ROBERTO SVALDI: Curriculum Vitae

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CURRENT POSITION

Ricercatore a tempo determinato di tipo B (RTDB) and **Rita Levi Montalcini Fellow**. 09.2022-present
Università degli Studi di Milano, Dipartimento di Matematica “F. Enriques”.
The position of RTDB is a 3-year tenure-track position in the Italian system.
As a Montalicini Fellow, I have been carrying out research on my project “From birational geometry to its applications: Minimal Model Program, moduli spaces, and algebraic foliations” since 15.12.2022.

EMPLOYMENT HISTORY

Bernoulli Instructor and **Marie Curie Fellow**. 07.2019-08.2022
École polytechnique fédérale de Lausanne, Institut de Mathématiques.
The position of Bernoulli Instructor at EPFL is comparable to a fixed-term Lectureship or to an Assistant Professorship without tenure-track.
As a Marie Curie Fellow, hosted by the Chair of Algebraic Geometry, I carried out research on my project “Moduli and boundedness problems in Algebraic Geometry” from 01.07.2019 to 31.12.2021.

University Research Fellow. 09.2015-06.2019
University of Cambridge, Department of Pure Mathematics and Mathematical Statistics.
Visiting Scholar at SISSA during academic year 2016-17.
The University Research Fellowship is comparable to an independent postdoc position.

Fellow and College Lecturer in Pure Mathematics. 10.2015-06.2019
Churchill College, Cambridge.
Visiting Scholar at SISSA during academic year 2016-17.

Assegnista di ricerca (Post-Doc). 10.2016-09.2017
Scuola Internazionale di Sstudi Superiori Avanzati, Area di Matematica.
Supervisor: Prof. Jacopo Stoppa. Funded under ERC Starting Grant no. 307119.
I visited Professor Jacopo Stoppa at SISSA Trieste as part of a collaboration at the interface between birational algebraic geometry and complex geometry focused on the study of Kähler–Einstein metrics on algebraic varieties.

RESEARCH INTERESTS

Minimal Model Program and its applications.
Birational geometry of Calabi–Yau and Fano varieties with applications to physics.
Boundedness questions in algebraic geometry and their topological implications.
The topology of singularities in algebraic geometry and interactions with physics.
Holomorphic foliations and dynamics on projective varieties.
Toric geometry and toroidal compactifications.
Hyperbolicity questions in algebraic geometry.

EDUCATION

Ph. D. in Mathematics. 09.2010-06.2015
Massachusetts Institute of Technology, Department of Mathematics.
Thesis: "*Log geometry and extremal contractions*". Thesis defended on 27,03.2015.
Advisor: Prof. J. M^{c}Kernan.

Laurea Specialistica in Matematica (equivalent of M.S. in Mathematics). 09.2008-05.2010
Università degli Studi di Roma 3, Faculty of Sciences.
Thesis: "*On the cohomology algebras of compact Kähler manifolds and the Kodaira problem*".
Advisor: Prof. L. Caporaso.
Graduated on 19.05.2010, with grade 110/110 cum laude.

Laurea Triennale in Matematica (equivalent of B.S. in Mathematics). 10.2005- 09.2008
Università degli Studi di Pavia, Faculty of Sciences.
Thesis: "*Riemann's singularity theorem*".
Advisor: Prof. M. D. T. Cornalba.
Graduated on 16.09.2008 with grade 110/110 cum laude.

AWARDS, FELLOWSHIPS, GRANTS, HABILITATIONS, SCHOLARSHIPS

Awards

Federigo Enriques Prize, 2016, €2000. 03.2017
Awarded by Unione Matematica Italiana and Fondazione Federigo Enriques.

Research grants obtained as PI

PSR Grant, PI, €24000. 08.2023
Project title: *Moduli problems in algebraic geometry and foliation theory*.
Funding by the University of Milan for incoming researchers that were attracted through a special recruitment program.

