

**PROOF OF GROMOV'S THEOREM ON
HOMOGENEOUS NILPOTENT APPROXIMATION
FOR VECTOR FIELDS OF CLASS C^1**

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The article is devoted to the asymptotic properties of the vector fields \tilde{X}_i^g , $i = 1, \dots, N$, θ_g -connected with C^1 -smooth basis vector fields $\{X_i\}_{i=1, \dots, N}$ satisfying condition (+ deg). We prove a theorem of Gromov on the homogeneous nilpotent approximation for vector fields of class C^1 . Nontrivial examples are constructed of quasimetrics induced by vector fields $\{X_i\}_{i=1, \dots, N}$.

Key words and phrases: vector field, degree of a vector field, smoothed vector field, Cauchy problem, Arzelà –Ascoli Theorem, quasimetric, generalized triangle inequality.

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