Colloquio di Matematica del Prof. Ambriosio, Scuola Normale Superiore, Pisa

Titolo. Calculus, heat flow, optimal transport and curvature-dimension
bounds in
metric measure spaces

Abstract. In this survey lecture, modelled in large part on the ICM2018
one, I will illustrate
the most recent developments on calculus in metric measure spaces and
the key role
played by the theory of optimal transport in the derivation of synthetic
lower bounds on
Ricci curvature and upper bounds on dimension, for metric measure
structures.
If time permits, I will also illustrate the emerging role of optimal
transport
and gradient flows in the field of machine learning.