Symmetric Polynomials in nonassociative algebras

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Let F_n be the free metabelian Lie, Leibniz, or Poisson algebra of rank n generated by $x_1, \ldots, x_n$ over a field of characteristic zero. A polynomial $p \in F_n$ is called symmetric if $p(x_1, \ldots, x_n) = p(x_{\pi 1}, \ldots, x_{\pi n})$, for every permutation $\pi \in S_n$. The set $F_n^{S_n}$ of symmetric polynomials is the algebra of invariants of the group S_n. We review the description of the algebra $F_n^{S_n}$ in the light of recent results [1, 2, 3].

References

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