Speaker : Piotr Krasoń

Title : On arithmetic in Mordell-Weil groups

Abstract : (joint with G.Banaszak) We will describe the problem of detecting linear dependence of points in Mordell-Weil groups A(F) of abelian varieties. This is done via reduction maps. We determine the sufficient conditions for the reduction maps to detect linear dependence in A(F). We also show that our conditons are very close to be or perhaps are the best possible. In particular we try to determine the conditions for detecting linear dependence in Mordell-Weil groups via finite number of reductions. The methods combine applications of transcedental, ℓ -adic and mod v techniques.