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8. Analysis

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Classification of sub-Riemann manifolds

Due to Ahlfors L. V. and Sario L. there is a classification of Riemannian surfaces from the point of view of potential theory. Properties of a set of harmonic functions on a Riemannian surface are used for all the Riemannian surfaces to be classified. Some years ago Holopainen I. and Rickman S. have shown a way to generalize the above-mentioned classification to the case of Riemannian manifolds of an arbitrary dimension. The main tools in their approach come from nonlinear potential theory. The main goal of the talk is to formulate some results concerning classification of sub-riemannian manifolds based on nonlinear potential theory of subelliptic equations. These results is joint work with Vodop'yanov S. K. Reference Markina I. G., Vodop'yanov S. K. Classification of sub-Riemannian manifolds, Sib. Mat. Zh. 16 P.