Nikolayevsky, Y.
Geodesic orbit and naturally reductive nilmanifolds associated with graphs. (English)

Summary: We study Riemannian nilmanifolds associated with graphs. We prove that such a nilmanifold is geodesic orbit if and only if it is naturally reductive if and only if its defining graph is the disjoint union of complete graphs and the left-invariant metric is generated by a certain naturally defined inner product.

MSC:
05C25 Graphs and abstract algebra (groups, rings, fields, etc.)
17B30 Solvable, nilpotent (super)algebras
53C30 Differential geometry of homogeneous manifolds

Keywords:
geodesic orbit manifold; two-step nilmanifold associated with a graph

Full Text: DOI