

## CURRICULUM VITAE

### GAVRIL FARKAS

Professor of Mathematics  
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### Personal Information

Date of birth: March 19, 1973      Place of birth: Nagyvárad (Oradea), Romania  
Citizenship: Hungary, Romania

### Area of specialization

Algebraic geometry with connection to other fields especially topology and physics

### Positions

2007–: Humboldt Universität zu Berlin, Full Professor (W3)  
2006–2007: University of Texas at Austin, Associate Professor  
2004–2006: University of Texas at Austin, Assistant Professor (tenured 2006)  
2003–2004: Princeton University, Assistant Professor  
2000–2003: University of Michigan, Ann Arbor, Postdoc

### Education

1996–2000: Universiteit van Amsterdam, PhD June 2000  
Thesis: *The birational geometry of the moduli space of curves*. Adviser: G. van der Geer  
1995–1996: Mathematical Research Institute in the Netherlands, MSc in Mathematics  
1991–1995: “Babes-Bolyai” University, Kolozsvár (Cluj), Romania, Bachelor of Science in Mathematics, specialization: geometry and topology

### Other professional experience

- Harvard University: invited visitor, Sept.-Dec. 1998, Oct.-Dec. 1999
- Newton Institute, Cambridge UK: invited visitor, June-July 2002, Feb.-April 2011
- Korean Institute for Advanced Studies, Seoul: invited visitor, March-April 2005, Sept. 2009
- Mittag-Leffler Institute Stockholm: Visiting Professor, April-June 2007
- IMPA, Rio de Janeiro: Visiting Professor, January-February 2007
- MSRI Berkeley: Research Member, February-April 2009
- University of Georgia, Athens: Visiting Professor, March-April 2010
- Institut Henri Poincaré, Paris: Visiting Professor, April-May 2010

- Istituto Nazionale di Alta Matematica, Rome: Visiting Professor, Oct.-Dec. 2011
- Vietnamese Institute of Advanced Studies Hanoi: Visiting Professor, Feb. 2014
- Warwick University: Visiting Professor, Feb-March 2015
- Università di Roma Tre: Visiting Professor, October-December 2015

### Awards, grants and fellowships

- Ad Astra Prize for Excellence in Research 2014
- Project leader in the DFG Sonderforschungsbereich 647 *Raum-Zeit-Materie* (2009-2012 and 2013-2016)
- Principal Investigator in the DFG International Research Training Group 1800 *Moduli spaces and automorphic forms* Berlin-Amsterdam-Leiden (2012-2016)
- Principal investigator in the DFG Schwerpunkt 1489 *Algorithmische und Experimentelle Methoden in Algebra, Geometrie und Zahlentheorie* (2010-2013 and 2013-2016)
- Alfred P. Sloan Research Fellowship (2005-2008)
- National Science Foundation, research grant DMS-0500747 (2005-2008)
- National Science Foundation, research grant DMS-0140520 (2002-2005)
- Principal Investigator on the NSF Research Training Grant at the University of Texas at Austin (with D. Ben-Zvi, D. Freed, S. Keel and K. Uhlenbeck)
- Texas Summer Research Assignment 2006, Project: *Geometry of moduli spaces*
- Rackham Faculty Fellowship, University of Michigan, June-August 2001
- Special prize of the *Romanian Mathematical Society* at the Romanian Mathematics Olympiad, 1991
- Winner of the "Traian Lalescu" Mathematics Contest for Romanian undergraduate students in 1992 and 1993

### Editorial work

- 2013-: Managing Editor (with Y. Tschinkel) of the journal *Algebraic Geometry*, published by the Foundation Compositio Mathematica
- 2008-: Editor of *Documenta Mathematica*, the Journal of the German Mathematical Society
- 2008-: Editor of *Mathematica (Cluj)*, a journal of the Romanian Academy
- Editor (with I. Morrison) of the *Handbook of Moduli*, 3 volumes, Intl. Press 2013
- Editor (with C. Faber and R. de Jong) of the volume *Geometry and Arithmetic*, Series of Congress Reports 2012, European Mathematical Society

### Publications

- (1) *The generic Green-Lazarsfeld secant conjecture* (with M. Kemeny), *Inventiones Mathematicae* (2015) to appear, arXiv:1408.4164.
- (2) *The universal abelian variety over  $\mathcal{A}_5$*  (with A. Verra), *Annales Scientifique École Normale Supérieure* (2016) to appear, arXiv:1402.0539.
- (3) *Minimal resolutions, Chow forms of K3 surfaces and Ulrich bundles* (with M. Aprodu and A. Ortega), *Journal für die Reine und Angewandte Mathematik* (2016), to appear, arXiv:1212.6248.

