

CURRICULUM VITAE

Florin Ambro

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Personal

Born: April 2, 1972, Constanta, Romania
Citizenship: Romanian

Education

1995-1999 Johns Hopkins University, Baltimore USA
Ph.D. May 1999; Advisor: Vyacheslav V. Shokurov
M.A. May 1996
1990-1995 University of Bucharest, Romania
B.A. *summa cum laude* July 1995

Employment

12/18- Scientific Researcher I
Institute of Mathematics "Simion Stoilow" of the Romanian Academy
05/09-11/18 Scientific Researcher II
Institute of Mathematics "Simion Stoilow" of the Romanian Academy
05/08-04/09 Scientific Researcher III
Institute of Mathematics "Simion Stoilow" of the Romanian Academy
07/07-04/08 Scientific Researcher
Institute of Mathematics "Simion Stoilow" of the Romanian Academy
11/03-03/07 Twenty-First Century COE Kyoto Mathematics Fellow
RIMS, University of Kyoto, Japan
02/02-10/03 Marie Curie Research Fellow
University of Cambridge, UK
04/00-01/02 JSPS Research Fellow
University of Tokyo, Japan
09/99-03/00 Visiting Assistant Professor
University of California at Santa Barbara, USA
01/99-04/99 Substitute Teacher
Bryn Mawr High School, Baltimore, USA

Awards, grants

| | |
|-----------|--|
| 2016 | Simion Stoilow Prize of the Romanian Academy |
| 2011-2014 | CNCSIS Research Grant no. PN-II-RU-TE-2011-3-0097 |
| 2007-2008 | Partially supported by Grant CEx05-D11/04.10.05 |
| 2005-2007 | JSPS Research Grant no. 17740011 |
| 2002-2003 | Marie Curie Research Fellowship |
| 2000-2002 | JSPS Research Fellowship |
| 1998-1999 | Partially supported by NSF Grant DMS-9800807 |
| 1995-1999 | Graduate Student Fellowship of Johns Hopkins University |
| 1990-1995 | Undergraduate Scholarship of University of Bucharest |
| 1989 | 1st prize, "Spiru Haret" Mathematical Contest, Buzău |
| 1989 | 2nd prize, "Gheorghe Țițeica" Mathematical Contest, Râmnicu Vâlcea |
| 1988 | 2nd prize, "Gheorghe Țițeica" Mathematical Contest, Craiova |
| 1985 | 2nd prize, "Gheorghe Țițeica" Mathematical Contest, Craiova |
| 1985 | 2nd prize, National Mathematical Olympiad, Tulcea |

Research Interests

Algebraic Geometry. Classification theory, singularities.

Publications

1. *Successive minima of line bundles*, (Joint with A. Ito) Adv. Math. 365 (2020), 107045
2. *Minimal Models of Semi-log-canonical Pairs*, (Joint with J. Kollár), In: Moduli of K-stable Varieties. Codogni G., Dervan R., Viviani F. (eds), Springer INdAM Series, vol 31 (2019), pp 1 – 13
3. *An injectivity theorem II*, preprint arXiv:1804.06337 (2018)
4. *On toric face rings I*, European J. Math. 4(3) (2018), pp. 708 – 731
5. *On toric face rings II*, in *Multigraded Algebra and Applications*, V. Ene and E. Miller (Ed.), Springer Proceedings in Mathematics & Statistics 238 (2018), pp. 1 – 40
6. *Variation of log canonical thresholds in linear systems*, Int. Math. Res. Notices 14 (2016), pp. 4418 – 4448
7. *Cyclic covers and toroidal embeddings*, in Spitsbergen volume, F. Bogomolov et al (Ed.), Eur. J. Math. 2(1) (2016), pp. 9 – 44
8. *On representations by Egyptian fractions*, (Joint with M. Barcău) Rev. Roum. Math. Pures et Appl. 60(3) (2015), pp. 331 – 336
9. *An injectivity theorem*, Compos. Math. 150(6) (2014), pp. 999 – 1023

