

ON APPLICATIONS OF THE TAYLOR FORMULA IN
SOME QUASISPACES*A. V. Greshnov*

We consider some metric spaces with quasimetric (quasispaces) comprising uniformly regular (equiregular) Carnot–Carathéodory quasispaces whose quasimetric is induced by $C^{\Upsilon-1}$ -smooth vector fields of formal degree not higher than Υ . For these spaces, some analogues of the Campbell–Hausdorff formula are derived, which allows us to prove a theorem on a nilpotent tangent cone, a theorem on isomorphism of various nilpotent tangent cones defined at a common point, and a local approximation theorem.

Key words and phrases: nilpotent group and algebra, canonical coordinates, vector field, the Taylor formula, the Campbell–Hausdorff–Dynkin formula, quasimetric, quasispaces.

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