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.