

MATH-IMS Joint Pure Mathematics Colloquium Series The Chinese University of Hong Kong

This Colloquium Series in Pure Mathematics is organized by the Department of Mathematics and the Institute of Mathematical Sciences (IMS) at The Chinese University of Hong Kong. The series focuses on all areas of pure mathematics together with theoretical developments and applications.

Date: February 13, 2023 (Monday)
Time: 11:00AM-noon (Hong Kong Time)
Venue: LSB 222

Automorphic periods and Strongly spherical varieties

*Speaker: Professor Lei Zhang
National University of Singapore*

Abstract: The Rankin-Selberg method is a classical approach to constructing integral representations of L-functions. One may use it to obtain the meromorphic continuation and functional equations of many L-functions. In this talk, we will survey several important constructions of Rankin-Selberg integrals and explore the connection with the double flag varieties for symmetric pairs, which are classified by He, Nishiyama, Ochiai, and Oshima. Moreover, we will discuss some new cases of period integrals on the strongly tempered spherical varieties and give their conjectural identity of central values of L-functions and their local multiplicity formulas in terms of local symplectic root number.

Bio: Professor Lei Zhang is an Associate Professor at the National University of Singapore. He obtained his B.S. from Peking University in 2005, and his Ph.D. from the University of Minnesota in 2011. Professor Zhang's research focuses on number theory and representation theory. He has made important contributions to the study of automorphic forms, L-functions, representations of topological groups and the Langlands program.