Antoine Pinardin

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Research Interests

Algebraic geometry, with a particular focus on birational geometry, especialy in a G-equivariant setting. Subgroups of Cremona and G-equivariant Minimal Model Program. K-stability of Fano varieties.

Education

Oct 2021 – · · · ·	**Ph.D. in Algebraic Geometry,** University of Edinburgh. Supervisor : Ivan Cheltsov
Sep 2020 – Sep 2021	**M.Sc. Fundamental Mathematics,** University of Paris. Thesis title: *GIT and hyperkähler structures of the Hilbert Schemes of points on surfaces.* Supervisor : Daniele Faenzi
Sep 2019 – Sep 2020	**M.Sc. Applied Algebra,** University of Paris-Saclay. Thesis title: *Determinants and Resultants in Higher Dimension.* Supervisors : Daniele Faenzi and Ronan Terpereau

Publications

Articles

1. A. Pinardin and Z. Zhang, $\mathfrak{A}_5$-*equivariant geometry of quadric threefolds*, 2025. arXiv: 2508.11496 [math.AG]. 🔗 URL: https://arxiv.org/abs/2508.11496.

2. A. Pinardin, A. Sarikyan, and E. Yasinsky, "Linearization problem for finite subgroups of the plane cremona group," 2024. arXiv: 2412.12022 [math.AG]. 🔗 URL: https://arxiv.org/abs/2412.12022.

3. I. Cheltsov, O. Li, S. Ma'u, and A. Pinardin, "K-stability and space sextic curves of genus three," 2024. arXiv: 2404.07803 [math.AG]. 🔗 URL: https://arxiv.org/abs/2404.07803.

4. A. Pinardin, "G-solid rational surfaces," *European Journal of Mathematics*, vol. 10, no. 2, pp. 1–23, 2024. 🔗 URL: https://link.springer.com/article/10.1007/s40879-024-00747-z.

Research Visits

Mar-Jun 2025	**CIRM, Luminy, France**. Invited by Prof. Frédéric Mangolte.
Jan-Feb 2025	**Simons foundation, New York City** Invited for two months by Prof. Yuri Tschinkel.
Nov 2024	**New York University, New York City** Invited for a week by Prof. Yuri Tschinkel.
Nov-Dec 2023	**University of Aix-Marseille, France**. Invited for a week by Prof. Frédéric Mangolte.
Oct 2023	**Simons foundation, New York City**. Invited for a week by Prof. Yuri Tschinkel.
Dec 2022	**University of Auckland, New Zealand**. Invited for three weeks by Dr. Sione Ma'u.

Events I organised

Oct 2024 ▌ **ICMS conference on Birational Geometry and Number Theory**
An international conference at the intersection of Number theory and Birational Geometry.
https://www.icms.org.uk/workshops/2024/birational-geometry-and-number-theory

Grants and Awards

Mar 2024 ▌ **ICMS grant.**
Awarded by the International Center for Mathematical Research for the organisation of an international conference.

Jun 2024 ▌ **[Sport] Blues Award of the University of Edinburgh.**
Highest award for an athlete from the University of Edinburgh.

Invited Talks

May 2025 ▌ *On non-linearisability of icosaedral group actions on quadric threefolds.* Conference on Structures and Symmetries in Algebraic geometry, Kraków, Poland.

▌ *On non-linearisability of icosaedral group actions on quadric threefolds.* Conference on Cremona groups, CIRM, Marseille, France.

Apr 2025 ▌ *Linearization problem for finite subgroups of the plane Cremona group.* Department seminar, London Institute for Mathematical Sciences, United Kingdom.

▌ *Linearization problem for finite subgroups of the plane Cremona group.* JAWZ seminar, University of Warwick, United Kingdom.

▌ *Linearization problem for finite subgroups of the plane Cremona group.* Department seminar, University of Sheffield, United Kingdom.

▌ *G-rational varieties.* Department seminar, UBE, France.

▌ *Linearization problem for finite subgroups of the plane Cremona group.* BENDZ seminar, EPFL, Switzerland.

▌ *G-solid varieties.* Department seminar, University of Basel, Switzerland.

Mar 2025 ▌ *K-stability and space sextic curves of genus three.* Winter school on K-stability, CIRM, France.

Feb 2025 ▌ *Linearization problem for finite subgroups of the plane Cremona group.* Edge seminar, University of Edinburgh.

Jan 2025 ▌ *Linearization problem for finite subgroups of the plane Cremona group.* Department seminar, New York University.

Nov 2025 ▌ *Linearization problem for finite subgroups of the plane Cremona group.* Department seminar, University of Liverpool.

Sep 2024 ▌ *Linearization problem for finite subgroups of the plane Cremona group.* Conference on Fano varieties, Cetraro, Italy.

Jun 2024 ▌ *G-Solid rational surfaces.* Hodge club seminar, University of Edinburgh, United Kingdom.

Feb 2024 ▌ *G-Solid rational surfaces.* CALF seminar, University of Birmingham, United Kingdom.

Jan 2024 ▌ *G-Solid rational surfaces.* Swiss-french workshop on algebraic geometry, Charmey, Switzerland.

