

A cohomological approach for classifying nilpotent Leibniz algebras

ABSTRACT

In this paper a cohomological approach (the Skjelbred-Sund method) to classify nilpotent Leibniz algebras in low dimensional cases will be presented. We distinguish six isomorphism classes (one parametric family and five concrete) of three dimensional nilpotent Leibniz algebras and show that they exhaust all possible cases.

Keyword: Lie algebra; Leibniz algebra; Cohomology; Central extension