MR1362853 (96k:17051) 17D92
Mallol, Cristian (RCH-FRN-MS); **Walkhoff, Alexander** (F-MONT2-IM)
Perturbation des algèbres vérifiant $x^3 = \lambda(x)x^2$. (French. French summary)
[**Perturbation of algebras satisfying $x^3 = \lambda(x)x^2$**]
Algebras Groups Geom. **12** (1995), *no. 4,* 307–319.

Weak Jordan-Bernstein algebras, a generalization of the notion of Jordan-Bernstein algebras, are those basic algebras A (that is, commutative algebras over a field K with a nonzero homomorphism of algebras $w: A \to K$) that satisfy $x^3 = w(x)x^2$ for every x in A. The field K is assumed to be of characteristic not 2 or 3. These algebras have been proved to belong to two classes, according to the existence or not of idempotent elements. In both cases they can be expressed as a direct sum: $A = Kz \oplus N$, where either $z^2 = 0$ or $z^2 = z$ and the following relations hold: (I) $zy = az(zy)$ where $a = 1$ if $z^2 = 0$ and $a = 2$ if $z^2 = z$, (II) $y^2 = zy^2 + 2y(zy)$, (III) $y^3 = 0$ for every $y \in N$. In the present paper, algebras satisfying the same conditions but without restrictions over a, and algebras with the condition (II) modified by a scalar ($y^2 = \mu(zy^2 + 2y(yz))$) when $z^2 = z$, are studied following the same ideas used to study weak Jordan algebras.

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