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**Alessandra Pantano\*** ([apantano@math.uci.edu](mailto:apantano@math.uci.edu)), Department of Mathematics, 103 MSTB, Irvine, CA 92697-3875. *A Step Towards the Determination of the Unitary Dual.*

The interest in unitary representations originated by an effort to extend Fourier analysis to non-commutative groups. The problem of finding the unitary dual of reductive groups, pioneered by Langlands and Harish-Chandra among others, remains to this day one of the biggest challenges in representation theory.

In this talk we will discuss methods for determining necessary conditions for the unitarity of representations of real split groups.

The unitarity of a Langlands quotient depends on the signature of the Hermitian form induced by a complicated intertwining operator. Comparing intertwining operators different groups, we produce interesting non-unitarity certificates for representations. This is a small step towards the determination of the full unitary dual. (Received September 19, 2007)