

The Poincaré inequality is an open ended condition

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Abstract

Analysis in spaces with no a priori smooth structure has progressed to include concepts from first-order calculus. One general approach is to assume that the metric measure spaces admit a Poincaré inequality with a doubling measure. Generally speaking, the Poincaré inequality provides a link between the local and infinitesimal behavior of a function. Examples of such spaces will be given in the talk. I will discuss the open ended property of these spaces. I will also talk about the open ended property of the Muckenhoupt weights. The talk is based on joint work with Stephen Keith.