### Liu Bie Ju Centre for Mathematical Sciences City University of Hong Kong

## Mathematical Analysis and its Applications Colloquium

Organized by Prof. Ya Yan LU and Prof. Wei Wei SUN

# Heat Kernels, Old and New

by

## Professor Peter Greiner University of Toronto, Canada

Date : Apr 16, 2013 (Tuesday) Time : 4:30 pm to 5:30 pm Venue: Room B6605 (College Conference Room) Blue Zone, Level 6, Academic 1 (AC1) City University of Hong Kong

#### ABSTRACT:

The heat kernel for the Cauchy-Riemann subLaplacian on odd dimensional spheres can be derived in a manner which is completely analogous to the classical derivation of elliptic heat kernels, which suggests that the usual hamiltonian construction of elliptic heat kernels, with appropriate modifications, will also yield heat kernels for subelliptic operators.

The language is geometric, in particular I will give a reasonably careful discussion of the underlying Riemannian and subRiemannian geometries and geodesics.

Light refreshments will be provided at Room B6605 before the colloquium from 4:00 pm to 4:30 pm. Please come and join us!

\*\* All interested are welcome \*\*

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