K-Theory, Quadratic Forms and Number Theory Seminar

Dr. Thomas Unger (UCD)

will speak on

The Procesi–Schacher conjecture and Hilbert's 17th problem for algebras with involution

Wed 22nd April 2009 at 4:00PM

Location: Mathematical Sciences Seminar Room

In 1976 Procesi and Schacher developed an Artin–Schreier type theory for central simple algebras with involution and conjectured that in such an algebra a totally positive element is always a sum of hermitian squares. I will present elementary counterexamples to this conjecture and some cases where the conjecture does hold. If time permits I will discuss a Positivstellensatz for noncommutative polynomials, positive semidefinite on all tuples of matrices of a fixed size. This is joint work with Igor Klep.

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