

On the Birational Classification of Complex Projective Varieties

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For smooth algebraic curves the birational class and the isomorphism class are the same. This is not the case starting with dimension two. There is a classic theory (Castelnuovo—Enriques) of the birational classification of smooth projective surfaces. In the period 1980–1988 Shigefumi Mori introduced many new ideas in order to study the higher dimensional projective varieties. Other important mathematicians studied this subject, as J. Kollar, Y. Kawamata, M. Reid, V. Shokurov and others. I will present a survey on the subject and a new result concerning the study of terminal singularities of some Fano 3-folds.