

## ROBERTO SVALDI: Curriculum Vitae

### École polytechnique fédérale de Lausanne

EPFL SB MATH MATH-GE  
MA B1 497 (Bâtiment MA)  
Station 8  
CH-1015 Lausanne, Switzerland

### Personal data

email: roberto.svaldi@epfl.ch  
home page: rsvaldi.github.io  
Phone number: +41 21 693 39 09  
ORCID ID: 0000-0003-1489-5899

## CURRENT POSITION

---

### **Bernoulli Instructor and Marie Curie Fellow,**

07.2019-present

École polytechnique fédérale de Lausanne, Institute of Mathematics.

*The position of Bernoulli Instructor at EPFL is comparable to a fixed-term Lectureship or to an Assistant Professorship without tenure.*

*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.*

## EMPLOYMENT HISTORY

---

### **University Research Fellow,** University of Cambridge,

09.2015-06.2019

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),** SISSA,

10.2016-09.2017

Area of Mathematics. Group of Geometry and Mathematical Physics.

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”.

Advisor: Prof. J. McKernan.

**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

### Awards

**Federigo Enriques Prize**, 2016, awarded by Unione Matematica Italiana and 03.2017  
 Fondazione Federigo Enriques (€2000).

### Grants

**Funding Compositio**, Co-PI, Foundation Compositio, #550, (9500EUR) 03.2022  
*for the organization of the workshop in September 2022.*

**Grant**, Co-PI, Bernoulli Center for Fundamental Studies, (35000CHF) 02.2022  
*for the organization of the workshop in September 2022.*

**Scheme 4 Grant**, Co-PI, London Mathematical Society, Ref.41916 (£1000), 10.2019  
*for the visit to King’s College London in February 2020.*

**Marie Skłodowska Curie Individual Fellowship**, PI, “Boundedness 07.2019-12.2021  
 and Moduli problems in birational geometry”, Grant No.842071. (€191149,44)

**EPSRC Postdoctoral Fellowship**, PI, “Moduli and boundedness problems 02.2019  
 in geometry”, EP/S024808/1, rejected in favour of the MSCA Fellowship. (£293505,40)

**Scheme 8 Grant**, PI, London Mathematical Society, Ref.81613, (£4000) 06.2017  
*for the organization of the PhD School of December 2017.*

**AMS Graduate Student Travel Grant** (\$250). 03.2015

### Habitations

**Abilitazione scientifica nazionale** a 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

**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

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).                                      | 03.2016-04.2016 |
| Visitor at Mathematics Department, UC San Diego.  | 02.2015-06.2015 |
| Visitor at Mathematics Department, Princeton University under the Exchange Scholar Program. | 09.2014-12.2014 |
| Visitor at Mathematics Department, UC San Diego.  | 10.2013-06.2014 |

## PUBLICATIONS

---

### Articles in peer-reviewed journals

10. (joint with C. Spicer), Local and global applications of the Minimal Model Program for co-rank one foliations on threefolds, in print at Journal of the European Mathematical Society, 57 pp., DOI: 10.4171/JEMS/1173.
  9. (joint with L. Braun, J. Moraga, S. Filipazzi), The Jordan property for local fundamental groups, *Geometry & Topology* 26-1 (2022), 283–319. DOI: 10.2140/gt.2022.26.283.
  8. (joint 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. (joint with W. Chen, G. Di Cerbo, J. Han, and C. Jiang), Birational boundedness of rationally connected Calabi-Yau threefolds, *Adv. Math.*, 378 (2021), 107541, 32 pp., DOI: 10.1016/j.aim.2020.107541
  6. (joint with S. Filipazzi), Invariance of plurigenera and boundedness for generalized pairs, *Mat. Contemp.* 47 (2020), 114–150, Proceedings of the ICM Satellite “Moduli spaces in Algebraic Geometry and Applications”, Campinas, Brazil 2018, DOI: 10.21711/231766362020/rmc476
  5. Hyperbolicity for log canonical pairs and the Cone Theorem, *Sel. Math. New Ser.* (2019), no.5, paper 67, 23 pp., DOI: 10.1007/s00029-019-0512-9.
  4. (joint with J. V. Pereira), Effective algebraic integration in bounded genus, *Algebraic Geometry* 6 (4) (2019) 454–485, DOI:10.14231/AG-2019-021.
  3. (joint 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. (joint with M. Brown, J. McKernan, H. R. Zong), A geometric characterization of toric varieties, *Duke Math. J.*, Volume 167, Number 5 (2018), 923–968, DOI:10.1215/00127094-2017-0047.
  1. (joint with G. Codogni, A. Fanelli, L. Tasin), Fano varieties in Mori fibre spaces, *Int. Math. Res. Not.*, Volume 2016, Issue 7: 2026–2067, DOI:10.1093/imrn/rnv173.
- 

