

Tits Alternative for the Cremona Group

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A group G satisfies the Tits alternative if any subgroup contains either a non-Abelian free subgroup or a solvable group of finite index. This alternative has been proved by Jacques Tits for the linear groups (up to restricting to finitely generated subgroups when the field is of positive characteristic). Since then, this alternative has been proved for many other groups. In particular, Serge Cantat (in the case of finitely generated subgroups) and Christian Urech proved that the Cremona group, namely the group of birational transformations of the projective plane, satisfies the Tits alternative. After an introduction to the Cremona group, the goal of this talk is to give their proof's strategy of this important result.

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