- (4) *Singularities of moduli spaces of level curves* (with A. Chiodo), Journal of the European Mathematical Society (2016), to appear, arXiv:1205.0201.
- (5) *Restricted Lazarsfeld-Mukai bundles and canonical curves* (with M. Aprodu and A. Ortega), arXiv:1410.0857, to appear in a volume of Advanced Studies in Pure Mathematics (Math. Soc. Japan) on the occasion of Mukai's 60th birthday.
- (6) *The geometry of the moduli space of odd spin curves* (with A. Verra), Annals of Mathematics 180 (2014), 927-970.
- (7) *Syzygies of torsion bundles and the geometry of the level  $\ell$  modular variety over  $\overline{M}_g$*  (with A. Chiodo, D. Eisenbud and F.-O. Schreyer), Inventiones Mathematicae 194 (2013), 73-118.
- (8) *The classification of the universal Jacobian over the moduli space of curves*, (with A. Verra), Commentarii Mathematici Helvetici 88 (2013), 587-611.
- (9) *The universal theta divisor over the moduli space of curves* (with A. Verra), Journal Mathematiques Pures et Appliquées 100 (2013), 591-605.
- (10) *Singularities of theta divisors and the geometry of  $A_5$*  (with S. Grushevsky, R. Salvati-Manni and A. Verra), Journal of the European Mathematical Society 16 (2014), 1817-1848.
- (11) *Brill-Noether with ramification at unassigned points*, Journal of Pure and Applied Algebra 217 (2013), 1838-1843.
- (12) *The universal difference variety over  $\overline{M}_g$*  (with A. Verra), Rendiconti del Circolo Matematico di Palermo 62 (2013), 97-110.
- (13) *Effective divisors on moduli spaces* (with D. Chen and I. Morrison), *A celebration of algebraic geometry*, Clay Mathematical Proceedings, Volume 18, 131-169.
- (14) *Moduli of theta-characteristics via Nikulin surfaces*, (with A. Verra), Mathematische Annalen 354 (2012), 465-496.
- (15) *Higher rank Brill-Noether on sections of K3 surfaces* (with A. Ortega), International Journal of Mathematics 23 (2012), 1250075.
- (16) *Green's Conjecture for general covers* (with M. Aprodu), "Vector Bundles and Compact Moduli-Georgia 2010", Contemporary Mathematics Vol. 564, 2012, 211-226.
- (17) *Prym varieties and their moduli*, "Contributions to algebraic geometry" (P. Pragacz ed.), European Mathematical Society Congress Reports, 215-257, European Mathematical Society 2012.
- (18) *Theta characteristics and their moduli*, Milan Journal of Mathematics 80 (2012), 1-24.
- (19) *The Green Conjecture for smooth curves lying on arbitrary K3 surfaces* (with M. Aprodu), Compositio Mathematica 147 (2011), 839-851.
- (20) *The maximal rank conjecture and rank two Brill-Noether theory* (with A. Ortega), Pure and Applied Mathematics Quarterly 7 (2011), 1265-1296, special volume dedicated to the memory of E. Viehweg.
- (21) *Koszul cohomology with applications to moduli*, (with M. Aprodu) in: "Grassmannians, vector bundles and moduli", Clay Mathematical Society Proceedings, Volume 14 (2011), 25-50.
- (22) *Rational maps between moduli spaces of curves and Gieseker-Petri divisors*, Journal of Algebraic Geometry 19 (2010), 243-284.
- (23) *The Kodaira dimension of the moduli space of Prym varieties*, (with K. Ludwig), Journal of the European Mathematical Society 12 (2010), 755-795.

