Title / Abstract

Ingrid Bauer

Title: Symmetries and equations for Del Pezzo surfaces and applications
Abstract. In this talk I will mainly discuss $\mathrm{Aut}(Y) = \mathfrak{S}_5$ equivariant equations of the Del Pezzo surface Y of degree 5. On the one hand, I will describe Y anticanonically embedded in $\mathbb{P}^5$ by the 4×4 Pfaffians of a $\mathfrak{S}_5$-equivariant 6×6 matrix of linear forms.

Moreover, I will give an embedding of Del Pezzo surfaces in products of projective lines as determinantal varieties and derive equations for the associated Hirzebruch-Kummer coverings in products of Fermat curves.

In the end, I will give applications of these results to some open questions on HK-covers of the projective plane branched on line arrangements. This is joint work with F. Catanese.

Christian Gleissner

Title: Canonical and Pluricanonical Systems of Product Quotients
Abstract. We consider canonical and pluricanonical systems of product quotients. In the first part of the talk we show that the highest possible degree of the canonical map of a surface S isogenous to a product is 32. The maximum can only be achieved if $|K_S|$ is base point free, $p_g(S) = 3$ and $q(S) = 0$. We provide two families that realize this value, they are unique among the examples obtained by the action of an abelian group. This is joint work with C. Rito and R. Pignatelli. In the second part of the talk, we illustrate a method to compute the plurigenera of product quotients. As an application, we give examples of product quotient surfaces and show that they are minimal. These results are obtained in collaboration with R. Pignatelli and F. Favale.

Michael Lönne

Title: On strata of the Miranda moduli space of Jacobian elliptic $K3$
Abstract. The moduli space was constructed by Miranda as a quotient of a quasi-projective variety of dimension 22 by a reductive group of dimension 4. The main focus will be on two stratifications, one by the monodromy group considered by Bogomolov, Petrov and Tschinkel, the other by the root lattice generated by fibre components studied in great detail by Shimada.

I will report on joint work with Klaus Hulek, which succeeds in a classification of all positive dimensional root lattice strata that coincide with a monodromy stratum up to subsets of positive codimension.