Lie Groups and Representation Theory Seminar at the University of Tokyo

リー群論・表現論セミナー

DATE   October 23 (Wed), 2019, 16:30–18:00

PLACE   Room 128, Graduate School of Mathematical Sciences

SPEAKER   **Clemens Weiske** (Aarhus University)

TITLE   Symmetry breaking and unitary branching laws for finite-multiplicity pairs of rank one theory

ABSTRACT   Let (G, G') be a real reductive finite multiplicity pair of rank one, i.e. a rank one real reductive group G with reductive subgroup G', such that the space of symmetry breaking operators (SBOs) between all (smooth admissible) irreducible representations is finite dimensional.

We give a classification of SBOs between spherical principal series representations of G and G', essentially generalizing the results on $(O(1, n + 1), O(1, n))$ of Kobayashi–Speh (2015).

Moreover we show how to decompose unitary representations occurring in (not necessarily) spherical principal series representations of G in terms of unitary G' representations, by making use of the knowledge gathered in the classification of the SBOs and the structure of the open P' orbit in G/P as a homogenous G'-space, where P' is a minimal parabolic in G' and P is a minimal parabolic in G. This includes the construction of discrete spectra in the restriction of complementary series representations and unitarizable composition factors.