Séminaire de théorie des nombres Londre – Paris

Le 16 novembre 2009 à 14h (à l'IHP)

On the Brauer group of K3 surfaces

Exposé de Alexei Skorobogatov (Imperial College, London, UK)

Résumé : The computation of the Brauer group is a first step in the computation of the Brauer-Manin obstruction. Until recently there was not a single $K3$ surface over a number field for which the Brauer group was known. I'll explain an approach to the computation of the Brauer group of Kummer surfaces and diagonal quartic surfaces, and will give examples over $\mathbb{Q}$ when the Brauer groupis trivial. Numerical experiments seem to support the conjecture that weak approximation holds in these cases. This is a joint work with Yuri Zarhin and Evis Ieronymou.