- (24) *The birational type of the moduli space of spin curves*, Advances in Mathematics 223 (2010), 433-443.
- (25) *Aspects of the birational geometry of  $\overline{\mathcal{M}}_g$* , in: "Geometry of Riemann surfaces and their moduli spaces", Surveys of Differential Geometry vol 14 (2010), 57-110.
- (26) *Brill-Noether geometry on the moduli space of spin curves*, in: "Classification of algebraic varieties-Schiermonnikoog 2009" 259-276 (C. Faber, G. van der Geer, E. Looijenga-eds), European Mathematical Society Congress Reports 2011.
- (27) *The Fermat cubic and special Hurwitz cycles on  $\overline{\mathcal{M}}_g$* , Bulletin of the Belgian Mathematical Society "Simon Stevin" 5 (2009), 831-851.
- (28) *Koszul divisors on moduli spaces of curves*, American Journal of Mathematics 131 (2009), 819-868.
- (29) *The global geometry of the moduli space of curves*, Summer Research Institute on Algebraic Geometry, Seattle (2005), Proceedings of Symposia in Pure Mathematics 80 (2009), 125-147.
- (30) *Higher ramification and varieties of secant divisors on the generic curve*, Journal of the London Mathematical Society 78 (2008), 418-440.
- (31) *Syzygies of curves and the effective cone of  $\overline{\mathcal{M}}_g$* , Duke Mathematical Journal 135 (2006), 53-98.
- (32) *Effective divisors on  $\overline{\mathcal{M}}_g$ , curves on K3 surfaces and the Slope Conjecture*, (with M. Popa), Journal of Algebraic Geometry 14 (2005), 241-267.
- (33) *Gaussian maps, Gieseker-Petri loci and large theta-characteristics*, J. reine angewandte Mathematik 581 (2005), 151-174.
- (34) *Divisors on  $\mathcal{M}_{g,g+1}$  and the minimal resolution conjecture for points on canonical curves*, (with M. Mustața and M. Popa), Annales Scientifique École Normale Supérieure 17 (2003), 553-581.
- (35) *The Mori cones of moduli spaces of pointed curves of small genus*, (with A. Gibney), Transactions of the American Mathematical Society 355 (2003), 1183-1199.
- (36) *Regular components of moduli spaces of stable maps*, Proceedings of the American Mathematical Society 131 (2003), 2027-2036.
- (37) *Brill-Noether loci and the gonality stratification of  $\mathcal{M}_g$* , J. reine angewandte Mathematik 539 (2001), 185-200.
- (38) *The geometry of the moduli space of curves of genus 23*, Mathematische Annalen 318 (2000), 43-65.
- (39) *The birational geometry of the moduli space of curves*, PhD Thesis (book, 85 pages), Universiteit van Amsterdam (2000).
- (40) *A multiplicity theorem in equivariant setting*, Mathematica 38 (1996), 221-226.
- (41) *On the completeness of Riemannian manifolds* (with Cs. Varga), Studia Univ. Babeş-Bolyai Math., 37 (1992), no.4, 95-101.
- (42) *Ljusternik-Schnirelmann theory on closed subsets of  $C^1$ -manifolds* (with Cs. Varga), Studia Univ. Babeş-Bolyai Math., 38 (1993), no.2, 75-89.

## Preprints

- (1) *The moduli space of twisted canonical divisors* (with R. Pandharipande), arXiv:1508.07940, submitted.
- (2) *The Prym-Green Conjecture for torsion line bundles of high order* (with M. Kemeny), arXiv:1509.07162, submitted.

- (3) *Prym varieties and moduli of polarized Nikulin surfaces* (with A. Verra), arXiv:1503.05967, submitted.
- (4) *Pointed Castelnuovo numbers* (with N. Tarasca), arXiv:1501.04882, submitted.
- (5) *The uniformization of the moduli space of principally polarized abelian 6-folds* (with V. Alexeev, R. Donagi, E. Izadi and A. Ortega), arXiv:1507.05710, submitted.
- (6) *The intermediate type of certain moduli spaces of curves* (with A. Verra), arXiv:0910.3905.
- (7) *Effective divisors on  $\overline{\mathcal{M}}_g$  and a counterexample to the Slope Conjecture*, (with M. Popa), math.AG/0209171.
- (8)  *$\overline{\mathcal{M}}_{22}$  is of general type*, preprint (2008).
- (9) *The effective cone of the moduli spaces of curves and the Slope Conjecture*, Max Planck Institute for Mathematics preprint based on talk at the *Mathematische Arbeitstagung* Bonn, June 2003.