10. *Basic properties of log canonical centers*, in Classification of Algebraic Varieties, C. Faber, G. van der Geer, E. Looijenga (Ed.), EMS Series of Congress Reports, 2011, vol. 3, pp 38 – 48
11. *On the classification of toric singularities*, in Proceedings of the Conference on Combinatorial Commutative Algebra and Computer Algebra (Mangalia 2008), V. Ene and E. Miller (Ed.), Contemporary Mathematics 502 (2009), pp. 1 – 4.
12. *Recent advances in the theory of minimal models*, in Proceedings of the ICTAMI Conference (Alba Iulia 2007), D. Breaz (Ed.), Acta Universitatis Apulensis 15 (2008), pp. 9 – 17
13. *Non-plt techniques*, in Flips for 3-folds and 4-folds, A. Corti (Ed.), Oxford Lecture Ser. Math. Appl., 35, Oxford Univ. Press, Oxford, 2007, pp 163 – 170
14. *Asymptotically saturated toric algebras*, Tohoku Math. J., 59(1) (2007), pp. 39 – 55
15. *Restrictions of log canonical algebras of general type*, J. Math. Sci. Univ. Tokyo, 13 (2006), pp. 409 – 437
16. *The minimal log discrepancy*, in Proceedings of the Symposium “Multiplier ideals and arc spaces” (RIMS 2006), K. Watanabe (Ed.), RIMS Koukyuuroku 1550, pp. 121 – 130
17. *The set of toric minimal log discrepancies*, Cent. Eur. J. Math, 4(3) (2006), pp. 358 – 370
18. *Toric FGA algebras*, in Proceedings of Algebraic Geometry Symposium (Kinosaki 2005), A. Ishii (Ed.), pp. 15 – 18
19. *A semiampleness criterion*, J. Math. Sci. Univ. Tokyo, 12(3) (2005), pp. 445 – 466
20. *The moduli b-divisor of an lc-trivial fibration*, Compos. Math. 141(2) (2005), pp. 385 – 403
21. *The nef dimension of log minimal models*, in Proceedings of the Symposium on Hodge Theory, Degeneration and Complex Surfaces, Tagajo (2004), S. Usui (Ed.), pp. 272–283
22. *Nef dimension of minimal models*, Math. Ann. 330(2) (2004), pp. 309 – 322
23. *Shokurov’s boundary property*, J. Differential Geometry 67(2) (2004), pp. 229 – 255
24. *Inversion of adjunction for non-degenerate hypersurfaces*, Manuscripta Math. 111(1) (2003), pp. 43 – 49
25. *Quasi-log varieties*, in Birational Geometry: Linear systems and finitely generated algebras. A collection of papers. Iskovskikh, V.A. and Shokurov, V.V. (Ed.) Proceedings of Steklov Institute 240 (2003), pp. 220 – 239
26. *Notes after Shokurov’s pl-flips*, preprint 2001
27. *On the semi-continuity of minimal log discrepancies*, in Proceedings of Algebraic Geometry Symposium (Kinosaki 2000), K. Ohno (Ed.), pp. 191 – 195
28. *On minimal log discrepancies*, Math. Res. Lett., 6(5-6) (1999), pp. 573 – 580
29. *Ladders on Fano varieties*, J. Math. Sci, 94:1 (1999), pp. 1126 – 1135
30. *The adjunction conjecture and its applications*, PhD thesis 1999, math.AG/9903060
31. *The locus of log canonical singularities*, preprint 1998, math.AG/9806067

Conference Talks

1. "IMAR70", Bucharest, October 2019
2. "The Ninth Congress of Romanian Mathematicians", Galati, Romania, June 2019
3. "Birational Geometry and Fano varieties", Steklov Institute, Moscow, Russia, June 2019
4. "The 17th Affine Geometry Meeting", Kwansei Gakuin University, Osaka, Japan, March 2019
5. "Workshop on Birational Geometry and Related Topics", SCMS, Shanghai, November 2018
6. "The 26th National School on Algebra: Combinatorial structures in algebra and geometry", Constanta, August 2018
7. "The Shokurovs: workshop for birationalists", IBS Center for Geometry and Physics, Pohang, Korea, December 2017
8. "International Conference on Algebraic Geometry", YMSC, Tsinghua University, Beijing, December 2017
9. "Workshop on Birational Geometry", Laboratory of Algebraic Geometry, Higher School of Economics, Moscow, November 2017
10. "The Second Turkish-Romanian Mathematics Colloquium", Galatasaray University, Istanbul, October 2017
11. "Instruments of Algebraic Geometry", Bucharest, September 2017
12. "Stability, Boundedness and Fano varieties", BICMR, Beijing, August 2017
13. "Conference on Birational Geometry", Simons Foundation, New York, August 2017
14. "Workshop on Singularities, Linear Systems, and Fano Varieties", NCTS Taipei, April 2017
15. "2016 Pohang Mathematics Workshop", Busan, Korea, November 2016
16. "EMS Summer School on Multigraded Algebra and Applications", Moeciu de Sus, Romania, August 2016
17. "Workshop on Complex Projective Geometry", University of Bucharest, July 2016
18. "Conference on Positivity and Vanishing Theorems", Lille, June 2016
19. "Meeting of CNMB mathematicians", Ovidius University, Constanta, Romania, May 2016
20. "Workshop for Young Researchers in Mathematics", Ovidius University, Constanta, Romania, May 2016
21. "The first Romanian-Turkish mathematics colloquium", Ovidius University, Constanta, October 2015
22. "Workshop Collapsing Calabi-Yau manifolds", SCGP, Stony Brook, September 2015
23. "International Conference Mathematics & IT: Research and Education MITRE-2015", Moldova State University, Chisinau, July 2015
24. "Workshop Frontiers of rationality", Longyearbyen, Norway, July 2014

