Lie Groups and Representation Theory Seminar
at the University of Tokyo

DATE   June 29 (Fri), 2007, 15:30–16:30, 16:45–17:45

PLACE   Room 122, Graduate School of Mathematical Sciences

SPEAKER   **Salem Ben Saïd** (Université Henri Poincaré - Nancy 1)

TITLE   On the theory of Bessel functions associated with root systems

ABSTRACT   The theory of spherical functions on Riemannian symmetric spaces G/K and on non-compactly causal symmetric spaces G/H has a long and rich history. In this talk we will show how one can use a limit transition approach to obtain generalized Bessel functions on flat symmetric spaces via the spherical functions. A similar approach can be applied to the theory of Heckman–Opdam hypergeometric functions to investigate generalized Bessel functions related to arbitrary root system. We conclude the talk by giving a conjecture about the nature and order of the singularities of the Bessel functions related to non-compactly causal symmetric spaces.