

Enveloping lie algebras of low dimensional leibniz algebras.

ABSTRACT

We calculate the enveloping Lie algebras of Leibniz algebras of dimensions two and three. We show how these Lie algebras could be used to distinguish non-isomorphic (nilpotent) Leibniz algebras of low dimension in some cases. These results could be used to associate geometric objects (loop spaces) to low dimensional Leibniz algebras.

Keyword: Leibniz algebra; Enveloping lie algebra; Nilpotent Algebra