

**Title:** “Theta correspondence, character theory and parabolic induction”

**Abstract:** Let  $F$  be  $p$ -adic field. Consider a dual pair  $(SO(2n+1), \widetilde{Sp}(2n))$ , where  $\widetilde{Sp}(2n)$  is the metaplectic cover of the symplectic group  $Sp(2n)$  and  $SO(2n+1)$  is the split orthogonal group over  $F$ . We show that there is a matching of Cartan subgroups between  $SO(2n+1)$  and  $\widetilde{Sp}(2n)$  via stabilized orbit correspondence. We say two representations of  $SO(2n+1)$  and  $\widetilde{Sp}(2n)$  correspond, if their characters on matching Cartan subgroups differ by a transfer factor, which is essentially character of the difference of the two halves of the oscillator representation. We show that this correspondence is compatible with parabolic induction: if two representations of Levi factors correspond, then after parabolic induction the two resulting representations also correspond. These results were motivated by the paper *Lifting of characters on orthogonal and metaplectic groups* by J. Adams who considered the case  $F = \mathbb{R}$ .