

Speaker: T. Tucker

Title: Dynamical Mordell-Lang problems

Abstract:

The Mordell-Lang conjecture, proved by Faltings and Vojta, states that a finitely generated subgroup of a semiabelian variety intersects any subvariety of that semiabelian variety in a union of finitely many translates of subgroups. It seems natural to ask if such a theorem holds when the finitely generated subgroup is replaced by a finitely generated semigroup of morphisms of a general variety; for example, one might take a semigroup of endomorphisms of a semiabelian variety. We will prove that this is true in many cases when the semigroup is cyclic and also give counterexamples in the more general case, some simple and some more complicated.