### Pre-prints

11. (joint with H. Liu), Rational curves and strictly nef divisors on Calabi–Yau threefolds, submitted, 18 pp., arXiv:2010.12233.
  12. (joint with S. Filipazzi), On the connectedness principle and dual complexes for generalized pairs, submitted, 48 pp., arXiv:2010.08018.
  13. (joint with C. Birkar, G. Di Cerbo), Boundedness of elliptic Calabi–Yau varieties with a rational section, submitted, 44 pp., arXiv:2010.09769.
  14. (joint with C. Spicer) Effective generation for foliated surfaces: results and applications, submitted, 32 pp., arXiv:2104.11540.
  15. (joint with J. Moraga), A characterization of toric singularities, 57 pp., arXiv:2108.01717.
  16. (joint with S. Filipazzi, C. Hacon), Boundedness of elliptically fibered Calabi–Yau threefolds, submitted, 49pp, arXiv:2112.01352.
-

## Surveys

17. On the structure of local and global singularities: Shokurov's Conjecture, Proceedings for the Kinoshita algebraic geometry symposium 2017, 12 pages, 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

| <b>Invited lectures series</b>  |         |
|---|---------|
| Boundedness for foliated surfaces,<br>Final conference of the ANR Project Foliage, Quimper, France.   | 03.2022 |
| A geometric characterization of toric varieties, BAGS, Université de Lorraine.  | 03.2018 |
| <b>Colloquia</b>  |         |
| The geometry of projective varieties, online talk, SISSA, Trieste.  | 04.2021 |
| <b>Invited conference talks</b>   |         |
| A characterization of toricness, 2021 Workshop on Algebraic Geometry: Generalised Pairs and Applications, online conference, Chinese Academy of Sciences & Tsinghua University.   | 08.2021 |
| Boundedness of elliptic fibrations,<br>Projective and birational higher dimensional geometry, online conference, Università di Trieste  | 04.2021 |
| Recent progress on the birational geometry of foliations on threefolds,<br>Algebraic Geometry: Moduli Spaces, Birational Geometry and Derived Aspects, MFO Oberwolfach.           | 07.2020 |
| Minimal Model Program for foliations on threefolds and applications,<br>Geometry and Dynamics of Foliations, online conference, CIRM.   | 05.2020 |
| Birational boundedness of elliptic Calabi-Yau varieties,<br>Workshop on the geometry of elliptic fibrations & COW Seminar, University of Warwick.                                 | 02.2020 |
| A geometric characterization of toric morphisms,<br>From Trento to Geometry and back, Università di Trento.   | 12.2019 |
| Birational boundedness of elliptic Calabi-Yau varieties,<br>Moduli and stability conditions, Leibniz Universität Hannover.  | 07.2019 |
| Birational boundedness of elliptic Calabi-Yau varieties,<br>Western Algebraic Geometry Symposium, UC Berkeley.  | 04.2019 |
| Towards birational boundedness of elliptic Calabi-Yau varieties, short communication<br>Moduli spaces in Algebraic Geometry and applications, ICM Satellite Conference, Campinas. | 07.2018 |
| On the birational boundedness of the bases of elliptically fibered Calabi-Yau manifolds in low dimension, Geometry and Physics of F-theory, BIRS.                                 | 01.2018 |
| On the geometry of Calabi-Yau varieties in low dimension,<br>Korean-Italian Meeting on Algebraic Geometry 2018, KIAS, Seoul.  | 01.2018 |
| Global vs. Local structure of singularities,<br>Kinoshita Algebraic Geometry Conference, Japan.   | 10.2017 |
| Log birational boundedness of Calabi-Yau pairs,<br>Workshop on Fano varieties and Calabi-Yau varieties, Kobe University.  | 01.2017 |
| Log birational boundedness of Calabi-Yau pairs,<br>Birational Geometry and Characteristic $p > 0$ , CIRM, Marseille.  | 09.2016 |
| A geometric characterization of toric varieties,<br>Giornate di Geometria Algebrica ed Argomenti Correlati XXIII, Università di Catania.  | 05.2016 |

