

Intersection Theory and Moduli Spaces, Topics for Final Presentation

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Due dates

- By the end of Friday May 14, please send me an email communicating your chosen topic.
- By the end of Monday May 17, please send me an email with a rough outline of the presentation.
- The presentations will be on Monday May 24 at our usual class time.

List of topics and some references

- The Chow ring of products of projective spaces.
 - David Eisenbus and Joe Harris, 3264 & All That Intersection Theory in Algebraic Geometry, Sections 2.1.4, 2.1.6, 2.1.7.
- The circles of Apollonius.
 - David Eisenbus and Joe Harris, 3264 & All That Intersection Theory in Algebraic Geometry, Section 2.3.
- The Chow ring of $\mathbb{G}(1, 3)$.
 - David Eisenbus and Joe Harris, 3264 & All That Intersection Theory in Algebraic Geometry, Section 3.3.
- Numerical criteria for ampleness and examples (Simon Cooper).
 - János Kollár, Birational Geometry of Algebraic Varieties, Section 1.5.
 - Robert Lazarsfeld, Positivity in Algebraic Geometry I, Examples 1.5.1, 1.5.2.

- The Naruki compactification of the moduli space of marked cubic surfaces (Lukas Gustafsson).
 - Isao Naruki, Cross ratio variety as a moduli space of cubic surfaces.
 - Elisabetta Colombo and Bert van Geemen, The Chow group of the moduli space of marked cubic surfaces.
- Enriques surfaces and the Enriques lattice.
 - If interested, contact me to decide the reference.