THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE
Algebraic Geometry and Representation Theory Seminar

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HTTPS://WEIZMANN.ZOOM.US/J/98304397425

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Selfdual cuspidal representations of GL(r,D) and distinction by an inner involution

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 GL(2n,F). This is a group of the form 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.

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