

On the discretely decomposable (g, K) -modules

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Abstract. For a pair of reductive Lie groups (G, H) , we say a (g, K) -module X is discretely decomposable as an $(h, H \cap K)$ -module if X is a union of $(h, H \cap K)$ -modules of finite-length. In this talk I will explain two classification results concerning discretely decomposable (g, K) -modules. One is a classification of the symmetric pairs (g, h) for which there exists at least one infinite-dimensional irreducible (g, K) -module X that is discretely decomposable as an $(h, H \cap K)$ -module. The other is a classification of the triples (g, h, q) such that (g, h) is a symmetric pair and that Zuckerman's derived functor module $A_q(\lambda)$ is discretely decomposable as an $(h, H \cap K)$ -module. This is a joint work with Toshiyuki Kobayashi.