

1129-20-451

Jerrod M Smith* (jerrod.smith@utoronto.ca), Department of Mathematics, University of Toronto, 40 St. George Street, Toronto, Ontario M5S 2E4, Canada. *Relative discrete series for quotients of p -adic \mathbf{GL}_n .*

Let F be a p -adic field and $G = \mathbf{G}(F)$ the F -points of a connected reductive group defined over F . Given an involution θ of \mathbf{G} , we define $H = \mathbf{G}^\theta(F)$ to be the subgroup of θ -fixed points in G . The quotient $H \backslash G$ is a p -adic symmetric space. It is of particular interest to understand the irreducible subrepresentations of $L^2(H \backslash G)$, the relative discrete series (RDS). The representations of G that can be realized in a space of functions on $H \backslash G$ are said to be H -distinguished. By work of Kato and Takano, it is known that an H -distinguished discrete series representation of G is a RDS. We construct families of non-discrete RDS representations for three quotients of the general linear group. We consider:

1. $\mathbf{GL}_n(F) \times \mathbf{GL}_n(F) \backslash \mathbf{GL}_{2n}(F)$,
2. $\mathbf{GL}_n(F) \backslash \mathbf{GL}_n(E)$, where E is a quadratic Galois extension of F , and
3. $\mathbf{U}_{E/F}(F) \backslash \mathbf{GL}_{2n}(E)$, where $\mathbf{U}_{E/F}$ is a quasi-split unitary group over F .

(Received March 21, 2017)