

Algebraic Geometry - Mariusz Koras in memoriam

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CHARACTERIZATION OF TORIC SURFACES BY THEIR AUTOMORPHISM GROUPS

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ABSTRACT. In this joint work with Andriy Regeta and Alvaro Liendo we show that affine toric surfaces are determined by their automorphism group, i.e. if S_1 is an affine toric surface and S_2 a normal affine surface such that the groups $\text{Aut}(S_1)$ and $\text{Aut}(S_2)$ are isomorphic, then S_1 and S_2 are isomorphic. I will explain how to prove this kind of results using group theoretical properties of Cremona groups.