Postdoctoral funding grant, Co-PI, €56400. 11.2022
Project title: *Boundedness and moduli problems in algebraic geometry and foliation theory*.
Funded by the University of Milan for a 2-year postdoctoral research assistantship.

Rita Levi Montalcini Fellowship, PI, €233427,59. 12.2022-present
Project title: *From birational geometry to its applications: Minimal Model Program, moduli spaces, and algebraic foliations*.
Funded by the Italian Ministry for University and Research.

Marie Skłodowska Curie Individual Fellowship, PI, €191149,44. 07.2019-12.2021
Project title: *Boundedness and Moduli problems in birational geometry*. Grant No. 842071.
Funded by the European Commission.

EPSRC Postdoctoral Fellowship, PI, £293505,40. 02.2019
Project title: *Moduli and boundedness problems in geometry*. Grant No. EP/S024808/1.
Funded by the Engineering and Physical Sciences Research Council , UK. The fellowship was rejected for incompatibility with the MSCA Fellowship.

Research funding obtained as a mentor

Postdoctoral Fellowship, PI: Dr. P. Chaudhuri, €70000. 05.2023
Funded by the Istituto Nazionale di Alta Matematica "F. Severi", to be spent at Università degli Studi di Milano.

Travel grants and funding for academic events

Grant No. 550, Co-PI, Foundation Compositio, €9500. 03.2022
Funding for the organization of the workshop in September 2022.

Grant, Co-PI, Bernoulli Center for Fundamental Studies, 35000CHF. 02.2022
Fuding for the organization of the workshop in September 2022.
Scheme 4 Grant, Co-PI , London Mathematical Society, Ref.41916, £1000. 10.2019
Funding for the visit to King's College London in February 2020.
Scheme 8 Grant, PI, London Mathematical Society, Ref.81613, £4000. 06.2017
Funding for the organization of the PhD School of December 2017.
AMS Graduate Student Travel Grant, $250. 03.2015

Habilitations

Abilitazione scientifica nazionale alla funzione di professore ordinario. 05.2023
Italian national habilitation to the ranking of full professor.
Abilitazione scientifica nazionale alla funzione di professore associato. 02.2022
Italian national habilitation to the ranking of associate professor.
Qualification aux fonctions de Maître de Conférences. 01.2019
French national habilitation to the ranking of Maître de Conférences.

Fellowships and Scholarships

Full tuition and salary, Massachusetts Institute of Technology. 09.2011-06.2015
Praecis Presidential Fellowship, Massachusetts Institute of Technology, $40000. 09.2010-05.2011
INdAM scholarship for students of the Laurea Specialistica program, 04.2009-03.2011
awarded by the National Institute for High Mathematics 'F. Severi', €9000.
INdAM scholarship for students of the Laurea Triennale program, 01.2006-12.2008
awarded by the National Institute for High Mathematics 'F. Severi', €12000.
Scholarship at Collegio Borromeo and University Institute for Higher Studies, 10.2005-10.2008
Pavia, Italy.

VISITING POSITIONS

Participation to the **Junior Hausdorff Trimester Program "Algebraic geometry: derived categories, Hodge theory, and Chow groups"**. 09-12.2023
Visitor at **King's College London** (Host: C. Spicer). 07.2023
Visitor at **Università di Roma Tor Vergata** (Host: M. McQuillan). 04.2022
Visitor at **King's College London** (Host: C. Spicer). 02.2020
Visitor at **University of Bonn** (Host: L. Tasin). 10.2018
Visitor at **Princeton University** (Host: G. Di Cerbo). 03.2018
Visitor at **BICMR, Beijing** (Host: C. Xu). 10.2017
Visitor at **SISSA, Trieste** (Host: J. Stoppa). 10.2016-09.2017
Visitor at **IMPA, Rio de Janeiro** (Host: J. V. Pereira). 03-04.2016
Visitor at **Mathematics Department, UC San Diego**. 02-06.2015
Visitor at **Mathematics Department, Princeton University** under the 09-12.2014
Exchange Scholar Program.
Visitor at **Mathematics Department, UC San Diego**. 10.2013-06.2014

