

# Lie Group and Representation Theory Seminar

Date: October 24 (Fri), 2003, 15:00–16:00

Place: RIMS 402

Speaker: 松本久義氏 Hisayosi Matumoto (Univ. Tokyo)

Title: The homomorphisms between scalar generalized Verma modules associated to maximal parabolic subalgebras

Abstract:

Let  $\mathfrak{g}$  be a reductive Lie algebra over the complex number field. A  $\mathfrak{g}$ -module induced from a one-dimensional module of a parabolic subalgebra is called a scalar generalized Verma module (SGVM). It is known that the homomorphisms between SGVMs correspond to the equivariant differential operators between equivariant line bundles on generalized flag varieties. Our main results are :

- (1) We give a classification of the homomorphisms between SGVMs associated to maximal parabolic subalgebras.
- (2) Using a comparison theorem, we construct a homomorphism between SGVMs associated to (not necessarily maximal) parabolic subalgebra from a homomorphism between SGVMs associated to a maximal parabolic subalgebra.

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Prior to the seminar, Matumoto will give an introductory seminar 13:00–14:30 at 402.