

Combinatorial structures associated with some classes of Leibniz algebras

ABSTRACT

This paper gives a graphical representation of a subclass of complex filiform Leibniz algebras. This class is split into three subclasses called first, second and third class denoted, in dimension n over a field of complex numbers \mathbb{C} , by $FLbn(\mathbb{C})$, $SLbn(\mathbb{C})$ and $TLbn(\mathbb{C})$, respectively. Here, the combinatorial structures associated with $FLbn(\mathbb{C})$ and $SLbn(\mathbb{C})$ in low dimensions are considered and some structural properties of the combinatorial structures are given.

Keyword: Leibniz algebras; Combinatorial structures; Classes