“It has been said that figures rule the world. Doubtful. But I am sure that figures show us whether it is being ruled well or badly.” —Goethe.

The Trivial Notions Seminar
Proudly Announces

Uniformity of Rational Points

A talk by
David Smyth

Abstract

Faltings’ celebrated proof of the Mordell Conjecture shows that a smooth curve of genus \( g \) defined over a number field \( K \) has only finitely many \( K \)-rational points. But how does the number of \( K \)-rational points vary in families? Do there exist genus \( g \) curves over \( K \) with an arbitrarily large number of \( K \)-rational points? A beautiful observation of Caporaso, Harris, and Mazur shows that, in fact, Lang’s conjecture (concerning rational points on higher-dimensional varieties) implies a uniform bound on the number of \( K \)-rational points as you vary the curve. We will start from scratch and hopefully wind up proving this implication.

Friday, February 2\textsuperscript{nd}, 2007 at 2:00 pm
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