PUBLICATIONS

Articles in peer-reviewed journals

16. (with J. Moraga), A characterization of toric singularities, accepted for publication at Journal de Mathématiques Pures et Appliquées, 57 pp., arXiv:2108.01717.
15. (with S. Filipazzi, C. Hacon), Boundedness of elliptically fibered Calabi–Yau threefolds, accepted for publication at Journal of the European Mathematical Society (JEMS), 73 pp., arXiv:2112.01352.
14. (with C. Birkar, G. Di Cerbo), Boundedness of elliptic Calabi–Yau varieties with a rational section, accepted for publication at Journal of Differential Geometry, 57 pp., arXiv:2010.09769.

13. (with S. Filipazzi), On the connectedness principle and dual complexes for generalized pairs, Forum Math. Sigma 11 (2023), Paper No. e33, 39pp. DOI: 10.1017/fms.2023.25.
12. (with C. Spicer), Effective generation for foliated surfaces: Results and applications, J. Reine Angew. Math. (Crelle's Journal) 795 (2023), 45–84. DOI: 10.1515/crelle-2022-0067.
11. (with H. Liu), Rational curves and strictly nef divisors on Calabi–Yau threefolds, Doc. Math. 27 (2022), 1581–1604. DOI: 10.4171/DM/904.
10. (with C. Spicer), Local and global applications of the Minimal Model Program for co-rank one foliations on threefolds, J. Eur. Math. Soc. (JEMS) 24 (2022), no. 11, 3969–4025. DOI: 10.4171/JEMS/1173.
9. (with L. Braun, J. Moraga, S. Filipazzi), The Jordan property for local fundamental groups, Geom. Topol. 26 (2022), no. 1, 283–319. DOI: 10.2140/gt.2022.26.283.
8. (with G. Di Cerbo), Birational boundedness of low dimensional elliptic Calabi-Yau varieties with a section, Compos. Math. 157 (2021), no. 8, 1766–1806. DOI: 10.1112/S0010437X2100717X.
7. (with W. Chen, G. Di Cerbo, J. Han, and C. Jiang), Birational boundedness of rationally connected Calabi-Yau threefolds, Adv. Math. 378 (2021), Paper No. 107541, 32 pp.. DOI: 10.1016/j.aim.2020.107541.
6. (with S. Filipazzi), Invariance of plurigenera and boundedness for generalized pairs, Mat. Contemp. 47 (2020), 114–150. DOI: 10.21711/231766362020/rmc476. Proceedings of the ICM Satellite "Moduli spaces in Algebraic Geometry and Applications", Campinas, Brazil 2018.
5. Hyperbolicity for log canonical pairs and the Cone Theorem, Sel. Math. New Ser. (2019), no. 5, Paper No. 67, 23 pp.. DOI: 10.1007/s00029-019-0512-9.
4. (with J. V. Pereira), Effective algebraic integration in bounded genus, Algebr. Geom. 6 (2019), no. 4, 454–485. DOI: 10.14231/AG-2019-021.
3. (with A. Fanelli, G. Codogni, and L. Tasin), A note on the fibres of Mori fibre spaces, Eur. J. Math. 4 (2018), no. 3, 859–878. DOI: 10.1007/s40879-018-0219-z.
2. (with M. Brown, J. McKernan, H. R. Zong), A geometric characterization of toric varieties, Duke Math. J., 167 (2018), no. 5, 923–968. DOI: 10.1215/00127094-2017-0047.
1. (with G. Codogni, A. Fanelli, L. Tasin), Fano varieties in Mori fibre spaces, Int. Math. Res. Not. IMRN 2016, no. 7, 2026–2067. DOI: 10.1093/imrn/rnv173.

