Elisabeth Bouscaren : From Manin Mumford to Mordell-Lang via Model Theory.

We will explain how to derive the Mordell-Lang Conjecture for abelian varieties over function fields from the Manin-Mumford conjecture, using model theory but bypassing the Trichotomy theorem in Zariski Geometries. We will focus on the characteristic p case. The proof makes essential use of the model theory of groups of finite (relative) Morley Rank and goes through a result of quantifier elimination for the induced structure on divisible subgroups of the group of $K-$rational points of abelian varieties, when K is a non perfect separably closed field of finite degree of imperfection.
(Joint work with Franck Benoist and Anand Pillay) (2014)