

Alpha-redundant vertices revisited

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(joint work with Christoph Brause and Ingo Schiermeyer)

A vertex v in a graph G is called α -*redundant* if $\alpha(G - v) = \alpha(G)$, where $\alpha(G)$ stands for the stability number of G , i.e. the maximum size of a subset of pairwise non-adjacent vertices. We will recall some results about this issue and describe some sufficient conditions for a vertex to be α -redundant. This leads to an efficient way to solve the maximum stable set problem in some subclasses of P_5 -free graphs.