Surveys

17. On the structure of local and global singularities: Shokurov's Conjecture, Proceedings of the "Kinosaki Algebraic Geometry Symposium 2017", 12 pp., available electronically on the Kyoto University Research Information Repository.
18. Recent progress on the birational geometry of foliations on threefolds, Oberwolfach Reports 17 (2020), no. 2/3, 1002–1006 DOI: 10.4171/OWR/2020/19

INVITED TALKS

Invited lectures series

Boundedness questions for Calabi–Yau varieties, 07.2024
CIME School 'Calabi–Yau varieties' Cetraro, Italy.

Boundedness for foliated surfaces, 03.2022
Final conference of the ANR Project 'Foliage', Quimper, France.

A geometric characterization of toric varieties, 03.2018
BAGS, Université de Loraine.

Colloquia

The geometry of projective varieties, online talk, SISSA, Trieste. 04.2021

Invited conference talks

The birational structure of log Calabi-Yau pairs. 01.2024
Higher Dimensional Algebraic Geometry Celebrating James' 60th,
UC San Diego.

Birational geometry of surface foliations: towards a moduli theory. 10.2023
International workshop on Birational Geometry,
Nagoya University.

Spazi di moduli per superfici foliate di tipo generale. 09.2023
23rd Congress of the Unione Matematica Italiana, Pisa.

Birational geometry of surface foliations: towards a moduli theory. 03.2023
Workshop on dynamics and birational geometry,
King's College London.

Minimal model program for foliated surfaces: a different approach. 08.2022
Higher Dimensional Geometry in New York: Stability and Moduli,
Simons Centre for Geometry and Physics, Stony Brook.

A geometric characterization of toric singularities and toric morphisms. 06.2022
Birational Geometry Conference and 2022 meeting of the Swiss Mathematical Society,
École polytechnique fédérale de Lausanne.

A characterization of toricness. 08.2021
2021 Workshop on Algebraic Geometry: Generalised Pairs and Applications,
online conference, Chinese Academy of Sciences & Tsinghua University.

Boundedness of elliptic fibrations. 04.2021
Projective and birational higher dimensional geometry, online conference,
Universitá di Trieste.

Recent progress on the birational geometry of foliations on threefolds. 07.2020
Algebraic Geometry: Moduli Spaces, Birational Geometry and Derived Aspects,
MFO Oberwolfach.

Minimal Model Program for foliations on threefolds and applications. 05.2020
Geometry and Dynamics of Foliations,
online conference, CIRM, Marseille.

Birational boundedness of elliptic Calabi-Yau varieties. 02.2020
Workshop on the geometry of elliptic fibrations & COW Seminar,
University of Warwick.

A geometric characterization of toric morphisms. 12.2019
From Trento to Geometry and back,
Universitá di Trento.

Birational boundedness of elliptic Calabi-Yau varieties. 07.2019
Moduli and stability conditions,
Leibniz Universität Hannover.

Birational boundedness of elliptic Calabi-Yau varieties. 04.2019
Western Algebraic Geometry Symposium,
UC Berkeley.

Towards birational boundedness of elliptic Calabi-Yau varieties. 07.2018
Moduli spaces in Algebraic Geometry and applications, ICM Satellite Conference,
short communication, Campinas.

On the birational boundedness of the bases of elliptically fibered Calabi-Yau manifolds in low dimension. 01.2018
Geometry and Physics of F-theory,
BIRS, Banff.

On the geometry of Calabi-Yau varieties in low dimension. 01.2018
Korean-Italian Meeting on Algebraic Geometry 2018,
KIAS, Seoul.

Global vs. Local structure of singularities. 10.2017
Kinosaki Algebraic Geometry Conference,
Kinosaki, Japan.

Log birational boundedness of Calabi-Yau pairs. 01.2017
Workshop on Fano varieties and Calabi-Yau varieties,
Kobe University.

