# 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.

## 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," *to appear in European Journal of Mathematics*, 2024. arXiv: 2309.13757 [math.AG].

## Education

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

## Awards

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| Sept. 2021 | **Leverhulme Early Career Fellowship.**<br>Research grant awarded by the Leverhulme Trust. |

## Employment Record

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

## Research Visits

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| Dec 2022 | **University of Auckland, New Zealand**.<br>On a joint project with Sione Ma'u, Ivan Cheltov, and Oliver Li. Invited for three weeks. |
| Nov-Dec 2023 | **University of Aix-Marseille, France**.<br>On a joint project with Prof.Frédéric Mangolte. Invited for a week. |

## Invited Talks

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| Dec 2023 | *G-Solid rational surfaces.* Aix-Marseille University, Marseille, France. Department seminar. |
| | *G-Solid rational surfaces.* University of Lille, Lille, France. Department seminar. |

## Invited Talks (continued)

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.

## 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.

## 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*

## Teaching (continued)

**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    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

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