

962-19-897

Matei N Stroila* (stroila@usc.edu). *Finiteness results for the torsion of Chow groups.*

Let X be a product of two smooth projective curves, $X = C_1 \times C_2$, defined over a local field with residue field of characteristic p . Let J_i be the Jacobian of C_i , $i = 1, 2$ and g_i be the genus of C_i , $i = 1, 2$. We prove that the prime to p torsion of the Chow group of zero cycles of X is finite in the following cases: i) one of the Jacobian has good reduction and the other one has complete toric reduction, ii) both Jacobians have complete toric reduction and the rank of the homomorphism ring ($Hom(J_1, J_2)$) is greater than or equal to $g_1 g_2$. Let C be a bielliptic curve such that its Jacobian J has mixed reduction, i.e. the neutral component of the reduction of J is an extension of an elliptic curve by a torus. We show that the prime to p torsion of the Chow group of zero cycles of $C \times C$ is finite. (Received September 28, 2000)