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February 9, 2012

Title: Gelfand pairs of quantum groups

Abstract:
A classical Gelfand pair (G, K) consists of a locally compact group G together with a compact subgroup K that satisfies the following assumption: The convolution algebra L1(K \ G / K), consisting of bi-K-invariant L1-functions should be commutative. A corner stone in Gelfand pair theory is the Plancherel-Godement theorem, which basically states that every continuous positive definite L1-function has an integral decomposition into spherical functions.

In this talk we address Gelfand pair properties for pairs of quantum groups. Such properties were discovered earlier by Koornwinder, Vainerman and others. Here, they mainly focused on the compact case. In this talk we focus on the general framework, culminating in a quantum Plancherel-Godement theorem.