

Yamaguchi, Keizo

Differential systems associated with simple graded Lie algebras. (English) Zbl 0812.17018

Shiohama, K. (ed.), Progress in differential geometry. Tokyo: Kinokuniya Company Ltd.. Adv. Stud. Pure Math. 22, 413-494 (1993).

This paper is based on the lectures given at University of Minnesota in 1990-91. Let $\mathfrak{g} = \bigoplus_{p \in \mathbb{Z}} \mathfrak{g}_p$ be a real simple Lie algebra such that $[\mathfrak{g}_p, \mathfrak{g}_q] \subset \mathfrak{g}_{p+q}$ and G' be the normalizer of $\bigoplus_{p \geq 0} \mathfrak{g}_p$ in the adjoint group G . Then there is a G -invariant differential system $D_{\mathfrak{g}}$ on $M = G/G'$. The main result is the following. The Lie algebra of all infinitesimal automorphisms of $(M, D_{\mathfrak{g}})$ is isomorphic to \mathfrak{g} except when it is locally isomorphic to the contact system on a real or complex jet space.

For the entire collection see [\[Zbl 0779.00011\]](#).

Reviewer: P.Grushko (Irkutsk)

MSC:

17B66 Lie algebras of vector fields and related (super) algebras

58A30 Vector distributions (subbundles of the tangent bundles)

Cited in **87** Documents

Keywords:

[Lie algebra of infinitesimal automorphisms](#); [jet space](#)