### PhD Students

- (1) Paul Larsen, PhD 2010, *Applied Mori theory of the moduli space of rational pointed curves*, currently: Deutsche Bank Berlin
- (2) Nicola Tarasca, PhD 2012, *Geometric cycles in the moduli space of curves*, currently: Post-Doc at the University of Utah
- (3) Margherita Lelli-Chiesa, PhD 2012-*Gieseker-Petri divisors and Brill-Noether theory of  $K3$  sections*, currently: Post-Doc at Università di Roma Tre
- (4) Fabian Müller, PhD 2013-*Models of moduli spaces of curves of small genus*, financed by the Priority Program 1489 of the DFG, currently: Zentralblatt Berlin
- (5) Gregor Bruns (2013-2016), financed by the Berlin Mathematical School
- (6) Emre Sertöz (2013-2016), financed by the GRK 1800 Berlin-Amsterdam-Leiden
- (7) Irfan Kadiköylü (2014-2016), financed by the Berlin Mathematical School
- (8) Daniele Agostini (2014-2017), financed by the GRK 1800 Berlin-Amsterdam-Leiden
- (9) Ignacio Reyes (2015-2017), financed by the Einstein Stiftung Berlin
- (10) Mara Ungureanu (2015-17)

### Postdoctoral fellows

- (1) 2005-2007: Deepak Khosla (PhD 2005, Harvard University with J. Harris)  
Research mentoring at the University of Texas in Austin.
- (2) 2008-2012: Cristina Manolache (PhD 2008, SISSA Trieste with B. Fantechi)  
Position supported by the SFB 647 at the HU Berlin
- (3) 2009-2010: Michele Bolognesi (PhD 2006, Université de Nice with C. Pauly)  
Research mentoring, assistant position at HU Berlin
- (4) 2010-2013: Paul Larsen (PhD 2010, Humboldt Universität zu Berlin)  
Research mentoring, assistant position at HU Berlin
- (5) 2012-2013: Frank Gounelas (PhD 2012, Oxford University with V. Flynn)  
Research mentoring, position financed by the SFB 647 at HU Berlin
- (6) 2013-2016: Fabio Tonini (PhD 2013, Scuola Normale Sup. di Pisa with A. Vistoli)  
Position financed by the SFB 647 at HU Berlin
- (7) 2013-2016: Michael Kemeny (PhD 2015, Universität Bonn with D. Huybrechts)  
Research mentoring, position financed by the SPP 1489 at HU Berlin
- (8) 2013-2015: Jarod Alper (PhD 2008, Stanford University with R. Vakil)  
Humboldt Forschungstipendium at HU Berlin

- (9) 2013-2014: Alwaleed Kamel (PhD 2010, Saitama University with F. Sakai)  
Georg Foster Fellowship
- (10) 2014-2016: Benjamin Bakker (PhD 2011, Princeton University with R. Pandharipande)  
Position financed by the IRTG 1800 Berlin-Amsterdam-Leiden
- (11) 2014-2016: Jeremy Guere (PhD 20105, Universite de Paris Jussieu with A. Chiodo)  
Position financed by the Einstein Foundation Berlin
- (12) 2015-2016: Valentin Tonita (PhD 2011, University of California Berkeley with A. Givental)  
Position financed by the SFB 647 at HU Berlin

### Professional activities

Organization of numerous conferences and workshops, among them:

- Satellite Conference of the European Congress of Mathematics, July 2016, with K. Hulek, S. Müller-Stach and M. Schütt
- Oberwolfach Workshop *Classical Algebraic Geometry*, June 2016, with O. Debarre, D. Eisenbud and R. Vakil
- *Geometry of algebraic varieties*, October 2015, with A. Ortega, conference on the occasion of A. Verra's 65th birthday
- *Recent developments in algebraic and arithmetic geometry*, August 2015, Siena, with L. Chiantini, G. van der Geer and J. Kramer
- *Motivic invariants associated to K3 and abelian geometries*, February 2015, HU Berlin, with R. Pandharipande
- *Recent developments in algebraic and arithmetic geometry*, August 2014, Budapest, Rényi Kutatóintézet
- *K3 surfaces and their moduli*, May 2014, Schiermonnikoog, with C. Faber and G. van der Geer
- Oberwolfach Workshop *Classical Algebraic Geometry*, June 2014, with O. Debarre, D. Eisenbud and R. Vakil
- Oberwolfach Workshop *Moduli spaces in algebraic geometry*, January 2010 and February 2013, with D. Abramovich, L. Caporaso and S. Kebekus
- *Birational geometry and stability of moduli stacks*, January-February 2014, with I. Morrison, workshop at the Vietnamese Institute for Advanced Studies, Hanoi
- *Syzygies in Berlin*, Berlin, June 2013, with K. Altmann
- *Geometry and topology of moduli*, Berlin, Humboldt Universität, October 2012
- Banff BIRS Workshop *Syzygies in algebraic geometry with the exploration of a connection to string theory* August 2012, with L. Ein, D. Eisenbud and I. Peeva
- *Geometry and Arithmetic* (Schiermonnikoog 2010), on the occasion of Gerard van der Geer's 60th birthday, with C. Faber and R. de Jong
- *Complex Algebraic Geometry*, Berlin, Humboldt Universität, October 2009, on the occasion of H. Kurke's 70th birthday, with K. Altmann
- *Moduli*, Berlin, Humboldt Universität, August 2009, with J. Kramer
- Romanian-German Conference in Algebraic Geometry, Sibiu/Hermannstadt, May 2009, with M. Aprodu
- Warwick Algebraic Geometry Symposium (2007-2008), with A. Corti, S. Mukai and M. Reid

- Co-organizer of the Northern German Algebraic Geometry Seminar (NoGAGS), as of 2007
- Organizer of the Princeton Algebraic Geometry Seminar (2003-2004)
- Co-organizer of the Texas Algebraic Geometry Seminar (2005-2007)
- *Curves and their moduli*, University of Michigan, Ann Arbor, March 2002, with A. Gibney and T. Nevins

#### Service:

- Member of the *Executive Board* and of the *Admissions Committee* of the Berlin Mathematical School
- Member of the Jury for the annual *Euler Vorlesung* at the Neues Palais in Potsdam (as of 2015).
- I have reviewed numerous times proposals submitted to the national funding agencies in USA (NSF), Germany (DFG), Chile, Italy, Poland, Portugal, Romania, Russia, Sweden, Switzerland and The Netherlands
- Senior speaker at GAEL 2009 (*Géométrie Algébrique en Liberté*), Leiden, June 2009
- Invited series of lectures at numerous schools including Cologne (August 2006), Lisbon (September 2011), Daejeon (January 2007 and March 2013), Rio de Janeiro (February 2007), Hamburg (August 2013), Zacatecas (June 2006), Nordfjordeid (June 2012), Bedlewo (July 2010), Grenoble (June 2011), Stony Brook (July 2014), Guanajuato (March 2016)
- *Mentor* "Warm-Up Workshop for AMS Summer Institute in Algebraic Geometry", Seattle, July 2005
- *Mentor* "Algebraic Geometry: Presentations by Young Researchers" Snowbird, Utah, July 2004

#### Selected talks

- "Moduli spaces in geometry" CIRM Luminy, October 2015
- "AMS Summer Institute in Algebraic Geometry", Salt Lake City, July 2015
- "Mathematische Arbeitstagung", Bonn, June 2015
- "Applications of syzygies", Saarbrücken, July 2015, a conference to celebrate F.-O. Schreyer's 60th birthday
- "Minimal resolutions, Betti numbers and combinatorics", Edinburgh, May 2015
- "In onore di Guido Castelnuovo", Venice, Istituto Veneto di Arte, Letteri e Scienze, May 2015
- "Geometry over non-closed fields", Simons Foundation, Puerto Rico, March 2015
- "Tropical geometry in Europe", TU Berlin, March 2015
- "Algebraic geometry", Chinese Academy, Beijing, October 2014
- Joint meeting of the German and Polish Mathematical Societies, Poznan, September 2014
- "Algebraic geometry", ICM satellite conference, Daejeon, August 2014
- "Explicit moduli spaces and cryptography", Rennes, June 2014
- "Irreducible symplectic varieties and moduli", Lille, March 2014
- "Brill-Noether methods", Bonn, Hausdorff Center, March 2014
- "Weihnachtskonferenz Geometrie und Zahlentheorie", Karlsruhe, December 2013
- "AGNES, Boston, October 2013

