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Title: On minimal superalgebras and minimal supervarieties

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Abstract: In this talk we consider the *minimal superalgebras* introduced by Giambruno and Zaicev in their characterization of varieties of associative PI-algebras over a field of characteristic zero which are minimal of fixed exponent. [2]. These superalgebras are also involved in the description of generators of minimal supervarieties of finite basic rank. In fact it is know that any minimal supervariety of finite basic rank is generated by a suitable minimal superalgebra, [1]. According to this, the complete characterization of minimal supervarieties of finite basic rank of exponential growth is reduced to decide whether any minimal superalgebra generates a minimal supervariety. This problem is still open. Recently we provided a family of minimal superalgebras not generating minimal supervarieties.

In this talk we discuss some obstruction on the structure of a given superalgebra forcing it to generate a non-minimal supervariety.

References

[1] O.M. Di Vincenzo, E. Spinelli, *On some minimal supervarieties of exponential growth*, J. Algebra **368** (2012), 182–198.

[2] A. Giambruno, M. Zaicev, *Codimension growth and minimal superalgebras*, Trans. Amer. Math. Soc. **355** (2003), 5091–5117.

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