|   |         |
|---|---------|
| Adjoint dimension of foliations,<br>Cambridge–Tokyo Workshop, I, University of Cambridge.   | 11.2015 |
| Hyperbolicity for log pairs,<br>Postgraduate Conference in Complex Geometry, University of Cambridge.                               | 09.2015 |
| Hyperbolicity for log pairs,<br>Distribution of Rational and Holomorphic Curves in Algebraic Varieties, Birs.                       | 03.2015 |
| A geometric characterization of toric varieties,<br>The Geometry of Algebraic Varieties, AMS Sectional Meeting, Michigan State.     | 03.2015 |
| A geometric characterization of toric varieties,<br>Geometria e Rappresentazioni nella Capitale, II, Università degli Studi Roma 3. | 12.2014 |

---

#### Invited seminar talks

|  |         |
|--|---------|
| Seminario di Geometria, Università di Roma Tre.  | 04.2022 |
| Seminario di Geometria, Università di Roma Tor Vergata.  | 04.2022 |
| Seminario di Algebra e Geometria, Sapienza Università 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,<br>Albert-Ludwigs-Universität Freiburg. | 07.2021 |
| 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, Università 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, Università 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, Università 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, Università degli Studi Roma 3.    | 12.2014 |
| Algebraic Geometry Seminar, UC San Diego.                           | 05.2014 |

---

#### Contributed talks

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

#### TEACHING

---

##### Teaching as an Instructor at EPFL

|  |             |
|--|-------------|
| Complex Manifolds, Mathematics Master's course, EPFL.          | Spring 2022 |
| Analysis I, 1st year Bachelor course, EPFL.                    | Fall 2021   |
| Analysis I, 1st year Bachelor course, EPFL.                    | Fall 2020   |
| Rings and modules, 3rd year Mathematics Bachelor course, EPFL. | Fall 2019   |
| Complex Manifolds, Mathematics Master's course, EPFL.          | Fall 2019   |

---

##### Teaching as a Research Fellow at University of Cambridge

|  |                    |
|--|--------------------|
| Positivity in Algebraic Geometry, Part III course, University of Cambridge.  | Lent (Spring) 2018 |
| Linear Series, Part III course, University of Cambridge.   | Lent (Spring) 2017 |
| Introduction to birational geometry, Minicourse in 6 lectures, part of the Ph.D. course "Topics in algebro-geometric stability", SISSA, Trieste. | 12/2016-1/2017     |

