1147-51-691 **Elia Bruè*** (elia.brue@sns.it). *Rigidity of the* 1*-Bakry-Émery inequality and applications.*

It is well-know that, in spaces with nonnegative Ricci curvature, a non trivial function satisfying the equality in the 2-Bakry-Émery contraction estimate is a splitting function. Unfortunately, this is not anymore the case when one considers the inequality with exponent $p = 1$.

However, in the setting of non-smooth spaces with Ricci bounded from below, this weak rigidity comes up naturally in the study of sets with finite perimeter. Boundaries of sets of finite perimeter are a rich class of codimension one objects very relevant at the geometric level, for instance almost every level set of Lipschitz functions belongs to this class.

In this talk I present a recent work in collaboration with L. Ambrosio and D. Semola in which we prove a splitting result in the critical case $p = 1$ and we use it as a main tool to describe tangents of sets with finite perimeter. (Received January 28, 2019)