Some PI-results on superalgebras with pseudoinvolution

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Let F be an algebraically closed field of characteristic zero and let us consider a superalgebra A, i.e., an algebra graded by $\mathbb{Z}_2$, the cyclic group of order 2. A pseudoinvolution on $A = A_0 \oplus A_1$ is a graded linear map $* : A \to A$ such that $a^{**} = (-1)^{|a|}a$ and $(ab)^* = (-1)^{|a||b|}b^*a^*$, for any homogeneous elements $a, b \in A_0 \cup A_1$.

The existence of pseudoinvolutions of the first kind, i.e., pseudoinvolutions fixing the ground field F, was proven in [5] by Jaber. Later on, Martinez and Zelmanov in [6] classified the irreducible bimodules over finite dimensional simple Jordan superalgebras via pseudoinvolutions.

The goal of this talk is to present several results of the theory of polynomial identities in the setting of superalgebras with pseudoinvolution ([1, 2, 3, 4]).

References

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