- “Integrable systems and moduli spaces”, Banff, August 2013
- “Moduli spaces in algebraic geometry and physics” (3 lectures), Hamburg, August 2013
- “Algebraic Geometry”, Amsterdam, July 2013
- “Developments in moduli theory”, Kyoto, June 2013, a conference to celebrate S. Mukai’s 60th birthday
- “Tropical geometry in Europe”, Geneve, May 2013
- “Syzygies and moduli” (3 lectures), KAIST Daejeon, Korea, March 2013
- “Representation theory, homological algebra and free resolutions”, MSRI Berkeley, February 2013
- “Log minimal model program for moduli spaces”, American Institute for Mathematics, Palo Alto, December 2012
- “Texas Geometry and Topology”, Houston, Texas, November 2012
- “Algebraic and complex geometry”, Hannover, September 2012, a conference on the occasion of Klaus Hulek’s 60th birthday
- “Komplexe Analysis”, Mathematisches Forschungsinstitut Oberwolfach, August 2012
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, June 2012
- “Georgia Algebraic Geometry Symposium”, Athens, Georgia, May 2012
- GAEL XX+ Grenoble, June 2012, a conference to celebrate GAEL’s 20th anniversary
- “Geometry of moduli spaces”, Sophus Lie Center, Nordfjordeid, Norway, June 2012, a series of lectures together with M. Reinecke (Wuppertal) and C. Voisin (Paris)
- “Geometria delle Varieta Algebriche Turin, March 2012, a conference to celebrate A. Conte’s 70th birthday
- “Modular forms and moduli spaces”, CIRM Luminy, October 2011
- “Periods and moduli spaces”, Korean Institute of Advanced Studies, Seoul, September 2011
- “Topics in moduli theory” (4 lectures), Instituto Superior Tecnico, Lisbon, September 2011
- “A celebration of algebraic geometry”, Cambridge Massachusetts August 2011, a conference in honor of J. Harris’ 60th birthday
- “Moduli of Riemann surfaces”, Park City, Utah, July 2011
- The Seventh Congress of Romanian Mathematicians, Brasov, July 2011
- “Vector bundles on algebraic curves”, Isaac Newton Institute Cambridge, June 2011
- “Moduli of curves and Gromov-Witten theory”, Grenoble June-July 2011
- “Moduli spaces and moduli stacks”, New York, Columbia University, May 2011
- “Groups and Algebraic Geometry”, Erlangen, May 2011-a conference on the occasion of the retirement of W. Barth
- Cambridge-Oxford-Warwick Seminar, Cambridge March 2011
- “Géométrie algébrique complexe”, Luminy, January 2011
- “Classical Algebraic geometry”, Instituto Nazionale di Alta Matematica, Rome, February 2011



