K-Theory, Quadratic Forms and Number Theory Seminar

Julien Houriet (EPFL, Lausanne)

will speak on

Hermitian lattices and K-theory of the ring of integers of a number field

Wed 14th May 2008 at 4:00PM

Location: Mathematical Sciences Seminar Room

Using Voronoi reduction theory for lattices, Christophe Soulé derived upper bounds for the torsion of the K-theory of the ring of integers Z. He generalized his method to the ring of integers of any number field and obtained bounds for their K-groups in terms of degree and absolute discriminant of the number field. The method consists in using relationships between K-groups of a ring R and homology of GL(R) on one side, and reduction theory for hermitian lattices on another side. We will show how one can use results on ideal lattices to improve results for hermitian lattices and consequently obtain better bounds for the torsion of K-groups.

This talk is part of the **K-Theory, Quadratic Forms and Number Theory** series. For more, see
https://maths.ucd.ie/seminars