

On the minimal varieties of a given exponent and the factorability of their T -ideals

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Abstract

Let F be a field of characteristic zero. In 2003, Giambruno and Zaicev established some interesting results relating minimal varieties of a given exponent and the factorability of their T -ideals (see [6, 7]). In this talk, we deal with varieties generated by PI-algebras with some additional structures and we present some recent results [1, 2, 3, 4, 5] concerning the minimality of these varieties and the factorability of their polynomial identities.

References

- [1] D. V. Avelar, O. M. Di Vincenzo, V. R. T. da Silva, The factorability of T_2 -ideals of minimal supervarieties, *Comm. Algebra* 47 (2019), 1595-1607.
- [2] O. M. Di Vincenzo, M. A. S. Pinto, V. R. T. da Silva, On the factorability of polynomial identities of upper block triangular matrix algebras graded by cyclic groups, *Linear Algebra Appl.* 601 (2020), 311-337.
- [3] O. M. Di Vincenzo, V. R. T. da Silva, E. Spinelli, A characterization of minimal varieties of \mathbb{Z}_p -graded PI algebras, *J. Algebra* 539 (2019), 397-418.
- [4] O. M. Di Vincenzo, V. R. T. da Silva, E. Spinelli, Minimal varieties of PI-superalgebras with graded involution, *Israel J. Math.*, in press.
- [5] O. M. Di Vincenzo, V. R. T. da Silva, E. Spinelli, On the factorability of the ideal of $*$ -graded polynomial identities of minimal varieties of PI $*$ -superalgebras, submitted.
- [6] A. Giambruno, M. Zaicev, Minimal varieties of algebras of exponential growth, *Adv. Math.* 174 (2003), 310-323.
- [7] A. Giambruno, M. Zaicev, Codimension growth and minimal superalgebras, *Trans. Amer. Math. Soc.* 355 (2003), 5091-5117.

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