Lie Group and Representation Theory Seminar, Kyoto 2006

Date: September 29 (Fri), 2006, 16:30–18:00
Place: RIMS, Kyoto University : Room 402
Speaker: Pierre PANSU (Paris-Sud)
Title: L^p -cohomology and negative curvature

Abstract:

L^p -cohomology of a Riemannian manifold is the cohomology of the (de Rham) complex of differential forms which are L^p -integrable. We explain the role played by L^p -cohomology in three problems related to negatively curved manifolds and groups.

- Hopf's conjecture on the sign of Euler characteristic of compact negatively curved manifolds (specificly, the Kahler case).

- Cannon's conjecture on hyperbolic groups whose ideal boundary is a 2-sphere.

- Optimal sectional curvature pinching for rank one symmetric spaces.