

Algebraic Geometry - Mariusz Koras in memoriam

Warsaw, 28.05.2018 - 01.06.2018



A SURVEY ON AUTOMORPHISM GROUPS OF KORAS-RUSSELL THREEFOLDS

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ABSTRACT. Koras-Russell threefolds are smooth contractible complex affine \mathbb{C}^* -varieties of dimension three. Koras and Russell introduced these varieties 20 years ago in order to prove their remarkable result: every algebraic action of \mathbb{C}^* on affine complex three-space is linearizable. Since then, the study of Koras-Russell threefolds has led to many important insights and results in the theory of affine algebraic geometry.

In this talk, I will give an overview of results concerning automorphism groups of a Koras-Russell threefolds and some of their consequences.