On the Lvov-Kaplansky conjecture

Pedro Fagundes

Department of Mathematics, State University of Campinas, Campinas, SP, Brazil psouzafag@gmail.com

In this talk we will discuss a conjecture attribuited to Lvov and Kaplansky which says that the image of a multilinear polynomial over the matrix algebra is a vector space. We will be particularly interested in variations of such conjecture and recent positive results, for instance the images of multilinear polynomials in some matrix subalgebras.