

## Description of some classes of Leibniz algebras

### ABSTRACT

In this paper we describe the isomorphism classes of finite-dimensional complex Leibniz algebras whose quotient algebra with respect to the ideal generated by squares is isomorphic to the direct sum of three-dimensional simple Lie algebra  $\mathfrak{sl}_2$  and a three-dimensional solvable ideal. We choose a basis of the isomorphism classes' representatives and give explicit multiplication tables.

**Keyword:** Lie algebra; Leibniz algebra; Solvable Lie algebra; Simple Leibniz algebra