

中央研究院數學研究所

Institute of Mathematics, Academia Sinica

Taipei Postdoc Seminar

Speaker : 楊策仲 博士 Dr. Tse-Chung Yang
(本所 Academia Sinica)

Title : *Counting isoclasses superspecial abelian surfaces over finite fields*

Abstract :

From the results of Waterhouse, the explicit formula for the isomorphism classes of supersingular elliptic curves over any finite field is known. In this talk, I will recall Honda-Tate theorem which help us parametrize the isogeny classes of simple abelian varieties over a finite field \mathbb{F}_q with $q = p^\alpha$ elements. In each isogeny class, we provide a lattice description for superspecial abelian varieties over \mathbb{F}_q . Our description depends on the parity of the exponent α of q . When q is an odd power of the prime p , we give an explicit formula for the number of superspecial abelian surfaces over \mathbb{F}_q .

This is a joint work with Jiangwei Xue and Chia-Fu Yu.

Time : 11:00 – 12:30, Wednesday, December 21, 2016

Venue : Room 638, Astro-Math. Building (NTU Campus)

Organizer : Yu-Yen Chien (NCTS), Jyun-Ao Lin (Academia Sinica)

Refreshment : 10:30

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