

## **BIRATIONAL INVOLUTIONS OF THE REAL PROJECTIVE PLANE**

EGOR YASINSKY

Birational involutions of the projective plane (or, equivalently, automorphisms of the field of rational functions in two variables of order 2) were studied already by the Italian school of algebraic geometry — Bertini, Castelnuovo, and Enriques. However, their explicit and complete description was obtained by Beauville and Bayle only in 2000 and only in the case of a complex projective plane. It turns out that for planes over algebraically non-closed fields the situation is much more complicated. I will talk about the joint work with I. Cheltsov, F. Mangolte and S. Zimmermann, in which we classified birational involutions of the real projective plane.