Dec 2023 ▌ *G-Solid rational surfaces.* Department seminar, University of Lille, France.

▌ *G-Solid rational surfaces.* Department seminar. Department seminar, Aix-Marseille University, France.

Attended Conferences

Jun 2025	▌ Structures and Symmetries in Algebraic Geometry, Kraków, Poland.
	▌ Real Algebraic Geometry and Birational Geometry, CIRM, Marseille, France.
May 2025	▌ Geometry and Topology in Gökova, Akyaka, Turkey.
	▌ Cremona groups, CIRM, Marseille, France.
Apr 2025	▌ BENDZ seminar, EPFL, Switzerland.
Mar 2025	▌ Winter school on K-Stability, CIRM, Marseille, France.
Jan 2025	▌ Swiss-French workshop in Algebraic Geometry, Charmey, Switzerland.
Dec 2024	▌ Algebraic Geometry, SMRI Institute, University of Sydney, Sydney, Australia.
	▌ Algebraic Geometry, Matrix Institute, University of Melbourne, Melbourne, Australia.
Oct 2024	▌ Birational Geometry and Number Theory, ICMS, Edinburgh, Scotland. Organiser of the event.
Sep 2024	▌ Conference on Fano Varieties in Cetraro, Italia.
Jun 2024	▌ BRIDGES meeting on special geometries and stability, Cargèse, France.
May 2024	▌ Conference on K-stability and moment maps, University of Cambridge, Cambridge, England.
	▌ Conference on Algebraic Transformation Groups, Ascona, Switzerland.
Feb 2024	▌ Swiss-French workshop in Algebraic Geometry, Charmey, Switzerland.
Dec 2023	▌ Seminar on singularities in Algebraic Geometry, University of Nottingham, Nottingham, England.
Oct 2023	▌ Conference on higher dimensional geometry, Simons Foundation, New York, New York.
Sep 2023	▌ Conference on K-stability, University of Oxford, Oxford, England.
Jul 2023	▌ GAEL 2023, University of Warwick, Coventry, England.
Apr 2023	▌ Conference on Vertex Algebras, Isle of Skye, Scotland.
Jan 2023	▌ Swiss-French workshop in Algebraic Geometry, Charmey, Switzerland.
	▌ Singularities in Trento, University of Trento, Trento, Italy.
Nov 2022	▌ EDGE 2022, ICMS, Edinburgh, Scotland.
Aug 2022	▌ Conference on K-Stability, University of Stony Brook, Stony Brook, New York.
Jun 2022	▌ Conference on Birational Geometry, EPFL, Lausanne, Switzerland.
May 2022	▌ Spring School of Algebraic Geometry, Université de Bourgogne-Franche-Comté, Dijon, France.
Dec 2021	▌ EDGE 2021, University of Edinburgh, Edinburgh, Scotland.

Employment Record

Jan. 2022 – · · · ·	▌ **Tutor in Mathematics for Undergraduate, M.Sc., and Ph.D. students (SMSTC).** University of Edinburgh.

Teaching

▌ **Algebras and Representation theory**.
Workshop organiser and Tutor, spring 2023.
https://smstc.ac.uk/modules/representation-theory

Teaching (continued)

Numerical Linear Algebra.
Tutor, autumn 2022, 2023 and 2024
http://www.drps.ed.ac.uk/17-18/dpt/cxmath10098.htm

Geometry.
Tutor, autumn 2023.
http://www.drps.ed.ac.uk/15-16/dpt/cxmath10074.htm

Group Theory.
Tutor, autumn 2023.
http://www-test.drps.ed.ac.uk/14-15/dpt/cxmath10079.htm

Honours Algebra.
Tutor, spring 2022 and spring 2023
http://www.drps.ed.ac.uk/16-17/dpt/cxmath10069.htm

Honours Complex Variables.
Tutor, spring 2022 and 2023
http://www.drps.ed.ac.uk/16-17/dpt/cxmath10069.htm

Accelerated Algebra and Calculus.
Tutor, autumn 2022
http://www-test.drps.ed.ac.uk/16-17/dpt/cxmath08062.htm

Introduction to Linear Algebra.
Tutor, autumn 2022
http://www.drps.ed.ac.uk/19-20/dpt/cxmath08057.htm

Calculus and its Applications.
Tutor, spring 2022
http://www.drps.ed.ac.uk/16-17/dpt/cxmath08058.htm

Proofs and Problem Solving.
Tutor, spring 2023
http://www.drps.ed.ac.uk/17-18/dpt/cxmath08059.htm

Skills

Languages	Fluent in French and English.
Coding	SageMath, Magma, GAP, LaTeX, Python, C, Java, HTML, css, Javascript.
Karate	British Champion, second place at the french cup, nine times national university champion.

References

Prof. Ivan Cheltsov   i.cheltsov@ed.ac.uk
Prof. Yuri Tschinkel   tschinkel@cims.nyu.edu
Prof. Susanna Zimmermann   susanna.zimmermann@unibas.ch

References (continued)

Prof. Frédéric Mangolte   frederic.mangolte@univ-amu.fr