Mathematics > Rings and Algebras

Generalized δ-Derivations

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We defined generalized \delta-derivations of algebra A as linear mapping \chi associated with usual \delta-derivation \phi by the rule \chi(xy)=\delta(\chi(x)y+x\phi(y))=\delta(\phi(x)y+x\chi(y)) for any x,y \in A. We described generalized \delta-derivations of prime alternative algebras, prime Lie algebras and superalgebras, unital algebras, and semisimple finite-dimensional Jordan superalgebras. In this cases we proved that generalized \delta-derivation is a generalized derivation or \delta-derivation. After that we described \delta-superderivations of superalgebras <<KKM Double>>, arising from prime alternative algebras, prime Lie algebras and superalgebras, unital algebras, and semisimple finite-dimensional Jordan superalgebras. In the end, we constructed new examples of non-trivial \delta-derivations of Lie algebras.

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