

COLLOQUIUM
UNIVERSITY OF PITTSBURGH
THURSDAY, JANUARY 21, 2016

704 THACKERAY HALL
3:00 P.M.

BAIYING LIU
SCHOOL OF MATHEMATICS
INSTITUTE FOR ADVANCED STUDY

ON DISCRETE SPECTRUM OF
QUASI-SPLIT CLASSICAL GROUPS AND
THE GENERALIZED RAMANUJAN PROBLEM

ABSTRACT: One of the fundamental problems in the modern theory of automorphic forms is to consider the spectral decomposition of the space of all square-integrable automorphic forms on a reductive algebraic group G defined over a number field F . This can be viewed as a vast generalization of the classical theory of Fourier analysis on $Z \backslash R$ and R . In this talk, we start with classical examples and then review the recent work of Arthur. The objective is to show our recent study on various refined properties of the spectral decomposition for quasi-split classical groups, with connection to the generalized Ramanujan problem: how bad the local components of the cuspidal spectrum could be?

Refreshments served at 2:30 p.m.
in the Math Dept. COMMON ROOM, Thackeray 705

*The speaker is a candidate for a position in the Department.