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Lipschitz surfaces, perimeter and trace theorems for BV functions in Carnot-Carathéodory spaces

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Abstract. We introduce intrinsic Lipschitz hypersurfaces in Carnot-Carathéodory spaces and prove that intrinsic Lipschitz domains have locally finite perimeter. We also show the existence of a boundary trace operator for functions with bounded variation on Lipschitz domains and obtain extension results for such functions. In particular, we characterize their trace space.

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