

1056-20-1365

Ricardo Portilla* (ricarpor@umich.edu). *Parametrizing Nilpotent Orbits in Symmetric Spaces Using Bruhat-Tits Theory.*

Let k be a field equipped with a nontrivial discrete valuation. Suppose k is complete and that its residue field is perfect. Let G be the group of k -rational points of a connected reductive linear algebraic group defined over k , and let θ be an involution of G . We denote by H the set of points in G which are fixed under θ . If \mathfrak{g} denotes the Lie algebra of G , then θ induces an involution $d\theta$ on the Lie algebra \mathfrak{g} . Denote by \mathfrak{p} the (-1) -eigenspace of \mathfrak{g} under $d\theta$ and fix $r \in \mathbb{R}$. We will discuss a parametrization of nilpotent H -orbits in \mathfrak{p} by (a symmetric space analogue of) distinguished degenerate Moy-Prasad cosets of depth r up to some natural equivalence relation. (Received September 21, 2009)