##### 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 responsible for Office Hours. | Spring 2012 |
| 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

|   |                 |
|---|-----------------|
| <b>Linus Rösler</b> , MA Thesis, “The geometry of elliptic fibrations”, EPFL.   | 02.2021-09.2021 |
| <b>Anaëlle Pfister</b> , BA project (equivalent to a bachelor’s thesis), “An introduction to toric geometry”, EPFL.                           | 02.2021-06.2021 |
| <b>Luca Nyckess</b> , BA project (equivalent to a bachelor’s thesis), “An introduction to complex manifolds and Hodge Theory”, EPFL.          | 02.2020-06.2020 |
| <b>Simen Moe</b> , 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

|  |                 |
|--|-----------------|
| <b>Alberto Smailovic Funcasta</b> , BA one semester study project, “Introduction to algebraic structures: from groups to modules”, EPFL. | 02.2022-06.2022 |
| <b>Linus Rösler</b> , MA project (one semester project), “Elliptic surfaces in Algebraic Geometry”, EPFL.                                | 09.2020-12.2020 |
| <b>Maxime Matthey</b> , MA project (one semester project), “Advanced topics in Commutative Algebra: Completions”, EPFL.                  | 09.2020-12.2020 |
| <b>Gheehyun Nahm</b> , Study project for an undergraduate student on advanced topics in Algebraic Geometry, University of Cambridge.     | 08.2018-03.2019 |
| <b>Leon Zhang</b> , Direct Reading Program, Supervisor for an undergraduate student learning Hodge Theory, MIT.                          | IAP 2015        |
| <b>Minseon Shin</b> , Direct Reading Program, Supervisor for an undergraduate student learning Scheme Theory, MIT.                       | IAP 2013        |

---

#### Thesis committee participation

|   |         |
|---|---------|
| <b>Peter Simko</b> , “Fano varieties”, Master thesis, EPFL. | 07.2017 |
|---|---------|

---

### ORGANIZATION OF CONFERENCES, SEMINARS AND WORKSHOPS

---

#### Conferences and workshops

|  |         |
|--|---------|
| <i>Foliations in Algebraic and Birational Geometry</i> , 5 days workshop (team of 4), Bernoulli Center for Fundamental Studies, Lausanne, Switzerland. | 09.2022 |
| <i>Basel-Dijon-EPFL Workshop</i> , two-day workshop, (team of 2), Lausanne, Switzerland.   | 05.2022 |
| <i>Basel-Dijon-EPFL Workshop</i> , two-day workshop, (team of 5), Basel, Switzerland.  | 11.2021 |

|   |         |
|---|---------|
| <i>Basel-Dijon-EPFL Workshop</i> , two-day workshop, (team of 4), Lausanne, Switzerland.                | 11.2019 |
| <i>Cambridge-Tokyo Algebraic Geometry Workshop, III</i> , two-day workshop, (team of 4), Cambridge, UK. | 12.2018 |
| <i>New advances in Fano manifolds</i> , five-day school for Ph.D. students, (team of 4), Cambridge, UK. | 12.2017 |
| <i>British Algebraic Geometry</i> , three-day conference, (local organizer), Cambridge, UK,             | 09.2017 |
| <i>Cambridge-Tokyo Algebraic Geometry Workshop, II</i> , two-day workshop, (team of 4), Cambridge, UK.  | 03.2017 |
| <i>MIT-RTG Mirror Symmetry Workshop</i> , five-day workshop, (team of 6), Big Bear Lake, CA.            | 05.2013 |

---

### Seminars

|  |                 |
|--|-----------------|
| Organizer for the Groups, Arithmetic & Algebraic Geometry Seminar, EPFL. | 07.2019-present |
| Organizer for the Algebraic Geometry Seminar, University of Cambridge.   | 10.2017-06.2019 |

### OUTREACH ACTIVITIES

---

|   |         |
|---|---------|
| HE+ Masterclass, Churchill College, Cambridge<br><i>I gave a lecture on modern geometry and organized an exercise session for high school students.</i>   | 04.2019 |
| Open days, Churchill College, Cambridge<br><i>I gave a lecture on symmetries and geometry and organized an exercise session for high school students.</i>   | 07.2018 |
| Orientation for high-school students, Liceo Classico “G. Prati”, Trento<br><i>I spoke to high school students about what are the challenges of becoming a maths student starting from a background in humanities.</i> | 04.2012 |