Log birational boundedness of Calabi-Yau pairs. 09.2016
Birational Geometry and Characteristic $p > 0$,
CIRM, Marseille.

A geometric characterization of toric varieties. 05.2016
Giornate di Geometria Algebrica ed Argomenti Correlati XXIII,
Universitá di Catania.

Adjoint dimension of foliations. 11.2015
Cambridge–Tokyo Workshop, I,
University of Cambridge.

Hyperbolicity for log pairs. 09.2015
Postgraduate Conference in Complex Geometry,
University of Cambridge.

Hyperbolicity for log pairs. 03.2015
Distribution of Rational and Holomorphic Curves in Algebraic Varieties,
BIRS, Banff.

A geometric characterization of toric varieties. 03.2015
The Geometry of Algebraic Varieties,
AMS Sectional Meeting, Michigan State.

A geometric characterization of toric varieties. 12.2014
Geometria e Rappresentazioni nella Capitale, II,
Universitá degli Studi Roma 3.

Invited seminar talks

Algebraic Geometry Seminar, UC San Diego. 03.2023

Oberseminar Algebraische Geometrie, Leibniz Universität Hannover. 01.2023

Seminario di Geometria ed Algebra, Università degli Studi di Milano. 10.2022

Algebraic Geometry Seminar, Universiteit van Amsterdam. 06.2022

Seminario di Geometria, Universitá di Roma Tre. 04.2022

Seminario di Geometria, Universitá di Roma Tor Vergata. 04.2022

Seminario di Algebra e Geometria, Sapienza Universitá di Roma. 04.2022

Explicit Birational Geometry Seminar, Fudan University. 02.2022

Algebraic Geometry Seminar, Columbia University. 01.2022

Oberseminar: Algebra, Zahlentheorie und algebraische Geometrie, online talk, 07.2021
Albert-Ludwigs-Universität Freiburg.

Algebraic Geometry seminar, online talk, University of Kansas. 04.2021

Algebraic Geometry Seminar, online talk, Université de Bordeaux. 04.2021

Dutch online Algebraic Geometry seminar, online talk, Universiteit van Amsterdam. 03.2021

Algebraic Geometry Seminar, online talk, University of Utah. 02.2021

Algebraic Geometry Seminar, online talk, UC San Diego. 01.2021

Iskovskikh Seminar (online), Steklov Mathematical Institute, Moscow. 11.2020

Algebraic Geometry Seminar, online talk, Ohio State University. 11.2020

Algebraic Geometry Seminar, online talk, Max Planck Institute, Bonn.	05.2020
Algebraic Geometry Seminar, University of Princeton.	03.2020
KCL/UCL Geometry seminar, University College London.	02.2020
Seminario di Geometria Algebrica, Universitá di Torino.	03.2019
Edinburgh Geometry Seminar, University of Edinburgh.	03.2019
Séminaire d'homotopie en géométrie algébrique, Université de Toulouse.	01.2019
Oberseminar Algebraische Geometrie, Universität des Saarlandes.	11.2018
Algebraic Geometry Seminar, Max Planck Institute, Bonn.	10.2018
Groups, Arithmetic & Algebraic Geometry Seminar, EPF Lausanne.	09.2018
Seminario di Geometria Algebrica, Universitá di Trento.	05.2018
Geometry and Mathematical Physics seminar, Loughborough University.	05.2018
Warwick Algebraic Geometry Seminar, University of Warwick.	05.2018
Algebraic Geometry Seminar, UC San Diego.	04.2018
Algebraic Geometry Seminar, University of Utah.	04.2018
Algebraic Geometry Seminar, Princeton.	03.2018
Math-Physics Joint Seminar, UPenn.	03.2018
Mathematics–String Theory Seminar, IPMU, Tokyo.	10.2017
Algebraic Geometry Seminar, University of Tokyo.	10.2017
Log birational boundedness of Calabi-Yau pairs, BICMR, Beijing.	10.2017
Algebraic Geometry Seminar, University of Oslo.	04.2017
Seminario di Geometria Algebrica, SISSA, Trieste.	03.2017
Algebraic Geometry Seminar, University of Cambridge	03.2017
Algebraic Geometry Seminar, University of Tokyo.	01.2017
Groups, Arithmetic & Algebraic Geometry Seminar, EPFL.	11.2016
Algebraic Geometry Seminar, UC San Diego.	11.2016
Seminario de Álgebra, IMPA, Rio de Janeiro.	03.2016
Algebraic Geometry Seminar, Princeton University.	03.2016
Algebraic Geometry Seminar, Columbia University.	03.2016
Geometry and Mathematical Physics seminar, Loughborough University.	02.2016
EDGE Seminar, University of Edinburgh.	01.2016
Geometry and Topology Seminar, Imperial College.	11.2015
Algebraic Geometry Seminar, University of Cambridge.	11.2015
Seminario di Geometria Algebrica, Universitá degli Studi di Pavia.	10.2015
CIRGET Seminar, UQAM, Montreal.	03.2015
Algebraic Geometry Seminar, Johns Hopkins University.	02.2015
Algebraic Geometry Seminar, UT Austin.	02.2015
Seminario di Geometria Algebrica, Universitá degli Studi Roma 3.	12.2014
Algebraic Geometry Seminar, UC San Diego.	05.2014