- Kinosaki Algebraic Geometry Symposium, Kinosaki (Japan), October 2010
- V Iberoamerican Congress on Geometry, Pucon (Chile), December 2010
- “Perspectives on algebraic varieties”, Levico Terme, a conference on the occasion of the 60th birthday of F. Catanese, C. Ciliberto and A. Verra, September 2010
- “Moduli and birational geometry”, Pohang (Korea), August 2010
- IMPANGA Summer School on Algebraic Geometry, Bedlewo (Poland), July 2010
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, June 2010
- Harvard-MIT Algebraic Geometry Seminar, March 2010.
- “After Carnival: An Algebraic Geometry Party”, Turin, February 2010.
- “Complex Algebraic geometry”, Seoul, September 2009.
- “Complex Algebraic geometry”, Mathematisches Forschungsinstitut Oberwolfach, August 2009
- “Classification of algebraic varieties” Schiermonnikoog, The Netherlands, May 2009.
- MSRI Main Seminar, Berkeley March 2009
- Invited plenary speaker at the annual meeting of the German Mathematical Society, Erlangen, September 2008
- “Algebraic stacks” Trento, Italy, September 2008
- “Komplexe Analysis”, Mathematisches Forschungsinstitut Oberwolfach, August 2008
- “Algebraic Geometry”, Institutul de Matematica al Academiei Romane, Bucharest, July 2008
- “Algebraic Geometry”, a satellite conference of the European Congress of Mathematicians, Leiden, July 2008
- “Aspects of moduli”, Pisa, Italy, June 2008
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, June 2008
- Princeton Algebraic Geometry Seminar, March 2008
- “Recent progress on moduli of curves”, Banff, Canada, March 2008
- “Moduli spaces of geometric and algebraic structures”, Bonn, January 2008
- “Algebraic geometry and commutative algebra”, Tokyo, December 2007
- “Complex Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, October 2007
- “Modular forms and moduli spaces”, St. Petersburg, Russia, July 2007
- “Linear series and subschemes”, Ghent, Belgium, April 2007
- “Moduli spaces” Mittag-Leffler Institute Djursholm, May 2007
- Summer course on “Moduli of curves” (7 lectures), IMPA Rio de Janeiro, February 2007
- Winterschool on Algebraic Curves, National Institute for Mathematical Sciences, Daejeon (Korea)-series of lectures, January 2007
- Workshop on Algebraic Geometry and its Applications, Sogang University, Seoul, January 2007
- Workshop on Vector Bundles, Clay Mathematics Institute, Cambridge, Massachusetts, October 2006

- “Meetkunde in de Herfsttij” (Geometry in autumn) Workshop, Leiden, The Netherlands, September 2006
- “Moduli spaces and combinatorics”, Banff, Canada, July 2006
- Cambridge-Oxford-Warwick Seminar, Oxford, June 2006.
- Invited Speaker, “Tópicos de geometria algebraica y temas afines” (4 lectures) Zacatecas, Mexico, June 2006
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, June 2006
- Algebraic Geometry Seminar, University of Chicago, January 2006
- Michigan-Ohio State Algebraic Geometry Meeting, Columbus, April 2006
- “Recent Trends in Higher Dimensional Algebraic Geometry”, Banff, Canada, April 2006
- Invited Speaker at the AMS Summer Institute in Algebraic Geometry, Seattle, July 2005
- Invited Speaker at the AMS/Taiwan Joint International Meeting, Taichung, Taiwan, December 2005
- Berkeley Algebraic Geometry Seminar, December 2005
- “Higher Dimensional Algebraic Varieties”, KIAS Workshop, Seoul, March 2005
- “Western Algebraic Geometry Seminar”, Seattle, March 2005
- “Texas Algebraic Geometry” Conference, Houston, May 2005
- “Cohomology of the Moduli Space of Curves” Conference, American Institute of Mathematics, March 2005
- “Compact Moduli Spaces” Conference, American Institute of Mathematics, December 2004
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, July 2004
- European Conference on Gromow-Witten invariants, Trieste, June 2004
- Third Ibero-American Congress of Geometry, Salamanca, June 2004
- Harvard-MIT Algebraic Geometry Seminar, March 2004
- “Higher Dimensional Algebraic Geometry” Conference, Taipei, March 2004
- Western Algebraic Seminar (WAGS), Vancouver, September 2003
- Mathematische Arbeitstagung, Bonn 2003
- “Geometry of Moduli Spaces”, Lille, June 2003
- Euroconference “Vector Bundles on Algebraic Curves”, Porto, July 2003
- Princeton Algebraic Geometry Seminar, April 2003
- “K-theory and Algebraic Cycles”, Miami University, Ohio, April 2003.
- Euroconference “Vector Bundles on Algebraic Curves”, Luminy, Marseille, July 2002
- Europroj conference “Higher Dimensional Complex Geometry”, Newton Institute, Cambridge, June 2002
- “Classical Algebraic Geometry”, Mathematisches Forschungsinstitut Oberwolfach, May 2002
- Newton Institute, Cambridge, Program on Higher Dimensional Complex Geometry, June 2002.
- Harvard-MIT Algebraic Geometry Seminar, February 2002

