

1154-22-853

Sabine Jessica Lang* (lang@math.utah.edu). *Projective cases for the restriction of the oscillator representation to dual pairs.*

We study the restriction of the oscillator representation of the symplectic group $Sp(2p(m+n), \mathbb{R})$ to two different subgroups, namely $O(m, n, \mathbb{R})$ and $Sp(2p, \mathbb{R})$. We work with (\mathfrak{g}, K) -modules and use the duality correspondence introduced by Howe to analyze these restrictions, and determine sufficient conditions on m, n and p so that the modules obtained are projective. The duality correspondence gives a description of the restriction in terms of lowest and highest modules, and we conclude by using gradings and filtrations to identify the modules. (Received September 11, 2019)