Contributed talks

Hyperbolicity for log pairs. 07.2015
AMS Summer Institute in Algebraic Geometry, Salt Lake City.

POSTDOC SUPERVISION

Postdocs

Priyankur Chaudhuri, funded by a grant from INDAM. 10.2023-present
Saverio Andrea Secci, funded by a grant of the University of Milan. 09.2023-present

TEACHING

Teaching as a RTDB in Università degli Studi di Milano

Matematica del discreto, 1st year service course for the Bachelor in IT (24 hours). Spring 2024
Matematica del continuo, 1st year service course for the Bachelor in IT (16 hours). Spring 2024
Matematica, 1st year service course for the Bachelor in Biotechnology (16 hours). Fall 2023
Matematica, 1st year service course for the Bachelor in Biotechnology (16 hours). Fall 2022
Matematica Generale, 1st year service course for the Bachelor in Biology (44 hours). Fall 2022

Teaching as Bernoulli Instructor at EPFL

Complex Manifolds, Mathematics Master's course (28 hours). Spring 2022
Analysis I, 1st year service course for students of several departments of EPFL (56 hours). Fall 2021
Analysis I, 1st year service course for students of several departments of EPFL (56 hours). Fall 2020
Rings and modules, 3rd year Mathematics Bachelor course (28 hours). Fall 2019
Complex Manifolds, Mathematics Master's course (28 hours). Fall 2019

Teaching as a Research Fellow at University of Cambridge

Positivity in Algebraic Geometry, Part III course (16 hours). Lent (Spring) 2018
Linear Series, Part III course (16 hours). Lent (Spring) 2017
Introduction to birational geometry, Minicourse in 6 lectures (12 hours), 12.2016-1.2017
part of the Ph.D. course "Topics in algebro-geometric stability", SISSA, Trieste.

Teaching as a College Lecturer at Churchill College

Groups, Rings and Modules. Supervisor for 10 students (25 hours). Lent (Spring) 2019
Geometry 1B. Supervisor for 7 students (16 hours). Lent (Spring) 2019
Groups 1A. Supervisor for 12 students (30 hours). Michaelmas (Fall) 2018
Group, Rings and Modules. Supervisor for 9 students (26 hours). Lent (Spring) 2018
Geometry 1B. Supervisor for 7 students (16 hours). Lent (Spring) 2018
Linear Algebra 1B. Supervisor for 13 students (35 hours). Michaelmas (Fall) 2017
Group, Rings and Modules. Supervisor for 8 students (16 hours). Lent (Spring) 2017
Geometry 1B. Supervisor for 9 students (15 hours). Lent (Spring) 2017
Group, Rings and Modules. Supervisor for 9 students (25 hours). Lent (Spring) 2016
Geometry 1B. Supervisor for 10 students (16 hours). Lent (Spring) 2016
Analysis 1B. Supervisor for 12 students (28 hours). Michaelmas (Fall) 2015
Topology and Metric Spaces. Supervisor for 8 students (12 hours). Michaelmas (Fall) 2015

