Philadelphia Area Number Theory Seminar

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Counting Local Systems on Supersingular Abelian Varieties

Abstract: Given a supersingular abelian variety A defined over an algebraically closed field of characteristic p, we count the number of homomorphisms from the étale fundamental group of A to $GL_n(q)$, where q is a power of p. This count (for fixed n) turns out to be a polynomial in q. We will give a somewhat complicated formula for this polynomial, then state a few theorems which elucidate its features, including a new result about semidirect products of profinite groups.

Thursday, September 17, 2015
2:40–4:00PM

Bryn Mawr College
Department of Mathematics
Park Science Center **328**

Tea and refreshments at 2:20PM in Park 355