McMaster University   University of Toronto   University of Waterloo

THE FIELDS INSTITUTE
FOR RESEARCH IN MATHEMATICAL SCIENCES

SEMINAR SERIES ON CONTROL THEORY

SPEAKER:

> ### Nicholas Varopoulos
> ### Paris VI
> ### (Université de Pierre et Marie Curie)

On the Topic:

"Subriemannian Geometry and Heat Kernels on Lie Groups: long time estimates"

We study hypoelliptic operators on Lie groups of the form: Δ = - sum of squares of left invariant vector fields on the group and the associated heat semigroup. We are interested in the long time behaviour. This leads to an interesting relation between the Sobolev inequalities associated to the operator and the subriemannian geometry on the group defined by the operator. It is also related to a Brownian functional appearing in financial mathematics.

Wednesday, April 22, 1992 at 3:30pm, room 3018

at

The Fields Institute

(Uni-Park 3, 185 Columbia Street West, Waterloo)