Title Harmonic analysis on quasi Gelfand pairs

Abstract

Let G be a locally compact group, K a compact subgroup $Aut(G)$ of automorphism group of G. We designate by $L^1_K(G)$ the Lie algebra of complex integrable K-biinvariant functions on G. The pair (G, K) is called quasi Gelfand pair of order p ($p \in \mathbb{N}^*$) if $L^1_K(G)$ is nilpotent of step p. When the step is equal to 1, we have the classical Gelfand pair with the zonal spherical functions. In this work we study firstly, this quasi Gelfand p air. Hence, secondly we study the quasi-spherical functions and the quasi-spherical Fourier transformation corresponding, and establish their relation with the quasi square integrable representation after studying some properties of these representations.

Keys words: Quasi Gelfand pair, quasi-spherical, quasi-square integrable and Character.