Universal torsors over degenerating del Pezzo surfaces

Ulrich Derenthal, Leibniz Universität Hannover

Let S be a split family of del Pezzo surfaces over a discrete valuation ring such that the general fiber is smooth and the special fiber has ADE-singularities. Let G be the reductive group given by the root system of these singularities. We construct a G-torsor over S whose restriction to the generic fiber is the extension of structure group of the universal torsor under the Neron-Severi torus. This extends a construction of Friedman and Morgan for individual singular del Pezzo surfaces.

This is joint work with Norbert Hoffmann.