

Speaker: Xinwen Zhu

Title: Geometric Satake and cycles on modular varieties

Abstract: I will first describe certain conjectural Tate classes in the étale cohomology of the special fibers of Shimura varieties. According to the Tate conjecture, there should exist corresponding cycles. Then I will use ideas from geometric Satake to construct these conjectural cycles. I will give a few examples where these cycle classes give the conjectural Tate classes mentioned at the beginning. Time permitting, I will also sketch the function field analogue, where a more complete theory is available. This is a joint work with Liang Xiao.