

Mordell-Lang modulo Abelian subvarieties

Gaël Rémond (remond@ujf-grenoble.fr)

Institut Fourier - Université Grenoble I

BP 74

38402 Saint-Martin-d'Hères CEDEX

France

Abstract. Faltings' results show the following statement: if C is a curve on an Abelian variety A and G a subgroup of finite rank of A , then there is only finitely many points of C lying in G . Here we deal with $A = E^n$ the power of an elliptic curve and assume that C is not contained in any translate of a strict Abelian subvariety of A . We investigate the finiteness of the set of points of C contained in the union of $G + B$ for B varying among all Abelian subvarieties of a certain codimension r (that is to say we consider points which are in C modulo a certain B). Our result is best possible when C has complex multiplication that is to say we can take $r = 2$. This is joint work with Evelina Viada.

