

Lie Groups and Representation Theory Seminar at the University of Tokyo

リー群論・表現論セミナー

- DATE April 15 (Thu), 2010, 16:30–18:00
- PLACE Room 056, Graduate School of Mathematical Sciences
- SPEAKER **Uganbayar Zunderiya** (Nagoya University)
- TITLE Generalized hypergeometric systems
- ABSTRACT A new type of hypergeometric differential equations was introduced and studied by H. Sekiguchi. The investigated system of partial differential equation generalizes the Gauss–Aomoto–Gelfand system which in its turn stems from the classical set of differential relations for the solutions to a generic algebraic equation introduced by K. Mayr in 1937. Gauss–Aomoto–Gelfand systems can be expressed as the determinants of 2×2 matrices of derivations with respect to certain variables. H. Sekiguchi generalized this construction by looking at determinations of arbitrary $l \times l$ matrices of derivations with respect to certain variables.
- In this talk we study the dimension of global (and local) solutions to the generalized systems of Gauss–Aomoto–Gelfand hypergeometric systems. The main results in the talk are a combinatorial formula for the dimension of global (and local) solutions of the generalized Gauss–Aomoto–Gelfand system and a theorem on generic holonomicity of a certain class of such systems.