

© 2024 Heldermann Verlag
Journal of Lie Theory 34 (2024) 735–751

G. Cairns

Dept. of Mathematical and Physical Sciences, La Trobe University, Melbourne, Australia
G.Cairns@latrobe.edu.au

Y. Nikolayevsky

Dept. of Mathematical and Physical Sciences, La Trobe University, Melbourne, Australia
Y.Nikolayevsky@latrobe.edu.au

Respectful Decompositions of Lie Algebras

One of Pierre Molino’s principal mathematical achievements was his theory of Riemannian foliations. One of his last papers, published in 2001, showed that his theory could be extended to a large class of non-integrable distributions. The key example here is that of a *respectful decomposition* of a Lie algebra \mathfrak{g} ; this is vector space decomposition $\mathfrak{g} = H + V$ such that $[V, H] \subseteq H$. This paper will examine the basic properties of respectful decompositions.

Keywords: Nilpotent Lie algebra, geodesic.

MSC: 17B30, 58A30.