

# CURRICULUM VITAE

## Florin Ambro

Institutul de Matematică "Simion Stoilow"  
P.O.BOX 1-764  
RO-014700 București, România

Tel: (+40) 21-319-6506  
Fax: (+40) 21-319-6505  
florin.ambro@imar.ro

### Date personale

Născut: 2 Aprilie 1972, Constanța, Romania  
Cetățenie: Română

### Studii

1995-1999 Johns Hopkins University, Baltimore USA  
Ph.D. Mai 1999; coordonator științific: Vyacheslav V. Shokurov  
M.A. Mai 1996  
1990-1995 Facultatea de Matematică din București  
B.A. *summa cum laude* Iulie 1995; media de absolvire: 9.90

### Locuri de muncă

12.2018- Cercetător Științific I  
Institute of Mathematics "Simion Stoilow" of the Romanian Academy  
05.2009-11.2018 Cercetător Științific II  
Institute of Mathematics "Simion Stoilow" of the Romanian Academy  
05.2008-04.2009 Cercetător Științific III  
Institutul de Matematică "Simion Stoilow" al Academiei Române  
07.2007-04.2008 Cercetător Științific  
Institutul de Matematică "Simion Stoilow" al Academiei Române  
11.2003-03.2007 Twenty-First Century COE Kyoto Mathematics Fellow  
RIMS, University of Kyoto, Japan  
02.2002-10.2003 Marie Curie Research Fellow  
University of Cambridge, UK  
04.2000-01.2002 JSPS Research Fellow  
University of Tokyo, Japan  
09.1999-03.2000 Profesor asistent vizitator  
University of California at Santa Barbara, USA  
01.1999-04.1999 Profesor suplinitor  
Bryn Mawr High School, Baltimore, USA

### Granturi, premii

2016	Premiul Simion Stoilow al Academiei Romane
2011-2014	Grant de cercetare CNCSIS no. PN-II-RU-TE-2011-3-0097
2007-2008	Finanțat parțial de grantul CEx05-D11-11/04.10.05
2005-2007	Grant de cercetare JSPS nr. 17740011
2002-2003	Bursă de cercetare Marie Curie
2000-2002	Bursă de cercetare JSPS
1998-1999	Finanțat parțial de grantul NSF DMS-9800807
1995-1999	Bursă de studiu la Johns Hopkins University
1990-1995	Bursă de studiu la Universitatea București
1989	premiul 1, Concursul de matematică "Spiru Haret", Buzău
1989	premiul 2, Concursul de matematică "Gheorghe Țițeica", Râmnicu Vâlcea
1988	premiul 2, Concursul de matematică "Gheorghe Țițeica", Craiova
1985	premiul 2, Concursul de matematică "Gheorghe Țițeica", Craiova
1985	premiul 2, Olimpiada Națională de Matematică, Tulcea

### Tema principală de cercetare

Geometrie algebrică: clasificare birațională, singularități

### Publicații

1. *Successive minima of line bundles* (Joint with A. Ito), preprint arXiv:1901.09341 (2019)
2. *An injectivity theorem II*, preprint arXiv:1804.06337 (2018)
3. *Minimal models of semi-log-canonical pairs* (Joint with J. Kollár), preprint arXiv:1709.03540 (2017)
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(06) (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. *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
15. *Restrictions of log canonical algebras of general type*, J. Math. Sci. Univ. Tokyo, 13 (2006), pp. 409 – 437
16. *The set of toric minimal log discrepancies*, Cent. Eur. J. Math, 4(3) (2006), pp. 358 – 370
17. *Asymptotically saturated toric algebras*, Tohoku Math. J., 59(1) (2007), pp. 39 – 55
18. *Toric FGA algebras*, in Proceedings of Algebraic Geometry Symposium (Kinosaki 2005), A. Ishii (Ed.), pp. 15 – 18
19. *A semiample criterion*, J. Math. Sci. Univ. Tokyo, 12(3) (2005), pp. 445 – 466
20. *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
21. *The moduli b-divisor of an lc-trivial fibration*, Compos. Math. 141(2) (2005), pp. 385 – 403
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

