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T. Kobayashi
Graduate School of Mathematical Sciences and Kavli IPMU (WPI), University of Tokyo, Komaba, Japan
toshi@ms.u-tokyo.ac.jp

Bounded Multiplicity Theorems for Induction and Restriction

We prove a geometric criterion for the bounded multiplicity property of "small" infinite-dimensional representations of real reductive Lie groups in both induction and restrictions. Applying the criterion to symmetric pairs, we give a full description of the triples $H \subset G \supset G'$ such that any irreducible admissible representations of G with H-distinguished vectors have the bounded multiplicity property when restricted to the subgroup G'. This article also completes the proof of the general results announced in a previous paper of the author [Advances Math. 388 (2021), art. no. 107862].

Keywords: Branching law, multiplicity, reductive group, symmetric pair, visible action, spherical variety.

MSC: 22E46; 22E45, 53D50, 58J42, 53C50.