25. "Conference on Positivity, Vanishing Theorems and Applications", Lille, May 2014
26. "Mini Workshop on Birational Geometry", University of Tokyo, November 2013
27. "Anniversary Conference Faculty of Sciences - 150 years", Bucharest, August 2013
28. "Workshop on Complex Geometry", IMS, National University of Singapore, August 2013
29. "Algebraic Geometry Session, Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society", Alba Iulia, June 2013
30. "One Day Workshop on Algebraic Geometry", National Taiwan University, May 2013
31. "Workshop on Algebraic Geometry", Florence, Italy, September 2012
32. "Workshop on ACC for minimal log discrepancies and termination of flips", AIM, Palo Alto, USA, May 2012
33. "Workshop for Young Researchers in Mathematics", Ovidius University, Constanta, Romania, May 2012
34. "Symposium on Projective Algebraic Varieties and Moduli", Busan, Korea, February 2012
35. "The 19th National School on Algebra, Computer Algebra and Combinatorics", Univ. Ovidius-IMAR, September 2011
36. "French-Romanian Workshop on Complex Geometry", IMAR, Bucharest, July 2011
37. "Workshop for Young Researchers in Mathematics", Ovidius University, Constanta, Romania, May 2011
38. "7-th Bolyai-Gauss-Lobachevsky Conference", Cluj, Romania, July 2010
39. "Exploratory Workshop on Combinatorial Commutative Algebra and Computer Algebra", Mangalia, Romania, May 2008
40. "Workshop on Higher dimensional minimal model program", Warwick Mathematics Institute, UK, December 2007
41. "International Conference on Theory and Applications of Mathematics and Informatics", Alba Iulia, August 2007
42. Workshop "Hot Topics: Minimal and Canonical Models in Algebraic Geometry", MSRI, Berkeley, April 2007
43. Workshop "Multiplier ideals and arc spaces", RIMS, Kyoto, August 2006
44. Workshop "Numerical invariants of singularities and higher-dimensional algebraic varieties", American Institute of Mathematics, Palo Alto, August 2006
45. "Algebraic Geometry Symposium", Kinosaki, October 2005
46. 21st Century COE Workshop "Frontiers of Mathematics", RIMS, Kyoto, October 2005
47. "Singularity Theory and Commutative Algebra" Symposium, Hamanako, Japan, September 2005
48. "Algebraic Geometry Summer Seminar", Tambara, July 2005
49. "Workshop on Birational Geometry, Derived Categories and Singularities", Steklov Mathematical Institute, Moscow, June 2005

50. "Algebraic Geometry Summer Seminar", Kusatsu, July 2004
51. "Higher Dimensional Algebraic Geometry" Workshop, National Taiwan University, Taipei, March 2004
52. "Hodge theory, Degeneration and Complex Surfaces- Interaction between Algebraic Geometry with Topology" Symposium, Tagajo, Miyagi, Japan, March 2004
53. "Eager Annual Conference", Aussois, France, September 2003
54. "Special Year on Algebraic Geometry and Topology", Australian National University, Canberra, August 2003
55. "Workshop on Global Geometry of Algebraic Varieties", Universidad Complutense de Madrid, December 2002
56. "COW Seminar", University of Cambridge, September 2002
57. "EuroConference - Higher Dimensional Complex Geometry", Isaac Newton Institute for Mathematical Sciences, Cambridge, June 2002
58. "NOMADS meeting in Nottingham", Nottingham, April 2002
59. "Linear systems and finitely generated algebras" Seminar, Steklov Mathematical Institute, December 2001
60. "Algebraic Geometry Symposium", Kinosaki, October 2000
61. "Midwest Algebraic Geometry Conference", University of Missouri, October 1999
62. "Workshop on Singularities", Ohio State University, November 1998
63. "GAEL Conference", CIRM at Luminy, Marseille, March 1998

