

# IMAGES OF POLYNOMIALS ON NULL-FILIFORM LEIBNIZ ALGEBRAS

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ABSTRACT. The so-called Lvov-Kaplansky Conjecture states that the image of a multilinear polynomial evaluated on the matrix algebra of order  $n$  is always a vector subspace. This intriguing problem has a solution only for  $n=2$ . Recently there has been intense research in topics related to this conjecture and problems of images of polynomials have been considered on other associative and non-associative algebras. In this talk we will present the recent developments in the area and also some recent results in joint work with Manuela Souza describing the image of multilinear and multihomogeneous polynomials on finite dimensional null-filiform Leibniz algebras of arbitrary dimension.

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