

Antoine Pinardin




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Research Interests

Algebraic geometry, with a particular focus on birational geometry, especially 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 – Sept.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 – Sept.2020  **M.Sc. Applied Algebra**, University of Paris-Saclay.
Thesis title: *Determinants and Resultants in Higher Dimension*.
Supervisors : Daniele Faenzi and Ronan Terpereau

Employment Record




- Jan. 2022 –  **Tutor in Mathematics for Undergraduate and M.Sc. Students**, University of Edinburgh.

Grants and Awards


- Mar. 2024  **ICMS grant**.
Awarded by the International Center for Mathematical Research for the organisation of an international conference.
- June 2024  **[Sport] Blues Award of the University of Edinburgh**.
Highest award for an athlete from the University of Edinburgh.

Publications

Articles

- 1 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>.
- 2 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>.
- 3 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>.

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>

Research Visits

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

Invited Talks

Dec 2023	■ <i>G-Solid rational surfaces.</i> Aix-Marseille University, Marseille, France. Department seminar.
	■ <i>G-Solid rational surfaces.</i> University of Lille, Lille, France. Department seminar.
Jan 2024	■ <i>G-Solid rational surfaces.</i> Charmey, Switzerland. Swiss-french workshop on algebraic geometry.
Feb 2024	■ <i>G-Solid rational surfaces.</i> University of Birmingham, United Kingdom. CALF seminar.
June 2024	■ <i>G-Solid rational surfaces.</i> University of Edinburgh, United Kingdom. Hodge club seminar.
Sep 2024	■ <i>Linearization problem in the plane Cremona group.</i> Cetraro, Italy. Conference on Fano varieties.
Jan 2025	■ <i>Linearization problem in the plane Cremona group.</i> New York University. Department seminar.

Attended Conferences

Dec 2021	■ EDGE 2021, University of Edinburgh, Edinburgh, Scotland.
May 2022	■ Spring School of Algebraic Geometry, Université de Bourgogne-Franche-Comté, Dijon, France.
Jun 2022	■ Conference on Birational Geometry, EPFL, Lausanne, Switzerland.
Aug 2022	■ Conference on K-Stability, University of Stony Brook, Stony Brook, New York.
Nov 2022	■ EDGE 2022, ICMS, Edinburgh, Scotland.
Jan 2023	■ Singularities in Trento, University of Trento, Trento, Italy.
	■ Swiss-French workshop in Algebraic Geometry, Charmey, Switzerland.
Apr 2023	■ Conference on Vertex Algebras, Isle of Skye, Scotland.
Jul 2023	■ GAEL 2023, University of Warwick, Coventry, England.
Sep 2023	■ Conference on K-stability, University of Oxford, Oxford, England.
Oct 2023	■ Conference on higher dimensional geometry, Simons Foundation, New York City, New York.
Dec 2023	■ Seminar on singularities in Algebraic Geometry, University of Nottingham, Nottingham, England.
Feb 2024	■ Swiss-French workshop in Algebraic Geometry, Charmey, Switzerland.
May 2024	■ Conference on Algebraic Transformation Groups, Ascona, Switzerland.

Attended Conferences (continued)

- Conference on K-stability and moment maps, University of Cambridge, Cambridge, England.
- Jun 2024 ■ BRIDGES meeting on special geometries and stability, Cargèse, France.
- Sep 2024 ■ Conference on Fano Varieties in Cetraro, Italia.
- Oct 2024 ■ Birational Geometry and Number Theory, ICMS, Edinburgh, Scotland. Organiser of the event.

Teaching

- **Algebras and Representation theory.**
Workshop organiser and Tutor, spring 2023.
<https://smstc.ac.uk/modules/representation-theory>
- **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>
- **Numerical Linear Algebra.**
Tutor, autumn 2022 and 2023
<http://www.drps.ed.ac.uk/17-18/dpt/cxmath10098.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	■	ŁTŁX, Python, C, Java, HTML, css, Javascript...
Karate	■	Senior British Champion, second at the french cup, eight times national university champion, fourth Dan in Shotokan karate.

References

- **Prof. Ivan Cheltsov** i.cheltsov@ed.ac.uk
- **Prof. Susanna Zimmermann** susanna.zimmermann.saclay@gmail.com
- **Prof. Yuri Tschinkel** tschinkel@cims.nyu.edu