Seminar talks

1. Geometry Seminar, Université Claude Bernard Lyon 1, France, January 2019
2. Journée de l'équipe AGL, Château de Montchat, Lyon, January 2019
3. "Monthly lecture", IMAR, October 2018
4. The London Geometry and Topology Seminar, Imperial College London, March 2017
5. Department of Mathematics and Physics, Roma Tre University, Seminar of Geometry, February 2017
6. SCGP, Stony Brook, September 2015
7. IBS Center for Geometry and Physics (Pohang, Korea), Algebraic Geometry Seminar, November 2014, 2016
8. Colloquim, National Taiwan University, June 2013
9. Institute of Mathematics, Chinese Academy of Sciences, Beijing, March 2012, December 2017
10. Faculty of Mathematics, Higher School of Economics, Moscow, Laboratory of algebraic geometry and its applications, October 2011
11. Faculty of Mathematics, University of Bucharest, Algebra Seminar, May 2011
12. Imperial College London, MAGIC Seminar, March 2011

13. University of Strasbourg, Algebraic Geometry Seminar, October 2010
14. University of Freiburg, Algebraic Geometry Seminar, October 2010
15. Alexandru Ioan Cuza University, Iasi, Geometry Seminar, December 2009
16. Faculty of Mathematics, University of Bucharest, Seminar on Theory of Subvarieties, November 2009
17. Princeton University, Algebraic Geometry Seminar, October 2008
18. Johns Hopkins University, Algebraic Geometry-Number Theory Seminar, September 2008
19. KIAS (Seoul), Algebraic Geometry Seminar, January 2008
20. Sogang University, Workshop on Birational Geometry, January 2008
21. Ovidius University (Constanta), Algebra and Geometry Seminar, November 2007, April 2011, November 2012, December 2014, April 2016
22. University of Washington, Seattle, Algebra Seminar, January 2007
23. IMAR (Bucharest), Algebraic Geometry Seminar, December 2005, November 2007, February 2010, January, March, April, June 2011, October 2014, March 2016, February, March 2017, March 2018
24. Tohoku University (Sendai), Algebraic Geometry Seminar, November 2005, December 2006
25. Saitama University, Algebraic Geometry Seminar, July 2005
26. Tokyo Institute of Technology, Algebraic Geometry Seminar, January 2004, March 2005
27. Nihon University (Tokyo), Singularity Theory Seminar, January 2004, March 2005, November 2013
28. Tokyo University, Algebraic Geometry Seminar, May 2000, October 2001, June 2004, November 2013
29. University of Cambridge, Geometry Seminar, March 2003
30. University of Lille, Algebraic Geometry Seminar, October 2003
31. Osaka University, Algebraic Geometry Seminar, June 2001
32. National University of Singapore, Algebraic Geometry Seminar, February 2001
33. Kyoto University, Algebraic Geometry Seminar, June 2000, May 2004, October 2005, November 2006
34. University of Chicago, Algebraic Geometry Seminar, May 1999

Teaching experience

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|---------------|---|
| February 2012 | Institute of Mathematics, Chinese Academy of Sciences <i>Singularities in birational geometry</i> , A series of six lectures |
| Fall 2011 | SNS-B, IMAR <i>Introduction to Toric Varieties</i> - Instructor |
| October 2010 | University of Strasbourg, France |

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|-------------------|---|
| Spring 2009 | <i>The canonical bundle formula</i> , A series of six lectures Johns Hopkins University, USA |
| Fall 2008 | <i>Topics in Algebraic Geometry</i> - Instructor Johns Hopkins University, USA |
| January 2008 | <i>Calculus II</i> - Instructor Sogang University, Korea |
| Fall 2007 | <i>Stability of toric varieties</i> , A series of six lectures Ovidius University, Constanta |
| February 2005 | <i>Algebraic Geometry</i> - Instructor Pohang University of Science and Technology, Korea. <i>Introduction to the Minimal Model Program</i> , A series of six lectures delivered at the 6th Postech Algebraic Geometry Winter School |
| September 2003 | University of Bath, UK Tutorial support for Alessio Corti's LMS/EPSRC Short Course <i>Higher-dimensional geometry</i> |
| 1999-2000 | University of California at Santa Barbara, USA <i>Calculus II</i> , Fall, Winter 99-00 - Instructor <i>Introduction to Differential Equations</i> , Fall, Winter 99-00 - Instructor |
| 1999 | Bryn Mawr High School, Baltimore, US <i>AP Statistics</i> , Spring 99 - Substitute Teacher |
| 1996-1999 | Johns Hopkins University, USA <i>Linear Algebra</i> , Summer 99 -Instructor <i>Differential Equations with Applications</i> , Summer 97,98 - Instructor, Fall 97, 98, 99, Spring 98 - Teaching Assistant <i>Calculus II</i> , Spring 97 - Teaching Assistant <i>Honors Multivariable Calculus</i> , Spring 96 - Teaching Assistant |
| Miscellany | |
| Languages | Romanian (native), English (native level), Japanese (passed 2-kyu test) |
| PC skills | C, L ^A T _E X |