# **Antoine Pinardin**

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http://www.antoinepinardin.com

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

## **Publications**

### Articles

- A. Pinardin, A. Sarikyan, and E. Yasinsky, "Linearization problem for finite subgroups of the plane cremona group," 2024. arXiv: 2412.12022 [math.AG]. *O* URL: https://arxiv.org/abs/2412.12022.
- 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]. *O* URL: https://arxiv.org/abs/2404.07803.
- A. Pinardin, "G-solid rational surfaces," *European Journal of Mathematics*, vol. 10, no. 2, pp. 1–23, 2024.
  *O* URL: https://link.springer.com/article/10.1007/s40879-024-00747-z.

## **Research Visits**

Mar-Jun 2025	<b>CIRM, Luminy, France</b> . Invited by Prof. Frédéric Mangolte.
Jan-Feb 2025	<b>Simons foundation, New York City</b> Invited for two months by Prof. Yuri Tschinkel.
Nov 2024	<b>New York University, New York City</b> Invited for a week by Prof. Yuri Tschinkel.
Nov-Dec 2023	<b>University of Aix-Marseille, France</b> . Invited for a week by Prof. Frédéric Mangolte.
Oct 2023	<b>Simons foundation, New York City</b> . Invited for a week by Prof. Yuri Tschinkel.
Dec 2022	<b>University of Auckland, New Zealand</b> . 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	<b>[Sport] Blues Award of the University of Edinburgh.</b> Highest award for an athlete from the University of Edinburgh.

## **Invited Talks**

Apr 2025	<i>Linearization problem for finite subgroups of the plane Cremona group.</i> BENDZ seminar, EPFL, 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	$G\mathchar`-Solid\ rational\ surfaces.$ Swiss-french workshop on algebraic geometry, Charmey, Switzerland.
Dec 2023	G-Solid rational surfaces. Department seminar, University of Lille, France.
	$G\mathchar`-Solid$ rational surfaces. Department seminar. Department seminar, Aix-Marseille University, France.

### **Attended Conferences**

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.

### **Attended Conferences (continued)**

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 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

## Teaching (continued)

#### Accelerated Algebra and Calculus. Tutor, autumn 2022 http://www-test.drps.ed.ac.uk/16-17/dpt/cxmatho8o62.htm

Introduction to Linear Algebra. Tutor, autumn 2022 http://www.drps.ed.ac.uk/19-20/dpt/cxmatho8057.htm

### Calculus and its Applications.

Tutor, spring 2022 http://www.drps.ed.ac.uk/16-17/dpt/cxmatho8058.htm

#### Proofs and Problem Solving. Tutor, spring 2023 http://www.drps.ed.ac.uk/17-18/dpt/cxmatho8059.htm

### Skills

Languages 📕 Fluent in French and English.

Coding 📕 SageMath, Magma, GAP, LTEX, 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. Frédéric Mangolte** frederic.mangolte@univ-amu.fr
- Prof. Yuri Tschinkel tschinkel@cims.nyu.edu
- Prof. Susanna Zimmermann susanna.zimmermann@unibas.ch