### Expuneri la conferințe

1. "The 17th Affine Geometry Meeting", Kwansai Gakuin University, Osaka, Japan, March 2019
2. "Workshop on Birational Geometry and Related Topics", SCMS, Shanghai, November 2018
3. "The 26th National School on Algebra: Combinatorial structures in algebra and geometry", Constanta, August 2018
4. "The Shokurovs: workshop for birationalists", IBS Center for Geometry and Physics, Pohang, Korea, December 2017
5. "International Conference on Algebraic Geometry", YMSC, Tsinghua University, Beijing, December 2017
6. "Workshop on Birational Geometry", Laboratory of Algebraic Geometry, Higher School of Economics, Moscow, November 2017
7. "The Second Turkish-Romanian Mathematics Colloquium", Galatasaray University, Istanbul, October 2017
8. "Instruments of Algebraic Geometry", Bucharest, September 2017
9. "Stability, Boundedness and Fano varieties", BICMR, Beijing, August 2017
10. "Conference on Birational Geometry", Simons Foundation, New York, August 2017
11. "Workshop on Singularities, Linear Systems, and Fano Varieties", NCTS Taipei, April 2017
12. "2016 Pohang Mathematics Workshop", Busan, Korea, November 2016
13. "EMS Summer School on Multigraded Algebra and Applications", Moeciu de Sus, Romania, August 2016
14. "Workshop on Complex Projective Geometry", University of Bucharest, July 2016
15. "Conference on Positivity and Vanishing Theorems", Lille, June 2016
16. "Meeting of CNMB mathematicians", Ovidius University, Constanta, Romania, May 2016
17. "Workshop for Young Researchers in Mathematics", Ovidius University, Constanta, Romania, May 2016
18. "The first Romanian-Turkish mathematics colloquium", Ovidius University, Constanta, October 2015
19. "Workshop Collapsing Calabi-Yau manifolds", SCGP, Stony Brook, September 2015
20. "International Conference Mathematics & IT: Research and Education MITRE-2015", Moldova State University, Chisinau, July 2015
21. "Workshop Frontiers of rationality", Longyearbyen, Norway, July 2014
22. "Conference on Positivity, Vanishing Theorems and Applications", Lille, May 2014
23. "Mini Workshop on Birational Geometry", University of Tokyo, November 2013
24. "Anniversary Conference Faculty of Sciences - 150 years", Bucharest, August 2013
25. "Workshop on Complex Geometry", IMS, National University of Singapore, August 2013

26. "Algebraic Geometry Session, Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society", Alba Iulia, June 2013
27. "One Day Workshop on Algebraic Geometry", National Taiwan University, May 2013
28. "Workshop on Algebraic Geometry", Florence, Italy, September 2012
29. "Workshop on ACC for minimal log discrepancies and termination of flips", AIM, Palo Alto, USA, May 2012
30. "Workshop for Young Researchers in Mathematics", Ovidius University, Constanta, Romania, May 2012
31. "Symposium on Projective Algebraic Varieties and Moduli", Busan, Korea, February 2012
32. "The 19th National School on Algebra, Computer Algebra and Combinatorics", Univ. Ovidius-IMAR, September 2011
33. "French-Romanian Workshop on Complex Geometry", IMAR, Bucharest, July 2011
34. "Workshop for Young Researchers in Mathematics", Ovidius University, Constanta, Romania, May 2011
35. "7-th Bolyai-Gauss-Lobachevsky Conference", Cluj, Romania, July 2010
36. "Exploratory Workshop on Combinatorial Commutative Algebra and Computer Algebra", Mangalia, Romania, May 2008
37. "Workshop on Higher dimensional minimal model program", Warwick Mathematics Institute, UK, Decembrie 2007
38. International Conference on Theory and Applications of Mathematics and Informatics, Alba Iulia, August 2007
39. Workshop "Hot Topics: Minimal and Canonical Models in Algebraic Geometry", MSRI, Berkeley, April 2007
40. Workshop "Multiplier ideals and arc spaces", RIMS, Kyoto, August 2006
41. Workshop "Numerical invariants of singularities and higher-dimensional algebraic varieties", American Institute of Mathematics, Palo Alto, August 2006
42. "Algebraic Geometry Symposium", Kinosaki, October 2005
43. 21st Century COE Workshop "Frontiers of Mathematics", RIMS, Kyoto, October 2005
44. "Singularity Theory and Commutative Algebra" Symposium, Hamanako, Japan, September 2005
45. "Algebraic Geometry Summer Seminar", Tambara, July 2005
46. "Workshop on Birational Geometry, Derived Categories and Singularities", Steklov Mathematical Institute, Moscow, June 2005
47. "Algebraic Geometry Summer Seminar", Kusatsu, July 2004
48. "Higher Dimensional Algebraic Geometry" Workshop, National Taiwan University, Taipei, March 2004
49. "Hodge theory, Degeneration and Complex Surfaces- Interaction between Algebraic Geometry with Topology" Symposium, Tagajo, Miyagi, Japan, March 2004

