Laurent-Gengoux, Camille; Wagemann, Friedrich

**Lie rackoids.** (English) [Zbl 1418.17008]


Summary: We define a new differential geometric structure, called Lie rackoid. A Lie rackoid differentiates to Leibniz algebroids in a similar way as Lie groupoids differentiate to Lie algebroids. Its main ingredient is a self-distributive product on the manifold of bisections of a smooth precategory. We show that the tangent algebroid of a Lie rackoid is a Leibniz algebroid and that Lie groupoids give rise via conjugation to a Lie rackoid. Our main objective are large classes of examples, including a Lie rackoid integrating the Dorfman bracket without the cocycle term of the standard Courant algebroid.

**MSC:**

17A32 Leibniz algebras
18A99 General theory of categories and functors
53D17 Poisson manifolds; Poisson groupoids and algebroids

**Keywords:**

Lie groupoid; Lie rack; Leibniz algebroid; Lie algebroid; bisection; augmented rack; Courant algebroid

**Full Text:** DOI arXiv HAL

**References:**


This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.