

Faltings heights

Heights functions are the most elementary tool to prove finiteness theorems in arithmetic geometry. Arakelov theory provides a geometric formalism to define them. For natural choices on modular spaces they also allow to give an interpretation of some mysterious numbers. In this talk we will review the definition of Faltings heights. We will present the inequality for the comparison of "singular heights". Rather than focusing on the proof, we prefer to give elementary consequences, show its relation with trivial classical inequalities in diophantine approximation and give examples of computation.