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

#### **Expuneri la seminar**

1. Geometry Seminar, Université Claude Bernard Lyon 1, France, January 2019
2. Journée de l'équipe AGL, Château de Montchat, Lyon, January 2019
3. Conferinta lunara, 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. Colloquim, National Taiwan University, June 2013
7. Institute of Mathematics, Chinese Academy of Sciences, Beijing, March 2012, December 2017
8. Faculty of Mathematics, Higher School of Economics, Moscow, Laboratory of algebraic geometry and its applications, October 2011
9. Faculty of Mathematics, University of Bucharest, Algebra Seminar, May 2011
10. Imperial College London, MAGIC Seminar, March 2011
11. University of Strasbourg, Algebraic Geometry Seminar, October 2010
12. University of Freiburg, Algebraic Geometry Seminar, October 2010
13. Alexandru Ioan Cuza University, Iasi, Geometry Seminar, December 2009
14. Faculty of Mathematics, University of Bucharest, Seminar on Theory of Subvarieties, November 2009
15. Princeton University, Algebraic Geometry Seminar, October 2008
16. Johns Hopkins University, Algebraic Geometry-Number Theory Seminar, September 2008

17. KIAS (Seoul), Algebraic Geometry Seminar, January 2008
18. Sogang University, Workshop on Birational Geometry, January 2008
19. Ovidius University (Constanta), Algebra and Geometry Seminar, November 2007, April 2011, November 2012, December 2014, April 2016
20. University of Washington, Algebra Seminar, January 2007
21. IMAR (Bucharest), Algebraic Geometry Seminar, December 2005, November 2007, February 2010, January 2011, March 2011, April, June 2011, October 2014, March 2016, February, March 2017, March 2018
22. Tohoku University, Algebraic Geometry Seminar, November 2005, December 2006
23. Saitama University, Algebraic Geometry Seminar, July 2005
24. Tokyo Institute of Technology, Algebraic Geometry Seminar, January 2004, March 2005
25. Nihon University, Singularity Theory Seminar, January 2004, March 2005, November 2013
26. Tokyo University, Algebraic Geometry Seminar, May 2000, October 2001, June 2004, November 2013
27. University of Cambridge, Geometry Seminar, March 2003
28. University of Lille, Algebraic Geometry Seminar, October 2003
29. Osaka University, Algebraic Geometry Seminar, June 2001
30. National University of Singapore, Algebraic Geometry Seminar, February 2001
31. Kyoto University, Algebraic Geometry Seminar, June 2000, May 2004, October 2005, November 2006
32. University of Chicago, Algebraic Geometry Seminar, May 1999

### **Experiență de predat**

- |                |  |
|----------------|--|
| Februarie 2012 | Institute of Mathematics Chinese Academy of Sciences<br><i>Singularities in birational geometry</i> , A series of six lectures |
| Toamna 2011    | SNS-B, IMAR<br><i>Introduction to Toric Varieties</i> - Instructor   |
| Octombrie 2010 | University of Strasbourg, France.<br><i>The canonical bundle formula</i> , A series of six lectures                            |
| Primavara 2009 | Johns Hopkins University, SUA<br><i>Topics in Algebraic Geometry</i> - Instructor  |
| Toamna 2008    | Johns Hopkins University, SUA<br><i>Calculus II</i> - Instructor   |
| Januarie 2008  | Sogang University, Korea.<br><i>Stability of toric varieties</i> , A series of six lectures                                    |
| Toamna 2007    | Universitatea Ovidius, Constanta   |

	Geometrie Algebrică - Instructor
Februarie 2005	Pohang University of Science and Technology, Korea. <i>Introduction to the Minimal Model Program</i> . O serie de șase lecții susținută la Școala de Iarnă Postech de Geometrie Algebrică
Septembrie 2003	University of Bath, UK Suport tutorial pentru cursul <i>Higher-dimensional geometry</i> , susținut de Alessio Corti
1999-2000	University of California at Santa Barbara <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 - Profesor suplinitor
1996-1999	Johns Hopkins University <i>Linear Algebra</i> , Summer 99 - Instructor <i>Differential Equations with Applications</i> , Summer 97,98 - Instructor, Fall 97, 98, 99, Spring 98 - Asistent de predare <i>Calculus II</i> , Spring 97 - Asistent de predare <i>Honors Multivariable Calculus</i> , Spring 96 - Asistent de predare

### Referate

Adv. in Math., Asian J. Math., Cent. Eur. J. Math., Compos. Math., Invent. Math., J. Differ. Geom., J. Lond. Math. Soc., J. Math. Sci. U. Tokyo, J. Pure and Applied Algebra

### Diverse

Limbi străine      Engleză (fluent), Japoneză (nivel 2-kyu)  
Programare        C, L<sup>A</sup>T<sub>E</sub>X