

1011-15-296

Francesco Barioli* (Francesco-Barioli@utc.edu). *Minimum Rank Problem and zero patterns.*

Given a certain class of matrices, the Minimum Rank Problem consists on determining the minimum rank of matrices within that class. In particular we will consider classes of symmetric matrices with a prescribed zero-pattern. Since a zero-pattern defines in a natural way an undirected graph, an interesting problem is to investigate the relation between minimum rank and some quantities strictly related to the graph. In this talk we will present a characterization of the minimum rank of decomposable graphs, and a new approach on the computation of the minimum rank for more general classe of graphs. (Received August 30, 2005)