



APRESENTA:

On generalized polynomial identities

22/11/2024 às 10h00

Online via *link*

<https://meet.google.com/qdq-kusm-she>

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Abstract. Let F be a field of characteristic zero, A be an associative F -algebra and $F\langle X \rangle$ be the free associative algebra, freely generated over F by the countable set X of variables. A non-zero polynomial $f(x_1, \dots, x_n) \in F\langle X \rangle$ is a polynomial identity of A if for all $a_1, \dots, a_n \in A$, $f(a_1, \dots, a_n) = 0$. The set of all polynomial identities of a given algebra is called T -ideal of identities and it is denoted by $\text{Id}(A)$.

In this talk we generalize the definition of polynomial identity by considering the so-called generalized polynomials, i.e., polynomials belonging to the W -free algebra, where W is an unitary algebra. We develop a theory of generalized identities and we present some recent results about generalized T -ideals and growth of their generalized codimensions. All these results will soon appear in [1] and [2].

References

- [1] G. Busalacchi, F. Martino, C. Rizzo, *Superalgebras and generalized polynomial identities*, 2024 (preprint)
- [2] F. Martino, C. Rizzo, *The 2×2 upper triangular matrix algebra and its generalized polynomial identities*, 2024 (submitted)

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