Representations of reductive groups distinguished by symmetric subgroups

Abstract:

We will discuss representation theory of a symmetric pair $(G,H)$, where $G$ is a complex reductive group, and $H$ is a real form of $G$. The main objects of study are the $G$-representations with a non trivial $H$-invariant functional, called the $H$-distinguished representations of $G$.

I will give a necessary condition for a $G$-representation to be $H$-distinguished and show that the multiplicity of such representations is less or equal to the number of double cosets $B\backslash G/H$, where $B$ is a Borel subgroup of $G$. 