

Speaker: Wei Zhang

Title: Some orbital integrals and arithmetic intersection number

Abstract: We first discuss some recent progress on the global Gan-Gross-Prasad conjecture for Rankin-Selberg L-values and period integrals on unitary groups, based on the relative trace formula of Jacquet and Rallis. Then we will present an arithmetic version of the (relative) trace formula as an approach to the Gross-Zagier formula and its higher dimensional generalization to unitary Shimura varieties. A key ingredient is an "arithmetic fundamental lemma" which is an equality between some orbital integrals and arithmetic intersection numbers.