### ACADEMIC SERVICES

---

#### Refereeing and reviewing activity

|  |               |
|--|---------------|
| Referee for academic journals:<br>Mathematics Research Letter, Michigan Journal of Mathematics,<br>International Mathematics Research Notices (3x), Mathematische Annalen,<br>Annali della Scuola Normale Superiore di Pisa, Journal of Algebraic Geometry,<br>Inventiones Mathematicae, International Journal of Mathematics,<br>Manuscripta Mathematica, Advances in Mathematics (2x), Transactions of the AMS,<br>Annales de l'Institut Fourier, Journal of Differential Geometry, Proceedings of the LMS,<br>Advances in geometry, Forum Math Pi, Journal of the LMS, Electronic Research Archive. | Since 2015    |
| Referee for conference proceedings (by conference title):<br>Groups of Automorphisms in Birational and Affine Geometry; Moduli of K-stable Varieties;<br>Birational geometry, Kähler-Einstein metrics and degenerations.   | Since 2013    |
| Referee for grants and fellowships applications submitted to<br>the Engineering and Physical Sciences Research Council, UK (3 grants reviewed).  | Since 09.2019 |
| Reviewer for Zentralblatt and Mathscinet.  | Since 2014    |

---

#### Mentoring activity

|  |                 |
|--|-----------------|
| Mentor for postgraduate students, Churchill College.           | 10.2017-06.2019 |
| Mentor for the students of the Institute of Mathematics, EPFL. | 11.2020-present |

---



### **Committee participation**

|  |                     |
|--|---------------------|
| Admission Selection Interviews, Churchill College, Cambridge.                    | 12.2018             |
| 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             |

### **LANGUAGES**

---

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

---

Last update: May 2nd, 2022

## REFERENCES

---

Prof. James M<sup>c</sup>Kernan, FRS  
Ph.D. thesis advisor  
Department of Mathematics  
UC San Diego  
9500 Gilman Drive  
La Jolla, CA 92093-0112, USA  
+1 858 534-6347  
[http://www.math.ucsd.edu/~jmckerna/  
mckernan@math.ucsd.edu](http://www.math.ucsd.edu/~jmckerna/mckernan@math.ucsd.edu)

Prof. Paolo Cascini  
Research reference  
Department of Mathematics  
Imperial College, London  
676 Huxley Building  
London SW7 2AZ, UK  
+44 (0)20 7594 8861  
<https://www.imperial.ac.uk/people/p.cascini>  
[p.cascini@imperial.ac.uk](mailto:p.cascini@imperial.ac.uk)

Prof. Caucher Birkar, FRS  
Research reference  
DPMMS  
University of Cambridge  
Wilberforce Road  
Cambridge CB3 0WB, UK  
+44 01223 765898  
[https://www.dpmms.cam.ac.uk/~cb496/  
cb496@dpmms.cam.ac.uk](https://www.dpmms.cam.ac.uk/~cb496/cb496@dpmms.cam.ac.uk)

Prof. Chenyang Xu  
Research reference  
Department of Mathematics  
Princeton University  
Fine Hall, Washington Road  
Princeton NJ 08544-1000 USA  
+1 609 258-4200  
[https://web.math.princeton.edu/~chenyang/  
chenyang@princeton.edu](https://web.math.princeton.edu/~chenyang/chenyang@princeton.edu)

Prof. Jorge Vitório Pereira  
Research reference  
Instituto Nacional de Matemática Pura e Aplicada  
Estrada Dona Castorina 110  
22460-320 - Rio de Janeiro - Brasil  
+55 21 25295220  
[http://w3.impa.br/~jvp/  
jvp@impa](http://w3.impa.br/~jvp/jvp@impa)

Prof. Zsolt Patakfalvi  
Research and teaching reference  
École polytechnique fédérale de Lausanne  
EPFL SB MATH CAG  
MA C3 635 (Bâtiment MA), Station 8  
CH-1015 Lausanne, Switzerland  
+41 21 693 55 20  
[http://cag.epfl.ch/  
zsolt.patakfalvi@epfl.ch](http://cag.epfl.ch/zsolt.patakfalvi@epfl.ch)