



Seminar

## K-Theory, Quadratic Forms and Number Theory

**Title:** The dilogarithm and  $SL_2$

**Speaker:** Dr. Kevin Hutchinson (UCD)

**Date:** Wed 6th October 2010 at 3:00PM

**Location:** Mathematical Sciences Seminar Room

**Abstract:** The Bloch group of a field, which is constructed from the 5-term functional equation of the dilogarithm, arises in a variety of contexts: invariants of hyperbolic 3-manifolds, algebraic K-theory and the homology of  $GL_2$ , *conformal field theory*.

We will discuss the classical Bloch group and some of the connections mentioned above, and will also discuss a new refinement of the Bloch group which allows us to calculate hitherto unknown parts of the homology of  $SL_2$ .