RITT LECTURES

Speaker: Zhiwei Yun

Title: Geometry in orbital integrals and beyond

Abstract:

In the first lecture, I will give an overview of geometric methods involved in computing important quantities in the theory of automorphic forms, namely orbital integrals. I will mention applications to various versions of the fundamental lemma.

In the second lecture, I will talk about my joint work with Wei Zhang on generalizing the Gross-Zagier and Waldspurger formulae to higher derivatives of L-functions for function fields, whose proof relies on extending the geometric ideas mentioned in the first talk.