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## Algebra and Number Theory Seminar

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Vijaykumar Singh

will speak on

**PhD Defence: Classification of Isogeny classes of  
Supersingular Abelian Varieties over Finite Fields**

Thu 9th June 2011 at 2:30PM

Location: Mathematical Sciences Seminar Room

*We study the intersection of two particular Fermat hyper-surfaces in  $P^3$  over a finite field. Using the Kani–Rosendecomposition we study arithmetic properties of this curve in terms of its quotients. Explicit computation of the quotient rank, zeta function, and number of rational points, of the mod  $p$  reduction of the curve. We show that the Jacobian of the quotient is split. We also give a complete classification of the isogeny classes of supersingular abelian varieties for all dimension by using Tate Theory.*

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