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K-Theory, Quadratic Forms and Number Theory Seminar

Dr. Omran Ahmadi (UCD)

will speak on

On the distribution of the number of points on algebraic curves in extensions of finite fields

Wed 7th April 2010 at 4:00PM

Location: Mathematical Sciences Seminar Room

Let C be a smooth absolutely irreducible curve of genus g greater than or equal to 1 defined over $F_q, the finite field of q elements. Let C(F_{q^n}) be the number of F_{q^n} - rational points on C. Under a certain multiplicative inde$
$function of C, we derive an asymptotic formula for the number of n = 1, ..., N such that (C(F_{q^n}) -$
$q^n 1)/2gq^{n/2} belongs to a given interval I which is a subset of [-1, 1]. This can be considered as an analogue of the Sato-$
$Tate distribution which covers the case when the curve E is defined over Q and considered modulo consecutive primes p, alth$

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