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### Algebra and Number Theory Seminar

## **Richard Moloney**

will speak on

#### Ph.D. defence: Division Polynomials for Edwards Curves and Divisibility Properties of Kloosterman Sums

### Thu 26th May 2011 at 2:30PM

#### Location: CASL Seminar Room - Belfield Office Park

Edwards curves have gained attention in recent years for their close connection to elliptic curves. In the first part of thisthesis, we investigate the analogue for Edwards curves of the well known division polynomials for elliptic curves. These are recursively defined polynomials which characterise the torsion points of a given curve. In the second part of thisthesiswe derive divisibility results for Kloosterman sums. Using number theoretic results such as Stickelberger's theorem and the Gross-Koblitz formula, we generalise and extend the known divisibility results for these exponential sums.

This talk is part of the Algebra and Number Theory series. For more, see <a href="https://maths.ucd.ie/seminars">https://maths.ucd.ie/seminars</a>