

Frédéric Campana: Pseudoeffectivity properties of orbifold cotangent bundles

Abstract: If (X, D) is a smooth and complex projective log-canonical pair with pseudo-effective canonical bundle, we show that the determinant of any quotient Q of any tensor power of its cotangent bundle is pseudo-effective. This strengthens our former result CP13, where such $\det(Q)$'s were shown to be generically nef. The proof is entirely similar, the main improvement being a strengthening of the Bogomolov-McQuillan algebraicity criterion for foliations. This new result permits to obtain very elementarily (and without using BCHM) the corollaries of CP13, and even new results previously not accessible even using BCHM. This is joint work (in development) with M. Paun.