

About the theta correspondance for type I pairs over finite fields

Jesua Epequin

(Institut de mathématiques de Jussieu)

Abstract

A pair (G, G') of subgroups of a symplectic group $\mathrm{Sp}_{2n}(q)$ is called *dual* if each one is the centraliser of the other. For such a pair, R. Howe introduced a correspondance that associates a set $\theta(\pi')$ of irreducible representations of G to an irreducible representation π' of G' .

In this talk we will present the important concept of cuspidal and unipotent representations, and we'll show how to obtain a "preferred" representation out of this set for type I pairs and unipotent representations of the principal series of G' . That is, we'll see how to extract a bijection out of the theta correspondance. This generalizes the case proved by Aubert and Przebinda, where one of the groups in the pair is symplectic of dimension 4 and the other is a split orthogonal group.