Positive entries of stable matrices by Daniel Hershkowitz (joint work with S. Friedland and S.M. Rump)

Abstract

The question of how many elements of a real positive stable matrix must be positive was raised in the previous workshop in Maynooth, and its solution is presented in this talk. It is shown that any real stable matrix of order greater than 1 has at least two positive entries. Furthermore, for every stable spectrum of cardinality greater than 1 there exists a real matrix with that spectrum with exactly two positive elements, where all other elements of the matrix can be chosen to be negative.