

**Number theory and Representation
Theory seminar, Fall 2007
East Hall 4096
October 29, 3:10-5:00pm
(tea break at 4pm)**

Point-counting problem for Shimura varieties

Sug Woo Shin (IAS)

Abstract

I will review the point-counting problem considered for mod p fibers of Shimura varieties, with a little bit of history, from the viewpoint of the computation of Hasse-Weil zeta functions as well as the construction of Galois representations from automorphic representations. Along this line, I will introduce the point-counting formula for Igusa varieties, justifying its usefulness in studying the cohomology of certain PEL-type Shimura varieties (which we prefer to be proper over the reflex field) and related questions about the Langlands correspondence..