ON $\mathbb{Z}_2$-GRADED IDENTITIES OF $UT_2(E)$

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Resumo

Let F be an infinite field of characteristic different from two and E be the infinite dimensional Grassmann algebra over F. Consider the upper triangular matrix algebra $UT_2(E)$ with entries in E endowed with the $\mathbb{Z}_2$-grading inherited by the natural $\mathbb{Z}_2$-grading over E. In this talk we will show some recent results about the ideal of $\mathbb{Z}_2$-graded polynomial identities ($T_{\mathbb{Z}_2}$ - ideal) of $UT_2(E)$ and its relatively free algebra. In particular we show that the set of $\mathbb{Z}_2$-graded polynomial identities of $UT_2(E)$ does not depend on the characteristic of the field. This is a joint work with Prof. Lucio Centrone (UNICAMP).