# Lie Group and Representation Theory Seminar, Kyoto 2006

Date:      November 21 (Tue) , 2006, 16:30–18:00
           November 22 (Wed), 2006, 9:00–10:30
           November 24 (Fri), 2006, 10:30–12:00

Place:     RIMS, Kyoto University : Room 402

Speaker:   Michael PEVZNER (Reims University, France)

Title:     **Quantization of symmetric spaces: spectral approach**

Abstract: In this series of talks we shall introduce a family of covariant symbolic calculi on a particular class of semi-simple symmetric spaces, to wit the para-Hermitian symmetric spaces (PHSS).

Beyond the formal definition and basic properties of such "pseudo-differential analyses" we shall focus on some fruitful applications of these techniques to the harmonic analysis on PHSS and more broadly to the representation theory of their transformation groups.

Main topics that will be discussed are:

- Composition formulæ and branching laws for tensor products of highest weight modules - an alternative definition of Rankin-Cohen brackets.
- $H^*$-algebra structure of $L^2$ spaces on PHSS.
- Square root method and the Plancherel formula for the rank-one PHSS.
- Star-products versus sharp-products.