INSALATE DI MATEMATICA

presents

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Optimal Transport and Sliced Wasserstein Gradient Flow

Abstract:

In this talk we will introduce the theory of optimal transport, which in the last decades has proven to be a very useful tool in several branches of mathematics. The aim of the presentation is twofold: on one hand we will define (Wasserstein) gradient flows, and on the other we will introduce the Sliced Wasserstein distance, an useful-for-application distance defined on spaces of probabilities via optimal transport (and the better known Wasserstein distance). Finally, we will present a recent result obtained in collaboration with Filippo Santambrogio (Univ. Lyon 1) concerning the Sliced Wasserstein Flow, which is the gradient flow of the Sliced Wasserstein distance in Wasserstein spaces.

Keywords: Optimal transport · Wasserstein spaces · Gradient flow · Sliced Wasserstein distance

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"Obvious" is the most dangerous word in mathematics.
(Eric Temple Bell)