On the little Weyl group of a real spherical space (joint with Eitan Sayag)

Abstract:

Let $G$ be a connected reductive group defined over a field $k$ of characteristic 0. Recently Knop and Krämer showed that one can attach a Weyl group to any algebraic homogeneous $G$-variety defined over $k$. This Weyl group is called the little Weyl group. In this talk I will discuss a geometric construction of the little Weyl group for a real spherical space $G/H$. Our technique is based on a fine analysis of limits of conjugates of the subalgebra $\text{Lie}(H)$ along one-parameter subgroups in the Grassmannian of subspaces of $\text{Lie}(G)$. 