

1023-22-901      **Alessandra Pantano\*** ([pantano@math.cornell.edu](mailto:pantano@math.cornell.edu)), 583 Malott Hall, Cornell University,  
Ithaca, NY 14853-4201. *Petite  $K$ -types and Unitary Representations.*

A fundamental problem in representation theory is the classification of the spherical unitary dual of real split reductive groups.

The unitarity of a representation is a consequence of the positivity of a (rather complicated) intertwining operator on an infinite set of representations of the maximal compact subgroup  $K$  of  $G$ .

In this talk we introduce the notion of petite  $K$ -types and explain their role in determining the (non-)unitarity of spherical representations of real groups. (Received September 22, 2006)