

## **Locally nilpotent derivations of polynomial and other free algebras**

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We shall survey some results on locally nilpotent derivations of polynomial algebras over fields of characteristic zero and their analogues for free associative algebras and for relatively free algebras of varieties of algebras. A special attention will be paid on the Weitzenböck derivations and on the Nowicki conjecture, their commutative and noncommutative generalizations, and their relations with classical and noncommutative invariant theory.