

Séminaire de théorie des nombres

Le 18 janvier 2010 à 14h

A model-theoretic approach to problems of Manin-Mumford-Andre-Oort-type

Exposé de Jonathan Pila
(Université de Bristol)

Résumé : I will describe a result, joint with Alex Wilkie, about the distribution of rational points on certain non-algebraic sets in real space. The natural setting is an “o-minimal structure over the real numbers”, a notion from model-theory. A surprising strategy, proposed by Umberto Zannier, uses this result to approach diophantine problems in the Manin-Mumford-Andre-Oort circle of conjectures. I will describe some implementations of this strategy, including an unconditional proof of the Andre-Oort conjecture for products of modular curves.