

SEMINARIO DI GEOMETRIA

25 Ottobre 2017, h.16.30-17.30

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Scalar curvature via local extent

In the first part we will present a metric characterization of the scalar curvature of a n -dimensional smooth Riemannian manifold, based on the asymptotic control of the maximal distance between $(n + 1)$ points in infinitesimally small neighborhood of a point. Since this characterization is purely in terms of the distance function, it could be used to give a definition of scalar curvature on a non-smooth metric space. In the second part we will discuss this issue. We will focus in particular on Alexandrov surfaces and higher dimensional Alexandrov spaces.