- Invited Special Session Talk at the AMS Sectional Meeting Ohio State University, Columbus, September 2001
- Europroj Algebraic Geometry Conference 2001, Norfjordeid, Norway, June 2001
- Europroj Annual Conference 1999, Kibutz Ma'agan, Israel, September 1999
- "Free Resolutions and Linear Systems", Bayreuth, July 1999
- Harvard-MIT Algebraic Geometry Seminar, November 1998
- European Summer School "Spaces with Singularities and Monopoles", Cluj (Koložsvár), July 1998
- Colloquium talks:
  - 2000: Universiteit van Amsterdam
  - 2002: University of Texas at Austin
  - 2003: University of British Columbia, Indiana University at Bloomington, University of California at Irvine, Penn State University, University of Illinois at Urbana-Champaign
  - 2004: Yale University, Rice University
  - 2005: University of Zürich, New Mexico State University, University of San Antonio
  - 2006: University of Georgia, Humboldt Universität zu Berlin, University of Warwick
  - 2007: University of Linnköping (Sweden)
  - 2008: Berlin Mathematical School, Universität Bonn
  - 2009: Ruprecht-Karls-Universität Heidelberg, Universität Hamburg, Université "Joseph Fourier"-Grenoble
  - 2010: Stony Brook, University of Georgia, Universität Freiburg, Seminario Matematico e Fisico di Milano, Johannes Gutenberg Universität Mainz
  - 2012: Leibniz Universität Hannover, Institute of Mathematics of the Romanian Academy
  - 2014: Ludwig-Maximilian Universität München
  - 2015: Babes-Bolyai University, Koložsvár (Cluj), Berlin Mathematical School
- Seminar talks:
  - USA: University of Chicago (2004, 2006), Harvard University (1999, 2002, 2004, 2010), University of Pennsylvania (2005, 2006), University of California-Berkeley (2005, 2009), Columbia University (2003), Johns Hopkins University (2003), Texas A&M University (2005, 2007), Stanford University (2004), University of Georgia (2006, 2010), University of Texas (2002), University of Illinois Urbana-Champaign (2003, 2004), Rice University (2004), Yale University (2004), Ohio State University (2006), University of Massachusetts at Amherst (2007), University of Michigan (2000, 2002, 2013), SUNY Stony Brook (2010)
  - Canada: University of British Columbia (2003, 2004)
  - Germany: Friedrich-Alexander Universität Erlangen-Nürnberg (2008), Universität Duisburg-Essen (2008, 2013), Universität Göttingen (2009), Universität des

Saarlandes (2009, 2013), Johannes Guttenberg Universiät Mainz (2010), Universität Bayreuth (2012), Max Planck Institute Bonn (2003, 2006, 2008), Universität Bonn (2015)

Spain: University of Barcelona (2008, 2015)

Italy: Università di Roma 3 (2008, 2011, 2013, 2014), Università di Genova (2010), Università di Roma 1 Sapienza (2011, 2014), Università di Roma 2 Tor Vergata (2011), Università di Milano (2010), Istituto Nazionale di Alta Matematica (2011), Università di Pavia (2013)

England: Cambridge University (2002, 2011), Warwick University (2006), Oxford University (2006)

France: Université Pierre et Marie Curie Paris 6 (2010), Université Joseph Fourier Grenoble (2009), Université de Bourgogne Dijon (2015)

Hungary: Rényi Kutatóintézet Budapest (2013)

The Netherlands: Universiteit Utrecht (1999), Universiteit van Amsterdam (1999, 2000, 2012, 2013, 2015), Universiteit Leiden (2006)

Switzerland: ETH Zürich (2011, 2013), Université de Genève (2013)

Sweden: Mittag-Leffler Institute (2007), KTH Stockholm (2011, 2012)

Korea: Sogang University (2009), KIAS Seoul (2005, 2009), KAIST Daejeon (2007, 2013)

Japan: University of Tokyo (2007)

Romania: Institutul de Matematica al Academiei Romane, Bucuresti (2012, 2015)

### **Languages**

English, German, Hungarian and Romanian