

# Séminaire de théorie des nombres Londres-Paris

Le 21 novembre 2011 à 14h (Jussieu 15–25–104)

## Quantitative ergodic theorems and Diophantine approximation

Exposé de Alex Gorodnik (University of Bristol)

**Résumé :** The fundamental problem in the theory of Diophantine approximation is to quantify the density of rational numbers in reals. We investigate this problem on varieties equipped with group actions, and establish analogues of Khinchin and Jarnik theorems in this setting. The main ingredient of the proof is an ergodic theorem with explicit rate determined by the spectral gap property of automorphic representations. This is a joint work with A.Ghosh and A.Nevo.