On the analytic Morse-Sard property for the endpoint maps in Carnot groups.

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In a subriemannian manifold the endpoint map is defined as the final point of the curve determined by the choice of certain parameters, called controls. The Morse-Sard conjecture states that the set that can be reached using only a specific class of curves (determined by the subriemannian structure) has measure zero. We present recent advances in the case of Carnot groups, among the simplest examples of subriemannian manifolds, where the conjecture is still unsolved. We show how in these geometries the specific structure of the endpoint maps allows to study the Morse-Sard conjecture using techniques from semialgebraic geometry, proving the statement for analytic controls.

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