Lie Group and Representation Theory Seminar

Date: December 26 (Fri), 2003, 16:00–17:00, 17:30–18:30
Place: RIMS 402
Speaker: Genkai Zhang
             (Chalmers Univ. of Tech. and Gothenburg Univ)

Title: Invariant plurisubharmonc functions on extended Cartan
and Siegel domains

Abstract:

Let $D = G/L$ be a bounded symmetric domain and S the corresponding Siegel domain in a vector space V. Let K be the semisimple part of L. It complexification K_c acts on the product V^N linearly and diagonally and we called the resulting domains $K_c D^N$ and $K_c S^N$ the extended Cartan and Siegel domains. We prove in certain cases that they are domain of holomorphy and generalize earlier results of Zhou and of Seegeev - Heinzner.

Title: Spherical transform of canoncal functions on root systems
of type BC

Abstract:

Consider a root system of the BC with general real positive multiplicity. We introduce the canonical functions which corresponds to the integral kernel of the canonical representations in the symmetric space case. We compute their spherical transform using the Cheredik operators and prove some Bernstein-Sato type formula. Some application to Macdonald polynomials will be mentioned if time permits.