



Seminar

K-Theory, Quadratic Forms and Number Theory

Title: Diophantine approximation of pi

Speaker: Dr. Pat McCarthy (NUI Maynooth)

Date: Wed 13th April 2011 at 3:00PM

Location: Mathematical Sciences Seminar Room

Abstract: Diophantine Approximation (in one dimension) is concerned with how well we can approximate a real number α with a rational number. Specifically, suppose that $\phi(x) > 0$ and $\phi(x)/x$ tends to 0 as x decreases to 0. Can we find infinitely many fractions p/q such that

$$|\alpha - p/q| \leq \phi(|1/q|)?$$

We present some results which hold for arbitrary irrational α and arbitrary algebraic α . Finally we discuss the current state of knowledge regarding the case where $\alpha = \pi$.