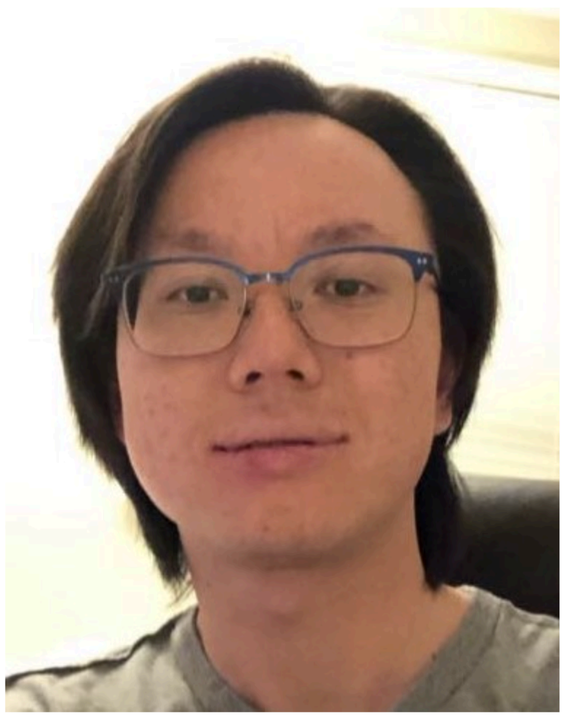
XIAMEN UNIVERSITY MALAYSIA
厦門大學馬來西亞分校

Research Talk - XMU-XMUM

Endoscopic liftings of supercuspidal representations for classical groups

May 19, 2025 (Monday), 3:30–4:30 pm Room A4#G06



Geo Kam-Fai Tam

Associate Professor

Xiamen University Malaysia

Research interests: Representation theory of p-adic reductive groups, endoscopic classification, supercuspidal representations, with number theoretic applications.

Speaker Introduction

Dr. Kam Fai Tam is an Associate Professor at Xiamen University Malaysia. Dr. Kam Fai Tam received his PhD at the University of Toronto in 2012. He received his Master and Bachelor at the Hong Kong University of Science and Technology.

Abstract

Let G be a classical group (orthogonal, symplectic, or unitary) over a p-adic field F, and π be a supercuspidal representation of $G(F)$. We propose a general strategy to express the Langlands parameter of π, only requiring the residual characteristic p to be odd, with proven examples by the speaker (partly joint with Corinne Blondel) and others. To briefly explain the strategy, we apply Mœglin's theory of Jordan blocks and Bushnell-Kutzko's theory of covering types to determine the endoscopic lift of π into the general linear group whose dual expresses the dual group of G as a complex matrix group. The cuspidal support of this lifted representation is expressed in terms of the inducing type of π defined by Stevens' construction of supercuspidal representations using skew semi-simple strata. This strategy is completely on the representation side.