

1059-31-98

Nageswari Shanmugalingam* (nages@math.uc.edu), Department of Mathematical Sciences, P.O.Box 210025, University of Cincinnati, Cincinnati, OH 45221-0025, **Estibalitz Durand**, Universidad Complutense de Madrid, Madrid, Spain, and **Jesus Jaramillo**, Universidad Complutense de Madrid, Madrid, Spain. *Geometric characterization of ∞ -Poincaré inequality in complete doubling metric measure spaces.*

Recent activity in analysis on metric measure spaces considers spaces equipped with a doubling measure supporting a p -Poincaré inequality for some $1 \leq p < \infty$. Some geometric consequences of such an inequality include a Rademacher type theorem and the quasiconvexity property of the metric space supporting the Poincaré inequality; these consequences do not seem to depend on the index p . In this talk we will consider the weakest of the Poincaré inequalities, corresponding to $p = \infty$. (Received February 18, 2010)