SCHAUDER ESTIMATES AT THE BOUNDARY IN CARNOT GROUPS

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We present a new approach to Schauder estimates at the boundary for sub-Laplacian operators in Carnot groups. While internal Schauder estimates have been deeply studied, up to now subriemannian estimates at the boundary are known only in the Heisenberg group. The proof in the Heisenberg setting, due to Jerison (1981), is based on the Fourier transform technique which can not be repeated in general Lie groups. After the result of Jerison no new contribution to the boundary problem has been provided. In this paper we introduce a new method, which allows to build a Poisson kernel starting from the fundamental solution, from which we deduce the Schauder estimates at non characteristic boundary points.