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## K-Theory, Quadratic Forms and Number Theory Seminar

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**Dr. Omran Ahmadi (UCD)**

will speak on

**On stable quadratic polynomials**

Thu 1st March 2012 at 4:00PM

Location: Mathematical Sciences Seminar Room (Ag 1.01)

A polynomial  $f(X)$  in  $K[X]$  over a field  $K$  is called stable if all its iterates are irreducible over  $K$ . We show that almost all monic quadratic polynomials  $f(X)$  in  $Z[X]$  are stable over  $Q$ . We also show that the presence of squares in so-called critical orbits of a quadratic polynomial  $f(X)$  in  $Z[X]$  can be detected by a finite algorithm; this property is closely related to the stability of  $f(X)$ . We also prove there are no stable quadratic polynomials over finite fields of characteristic 2 but they exist over some infinite fields of characteristic 2.

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