

Lie Groups and Representation Theory Seminar at the University of Tokyo

リー群論・表現論セミナー

- SPEAKER** Benjamin Harris (Louisiana State University, USA)
- DATE** October 22 (Tue), 2013, 17:00–18:00
- PLACE** Room 126, Graduate School of Mathematical Sciences
- TITLE** Representation Theory and Microlocal Analysis
- ABSTRACT** Suppose $H \subset K$ are compact, connected Lie groups, and suppose τ is an irreducible, unitary representation of H . In 1979, Kashiwara and Vergne proved a simple asymptotic formula for the decomposition of $\text{Ind}_H^K \tau$ by microlocally studying the regularity of vectors in this representation, thought of as vector valued functions on K . In 1998, Kobayashi proved a powerful criterion for the discrete decomposability of an irreducible, unitary representation π of a reductive Lie group G when restricted to a reductive subgroup H . One of his key ideas was to restrict π to a representation of a maximal compact subgroup $K \subset G$, view π as a subrepresentation of $L^2(K)$, and then use ideas similar to those developed by Kashiwara and Vergne.
- In a recent preprint the speaker wrote with Hongyu He and Gestur Olafsson, the authors consider the possibility of studying induction and restriction to a reductive Lie group G by microlocally studying the regularity of the matrix coefficients of (possibly reducible) unitary representations of G , viewed as continuous functions on the (possibly noncompact) Lie group G . In this talk, we will outline the main results of this paper and give additional conjectures.