Section Mathématiques

SEMINAIRE D'ANALYSE

➢ *VENDREDI 15 octobre 2010 à 16h15 à la salle MA A112*

*Monsieur **Luca GRANIERI** (Polytechnique de Bari, Italie)* donnera une conférence sur le thème:

"ON THE GEOMETRY OF WASSERSTEIN SPACES"

In this seminar we deal with the structure of metric currents according to the theory developed by Ambrosio and Kirchheim. Our motivation is the study of optimality properties of Eulerian representation of Mather?s minimizing measures of Lagrangian dynamic as metric objects.
In particular we are interested in considering the metric space of probability measures endowed with the Wasserstein distances induced by the Monge-Kantorovich theory in mass transportation. This leads to define the notion of homology class in a metric framework.
In the literature are known just metric spaces with trivial metric homology, i.e. such that every closed 1-current is the boundary of a 2-current. We will explain how the space of probability measures on the flat Torus is a first example of metric space with a non-trivial homology in a metric sense. Moreover, in such contest the Eulerian representations enjoy optimality properties as metric 1-currents.

Lausanne, le 7 octobre 2010
BB/BD/JK/nk