

Non-branching $RCD(0, N)$ Geodesic Spaces with Small Linear Diameter Growth have Finitely Generated Fundamental Groups

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Abstract. In this paper, we generalize the finite generation result of Sormani to non-branching $RCD(0, N)$ geodesic spaces (and in particular, Alexandrov spaces) with full support measures. This is a special case of the Milnor's Conjecture for complete non-compact $RCD(0, N)$ spaces. One of the key tools we use is the Abresch-Gromoll type excess estimates for non-smooth spaces obtained by Gigli-Mosconi.