

Real forms of toric varieties

Giancarlo Lucchini-Arteche¹ and Ronan Terpereau²

Toric varieties are central objects in algebraic geometry, whose combinatorial description makes them particularly tractable. In this mini-course, we will first review their classification over the complex numbers. We will then explain how Galois descent can be used to obtain a classification over the real numbers.

- * Lecture 1 (1h30): Complex toric varieties

- * Lecture 2 (1h30): Real forms, Galois cohomology, and the classification of real tori and torsors under the action of a real torus

- * Lecture 3 (1h): Real forms of toric varieties: main result and examples.

¹Universidad de Chile

²Université de Lille