

Number Theory Seminar

Distribution problems associated to abelian varieties

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Abstract: Given an abelian variety A defined over \mathbb{Q} , we look at its reduction A_p at an arbitrary prime p and study the distribution of A_p with specific properties. For example, the Lang-Trotter Conjecture about an abelian variety A of dimension 1 and its generalizations to an abelian variety A of higher dimension concern the distribution of A_p having a prescribed Frobenius trace, while the Murty-Patankar Conjecture about an absolutely simple abelian variety A concerns the distribution of A_p having split reduction. In this talk, I will discuss new upper bounds for the counting functions related to the aforementioned conjectures.

Friday, March 31 at 12:00 PM in 612 SEO