

# Applications of the 1D localization technique for metric measure spaces with lower Ricci curvature bounds

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**Abstract:** The localization technique allows to reduce a geometric problem in higher dimensions to a problem on a 1-dimensional weighted segment. It was developed for Euclidean space in the context of convex analysis, extended to weighted Riemannian manifolds by Klartag and to metric measure spaces with lower Ricci curvature bounds by Cavalletti and Mondino.

In this talk I will give an introduction to the machinery of the 1D localization technique and how it allows to prove sharp results in the context of lower Ricci curvature bounds like the Bishop-Gromov volume growth estimate, spectral inequalities and rigidity result.