Abstract:

Let \( n \) be a positive integer, \( F \) be a non-Archimedean locally compact field of odd residue characteristic \( p \), and \( G \) be an inner form of \( \text{GL}(2n,F) \). This is a group of the form \( \text{GL}(r,D) \) for a positive integer \( r \) and division \( F \)-algebra \( D \) of reduced degree \( d \) such that \( rd=2n \). Let \( K \) be a quadratic extension of \( F \) in the algebra of matrices of size \( r \) with coefficients in \( D \), and \( H \) be its centralizer in \( G \). We study selfdual cuspidal representations of \( G \) and their distinction by \( H \), that is, the existence of a nonzero \( H \)-invariant linear form on such representations, from the viewpoint of type theory. When \( F \) has characteristic 0, we characterize distinction by \( H \) for cuspidal representations of \( G \) in terms of their Langlands parameter, proving in this case a conjecture by Prasad and Takloo-Bighash.