Lie Groups and Representation Theory Seminar at the University of Tokyo

リー群論・表現論セミナー

(Joint with Tuesday Seminar on Topology)

DATE Nov 12 (Tue), 2024, 17:30–18:30

PLACE Room 123 (hybrid)

SPEAKER Junko Inoue (井上順子) (Tottori University)

TITLE Holomorphically induced representations of some solvable Lie groups

ABSTRACT From a viewpoint of the orbit method, holomorphic induction is originally based on the idea of realizing an irreducible unitary representation of a Lie group G in an L^2 -space of some holomorphic sections of some line bundle over a G-homogeneous space associated with a polarization for a linear form of the Lie algebra of G. It is a generalization of ordinary induction from a unitary character; Through this process, Auslander–Kostant constructed the irreducible unitary representations of type 1, connected, simply connected solvable Lie groups.

> In this talk, focusing on the class of exponential solvable Lie groups, we are concerned with holomorphically induced representations ρ in some general settings. We would like to discuss the following problems:

- (1) conditions of non-vanishing of ρ ,
- (2) decomposition of ρ into a direct integral of irreducible representations,
- (3) Frobenius reciprocity in the sense of Penney distributions.