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On (Bi)Hom-algebras and ternary Hom-algebras structures.

Abstract

We recall some basic on binary BiHom-algebras and 3-Hom-Lie algebras. Also, we introduce and study BiHom-alternative algebras and BiHom-Malcev algebras. It is shown that BiHom-alternative algebras are admissible BiHom-Malcev and BiHom-Jordan eligible. Moreover, we introduce the notion of Yau-type 3-Hom-Lie bialgebras and give some constructions.