

abstract

Joint IAS/PU Number Theory Seminar
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

The classical Kuga-Satake construction, over the complex numbers, uses Hodge theory to attach to each polarized K3 surface an abelian variety in a natural way. Deligne and Andre extended this to fields of characteristic zero, and their results can be combined with Faltings's isogeny theorem to prove the Tate conjecture for K3 surfaces in characteristic zero. Using the theory of integral canonical models of Shimura varieties of orthogonal type, we extend the Kuga-Satake construction to odd characteristic. We can then deduce the Tate conjecture for K3s in this situation as well (with some exceptions in characteristic 3).