Conjugacy classes of elements of finite order in the plane Cremona group

Igor Dolgachev
Department of Mathematics
University of Michigan

Abstract

The plane Cremona group is the group of birational automorphisms of projective plane. The classification of its elements of finite order up to conjugacy was given in the last century by S. Kantor. In this talk I will explain how to derive this classification by modern tools including the known structure of conjugacy classes in finite Weyl groups and also the theory of log-terminal Del Pezzo surfaces. These tools allows us to complement and clarify the classical results of Kantor.