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Necessary and sufficient conditions for a variety of Leibniz algebras to have polynomial growth. (English. Russian original) [Zbl 1184.17003](#)

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Summary: We study the behavior of the codimension sequence of polynomial identities of Leibniz algebras over a field of characteristic 0. We prove that a variety V has polynomial growth if and only if the condition

$$N_2A, \widetilde{V}_1 \not\subset V \subset \widetilde{N}_cA$$

holds, where N_2A is the variety of Lie algebras defined by the identity $(x_1x_2)(x_3x_4)(x_5x_6) \equiv 0$, \widetilde{V}_1 is the variety of Leibniz algebras defined by the identity $x_1(x_2x_3)(x_4x_5) \equiv 0$, and \widetilde{N}_cA is the variety of Leibniz algebras defined by the identity $(x_1x_2)(x_{2c+1}x_{2c+2}) \equiv 0$.

MSC:

17A32 Leibniz algebras

Cited in 2 Documents

Keywords:

codimension sequence of polynomial identities of Leibniz algebras

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