

General Mathematics Seminar
of the
University of Luxembourg
in cooperation with the
Luxembourg Mathematical Society

February 2011

Tuesday, February 8, 2011, at 17:00

Campus Kirchberg, room A02

Katarzyna Grabowska
(University of Warsaw, Poland)

Dirac Algebroids

Abstract:

I will present the concept of a Dirac algebroid which is a linear almost Dirac structure on the dual E^* to a vector bundle $\tau : E \rightarrow M$. The linearity of the structure is expressed in the language of double vector bundles. Dirac algebroids provide a general setting for Lagrangian and Hamiltonian systems in mechanics including systems described by singular Lagrangians, system with nonholonomic constraints and systems on Lie algebroids.

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Tuesday, February 22, 2011, at 17:00

Campus Kirchberg, room B02

Robert Philipowski
(University of Bonn, Germany)

Ricci flow, coupling of Brownian motions and Perelman's L -functional

Abstract:

In this talk I will show that on a manifold whose Riemannian metric evolves under backwards Ricci flow two Brownian motions can be coupled in such a way that their normalized L -distance is a supermartingale. As a corollary, one obtains a new proof and a generalization of a recent result of Peter Topping concerning L -optimal transport. This is joint work with Kazumasa Kuwada.