



# Two characterization of BV functions on Carnot groups via the heat semigroup

Marco Bramanti, Michele Miranda Jr., Diego Pallara

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In this paper we provide two different characterizations of sets with finite perimeter and functions of bounded variation in Carnot groups, analogous to those which hold in Euclidean spaces, in terms of the short-time behaviour of the heat semigroup. The second one holds under the hypothesis that the reduced boundary of a set of finite perimeter is rectifiable, a result that presently is known in Step 2 Carnot groups.

Subjects: **Analysis of PDEs (math.AP)**; Functional Analysis (math.FA)

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