Stanford Department of Mathematics
Number Theory Seminar

February 3, 2020

2:30–3:30pm, 383N

Local systems over Shimura varieties: a comparison of two constructions

Kai-Wen Lan
University of Minnesota

Abstract

Given a Shimura variety, we can construct two kinds of automorphic local systems; i.e., local systems attached to algebraic representations of an associated algebraic group. The first is based on the classical complex analytic construction using double quotients, while the second is a p-adic analytic construction based on a recently developed p-adic analogue of the Riemann–Hilbert correspondence.

I will explain how to compare these two constructions even when the Shimura variety is not of abelian type, and mention some applications and recent developments. (This is based on joint work with Hansheng Diao, Ruochuan Liu, and Xinwen Zhu.)