

1067-22-323

Sigurdur Helgason* (helgason@mit.edu), Department of Mathematics, MIT, Cambridge, MA 02478. *Eigenspace representations for homogeneous spaces.*

In this lecture we describe various results (old and relatively new) about eigenspace representation for homogeneous spaces G/H . This refers to the representations of G on the joint eigenspaces (functions and vector bundle sections) of invariant differential operators on G/H . The results are richest when the algebra $D(G/H)$ of invariant differential operators is commutative; if not one can restrict to commutative subalgebras. (Received August 22, 2010)