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 – 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

Grants and Awards

Sept. 2021	🔖	**Leverhulme Early Career Fellowship.** Research grant awarded by the Leverhulme Trust.
June 2024	🔖	**[Sport] Blues Award of the University of Edinburgh.** Highest award for an Edinburgh University Athlete.

Employment Record

Jan. 2022 – ····	🔖	**Tutor in Mathematics for undergraduate and postgraduate students.** 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].

2. A. Pinardin, "G-solid rational surfaces," *European Journal of Mathematics,* vol. 10, no. 2, pp. 1–23, 2024.

Events I am organising

Oct. 2024	🔖	**ICMS conference on Birational Geometry and Number Theory** An international workshop 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**. On a joint project with Sione Ma'u, Ivan Cheltov, and Oliver Li. Invited for three weeks.
Oct 2023	■	**Simons foundation, New York City**. Invited for a week 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 for a week by Prof. Yuri Tschinkel.
Jan-June 2025	■	**CIRM, Luminy, France**. Invited for a semester by Prof. Frédéric Mangolte.

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.
June 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.

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, University of Edinburgh, 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.
Sept. 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 singuarities 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.
	■	Conference on K-stability and moment maps, University of Cambridge, Cambridge, England.
June 2024	■	BRIDGES meeting on special geometries and stability, Cargèse, France.
Sep. 2024	■	Conference on Fano Varieties in Cetraro, Italia.

Teaching

Algebraic Geometry.
Workshop organiser and Tutor, Autumn 2024.
https://smstc.ac.uk/modules/algebraic-geometry

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, 2023 and 2024
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

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

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

Skills

Languages   Fluent in French and English.

Coding   LaTeX, Python, C, Java, HTML, css, Javascript…

Skills (continued)

Karate ◼ Senior British Champion, second at the french cup, eight times national university champion, fourth Dan in Shotokan karate.

Reference

Advisor ◼ **Prof. Ivan Cheltsov** i.cheltsov@ed.ac.uk