Title: Spherical Grassmannian on reductive Lie groups

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ABSTRACT

Let G be a locally compact group, K a compact subgroup of G and δ an arbitrary class of irreducible unitary representations of K.

If U is a topological completely irreducible representation of G on a Banach space E such that δ is contained in the restriction of U to K, then there exists a spherical function ϕ^U of type δ which is not trivial.

The height of ϕ is the multiplicity p of δ in the restriction to K of the representation U_ϕ associated to ϕ

The p-δ-spherical Grassmannian $\mathcal{G}_{p,\delta}$ is an equivalence class of spherical functions of type δ-positive of height p .

In this talk, we'll construct some elements of $\mathcal{G}_{p,\delta}$ on a locally compact group, on a connected Lie group and on a reductive Lie group using a generalized Abel transform.

And, if the discret series of G is not empty, we'll give a extension of Paley Wiener theorem using a compact Cartan subgroup of G.