

Rational points on conic bundle surfaces

Christopher Frei, University of Manchester

We discuss some recent results on the distribution of rational points of bounded height on conic bundle surfaces. In the case of anticanonical heights, we obtain asymptotic lower bounds of the (conjecturally) correct order of magnitude for a wide class of conic bundle surfaces, including arbitrary del Pezzo surfaces with large enough Picard group. For heights coming from certain other ample divisors, we even obtain an asymptotic formula that agrees with a conjecture of Batyrev and Manin.

This is joint work with Daniel Loughran and Efthymios Sofos.