

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

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| 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: <i>GIT and hyperkähler structures of the Hilbert Schemes of points on surfaces</i> .
Supervisor : Daniele Faenzi |
| Sep 2019 – Sep 2020 | ■ M.Sc. Applied Algebra , University of Paris-Saclay.
Thesis title: <i>Determinants and Resultants in Higher Dimension</i> .
Supervisors : Daniele Faenzi and Ronan Terpereau |

Research Visits


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| 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. |

Publications



Articles

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








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

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

Attended Conferences

- 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 City, 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.









Attended Conferences (continued)

- Nov 2022  Singularities in Trento, University of Trento, Trento, Italy.
- Aug 2022  EDGE 2022, ICMS, Edinburgh, Scotland.
- Jun 2022  Conference on K-Stability, University of Stony Brook, Stony Brook, New York.
- May 2022  Conference on Birational Geometry, EPFL, Lausanne, Switzerland.
- Dec 2021  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 and M.Sc. Students**, University of Edinburgh.

Teaching

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

Teaching (continued)

- **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 ■ 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