

# Antoine Pinardin

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🌐 <http://www.antoinepinardin.com>

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

## Grants and Awards

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| Mar. 2024 | 📖 <b>ICMS grant</b> .<br>Awarded by the International Center for Mathematical Research for the organisation of an international conference. |
| June 2024 | 📖 <b>[Sport] Blues Award of the University of Edinburgh</b> .<br>Highest award for an Edinburgh University Athlete.                         |

## Employment Record

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| Jan. 2022 – . . . . | 📖 <b>Tutor in Mathematics for Undergraduate and M.Sc. Students</b> , University of Edinburgh. |
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## 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

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|-----------|---|
| Oct. 2024 | 📖 <b>ICMS conference on Birational Geometry and Number Theory</b><br>An international conference at the intersection of Number theory and Birational Geometry.<br><a href="https://www.icms.org.uk/workshops/2024/birational-geometry-and-number-theory">https://www.icms.org.uk/workshops/2024/birational-geometry-and-number-theory</a> |
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## Research Visits

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

## 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.
	■ Conference on K-stability and moment maps, University of Cambridge, Cambridge, England.











## Attended Conferences (continued)

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- 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

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-     **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

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- Languages  Fluent in French and English.
- Coding   $\text{\LaTeX}$ , 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.

## Reference

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Advisor  **Prof. Ivan Cheltsov** [i.cheltsov@ed.ac.uk](mailto:i.cheltsov@ed.ac.uk)