Bernoullis Tafelrunde

Graduate Student Seminar

Thursday 28th November 12:15-13:00
Seminarraum 05.002, Spiegelgasse 5

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Automorphisms of Del Pezzo surfaces of degree 4

Abstract

The talk will be based on the results of my Master Thesis. We will start off with an introduction into the concept of a blow-up of points in the projective plane, give a short definition of the notion of a divisor and then use these tools to describe a Del Pezzo surface of degree 4 as the blow-up of five points in the projective plane and investigate its automorphism group. More concretely, the latter can be written as a semi direct product of $\mathbb{Z}_2^4$ and H_S, where H_S denotes a group isomorphic to the subgroup of automorphisms of $\mathbb{P}^2$ which preserve a given five point set. As five point sets in $\mathbb{P}^2$ need not be equivalent (i.e. may not be related by an automorphism of the projective plane), the concrete form of H_S may vary, depending on the concrete choice of the points, this is, the isomorphism class of the corresponding Del Pezzo surface S. If time permits, we will lastly see that any Del Pezzo surface of degree 4 can be embedded into $\mathbb{P}^4$ as a complete intersection of two quadrics.