

QUANTITATIVE AND QUALITATIVE ESTIMATES ON THE NORM OF PRODUCT OF POLYNOMIALS

GUSTAVO ARAÚJO

UNIVERSIDADE ESTADUAL DA PARAÍBA, BRAZIL.

ABSTRACT. When for the first time, in 1987, a Banach space X and a bounded operator $T : X \rightarrow X$ with no trivial invariant subspaces was constructed, two of the many tools used by P.H. Enflo was the “concentration of polynomials at low degrees” and a series of estimates on the norm of products of polynomials. The concept of concentration of polynomials at low degrees has been adapted to other norms and one of these adaptations falls within the case of sets with gaps or missing portions (the so-called lacunary sets). Here we deepen into the study of these two concepts and, among other things, we present a result on estimates of lacunary norms of product of polynomials.

This is a joint work with P.H. Enflo, G.A. Muñoz-Fernández, D.L. Rodríguez-Vidanes and J.B. Seoane-Sepúlveda.