminar: Limiting plane curves

Purdue University: Rational cubic fourfolds (lecture series)

University of Minnesota Seminar: Rational cubic fourfolds

Oberwolfach meeting on Classical Algebraic Geometry: Limits of plane curves and the minimal model program

National University of Singapore Seminar: Limits of plane curves and the minimal model program

Johns Hopkins University Seminar: Limits of plane curves and stable log surfaces

1997

Institut Mittag Leffler Colloquium: Cubic fourfolds and rationality

University of Illinois at Chicago Seminar: Cubic fourfolds and rationality

Midwest Algebraic Geometry Conference, Notre Dame: Limiting plane curves and the minimal model program

University of Missouri at Columbia, Commutative algebra/Algebraic Geometry Seminar: Rational cubic fourfolds

Boston University Algebra Seminar: Rational cubic fourfolds

Harvard Algebraic Geometry Seminar: Limiting plane curves and the minimal model program

Northwestern Algebraic Geometry Seminar: Limiting plane curves and the minimal model program

1996

University of Chicago Algebraic Geometry Seminar: Geography of cubic fourfolds

Columbia Algebraic Geometry Seminar: Geography of cubic fourfolds

University of Chicago Algebraic Geometry Seminar: Limiting plane curves

1995

Harvard Algebraic Geometry Seminar: Correlation for surfaces of general type

AMS Summer Conference in Algebraic Geometry, Santa Cruz: Correlation for surfaces of general type

Harvard Algebraic Geometry Seminar: Geography of cubic fourfolds

UCLA Algebraic Geometry Seminar: Geography of cubic fourfolds