Teaching as a graduate student at MIT

18.095, Mathematics Lecture Series. Organizer and Recitation Leader. IAP 2015
18.085, Computational Science and Engineering. Course Instructor. Summer 2013
18.095, Mathematics Lecture Series. Organizer and Recitation Leader. IAP 2013
18.02, Multivariable Calculus. Teaching Assistant. Fall 2012
18.085, Mathematical Methods for Engineering. Grading Assistant and Spring 2012
responsible for Office Hours.
18.112, Complex Analysis. Grading Assistant and responsible for Office Hours. Fall 2011
18.755, Lie Groups. Grading Assistant and responsible for Office Hours. Fall 2011

Teaching as an undergraduate student in Italy

Complex Analysis. Teaching Assistant, University of Rome 3. Spring 2010
Calculus 1. Teaching Assistant, University of Rome 3. Fall 2009
General topology. Teaching Assistant, University of Rome 3. Spring 2009

General Mathematics for Biological Sciences. Teaching Assistant, University of Pavia. Fall 2008

STUDENT SUPERVISION

Thesis supervision

Linus Rösler, MA Thesis, "The geometry of elliptic fibrations", EPFL. 02.2021-09.2021

Anaëlle Pfister, BA project (equivalent to a bachelor's thesis), "An introduction to toric geometry", EPFL. 02.2021-06.2021

Luca Nyckess, BA project (equivalent to a bachelor's thesis), "An introduction to complex manifolds and Hodge Theory", EPFL. 02.2020-06.2020

Simen Moe, Part III essay (equivalent to a master's thesis), "An introduction to the Minimal Model Program", University of Cambridge. 12.2018-05.2019

Study projects supervision

Alberto Smailovic Funcasta, one-semester study project, "Introduction to algebraic structures: from groups to modules", EPFL. 02.2022-06.2022

Linus Rösler, MA project (one-semester project), "Elliptic surfaces in Algebraic Geometry", EPFL. 09.2020-12.2020

Maxime Matthey, MA project (one-semester project), "Advanced topics in Commutative Algebra: Completions", EPFL. 09.2020-12.2020

Gheehyun Nahm, one-semester study project on advanced topics in Algebraic Geometry, University of Cambridge. 08.2018-03.2019

Leon Zhang, Direct Reading Program, Supervisor for an undergraduate student on topics in Hodge Theory, MIT. IAP 2015

Minseon Shin, Direct Reading Program, Supervisor for an undergraduate student on topics in Scheme Theory, MIT. IAP 2013

Thesis committee participation

Peter Simko, "Fano varieties", Master thesis, EPFL. 07.2017

ORGANIZATION OF CONFERENCES, SEMINARS AND WORKSHOPS

Conferences and workshops

Higher-dimensional log Calabi–Yau pairs, five-day workshop (team of 4), American Institute of Mathematics, Pasadena, USA. 10.2024

Ricercatori in Algebra e Geometria 2024, three-day workshop (team of 6), Milano, Italy. 09.2024

Birational workshop, five-day workshop (team of 4), part of the activities of the research trimester "Algebraic geometry: derived categories, Hodge theory, and Chow groups", Hausdorff Institute for Mathematics, Bonn, Germany. 11.2023

Foliations in Algebraic and Birational Geometry, five-day workshop (team of 4), Bernoulli Center for Fundamental Studies, Lausanne, Switzerland. 09.2022

Basel-Dijon-EPFL Workshop, two-day workshop (team of 2), Lausanne, Switzerland. 05.2022

Basel-Dijon-EPFL Workshop, two-day workshop, (team of 5), Basel, Switzerland. 11.2021

Basel-Dijon-EPFL Workshop, two-day workshop, (team of 4), Lausanne, Switzerland. 11.2019

Cambridge-Tokyo Algebraic Geometry Workshop, III, two-day workshop, (team of 4), Cambridge, UK. 12.2018

New advances in Fano manifolds, five-day school for Ph.D. students, (team of 4), Cambridge, UK. 12.2017

British Algebraic Geometry, three-day conference, (local organizer), Cambridge, UK. 09.2017

Cambridge-Tokyo Algebraic Geometry Workshop, II, two-day workshop, (team of 4), Cambridge, UK. 03.2017

MIT-RTG Mirror Symmetry Workshop, five-day workshop, (team of 6), Big Bear Lake, US. 05.2013

Seminars

Organizer for the Groups, Arithmetic & Algebraic Geometry Seminar, EPFL. 09.2019-08.2022

Organizer for the Algebraic Geometry Seminar, University of Cambridge. 10.2017-06.2019

OUTREACH ACTIVITIES

HE+ Masterclass, Churchill College, Cambridge 04.2019
I gave a lecture on modern geometry and organized an exercise session for high school students.

Open days, Churchill College, Cambridge 07.2018
I gave a lecture on symmetries and geometry and organized an exercise session for high school students.

Orientation for high-school students, Liceo Classico "G. Prati", Trento 04.2012
I spoke to high school students about what are the challenges of becoming a maths student starting from a background in humanities.

ACADEMIC SERVICES

Refereeing and reviewing activity

Referee for academic journals: (unless otherwise stated, 1 report per journal) Since 2015
Journal list: Mathematics Research Letter, Michigan Journal of Mathematics, International Mathematics Research Notices (6 reports), Mathematische Annalen (2 reports), Annali della Scuola Normale Superiore di Pisa, Journal of Algebraic Geometry (3 reports), Inventiones Mathematicae (2 reports), International Journal of Mathematics (3 reports), Manuscripta Mathematica (2 reports), Advances in Mathematics (2 reports), Transactions of the AMS (2 reports), Annales de l'Insitute Fourier, Journal of Differential Geometry (2 reports), Proceedings of the LMS (2 reports), Advances in geometry, Forum Math Pi (2 reports), Journal of the LMS, Electronic Research Archive, Mathematische Zeitschrift, Journal of the AMS, Compositio Mathematica (2 reports), Bulletin of the LMS.

Referee for conference proceedings: (by conference title) Since 2013
Groups of Automorphisms in Birational and Affine Geometry;
Moduli of K-stable Varieties;
Birational geometry, Kähler-Einstein metrics and degenerations.

Referee for grants and fellowships applications submitted to the Since 09.2019
Engineering and Physical Sciences Research Council, UK (3 grants).

Reviewer for Zentralblatt and Mathscinet (7 reviews). Since 2014

Mentoring activity

Mentor for 1st year students of the Bachelor in Mathematics, 10.2022-present
Università degli Studi di Milano.

Mentor for the students of the Institute of Mathematics, EPFL. 11.2020-07.2021

Mentor for postgraduate students, Churchill College. 10.2017-06.2019

Committee participation

Graduate studies committee, Università degli Studi di Milano. 05.2024-present

Postdoc Selection Committee for the Chair of Algebraic Geometry, EPFL. 02.2021 and 02.2022

Doctoral students Selection Committee for the Chair of Algebraic Geometry, EPFL. 02.2022

Admission Selection Interviews, Churchill College, Cambridge. 12.2018

LANGUAGES

Italian: mother tongue.
English: professional proficiency.
French: intermediate level.
German: beginner level.

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