

Semi Square Stable Graphs

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The independent number of a graph, $\alpha(G)$, is the maximum number of independent vertices in G . A Graph G is called square stable if $\alpha(G) = \alpha(G^2)$, where G^2 is the square of the graph G . We introduce a new class of graphs called semi square stable (SSS-graph for short) as graphs for which $\alpha(G^2) = i(G)$, where $i(G)$ is the minimum number of independent dominating number of vertices of the graph G . We give a way to construct new SSS-graphs out of known ones and finally we prove that every proper interval graph is an SSS-graph.

Stable set, independent domination set, semi-square-stable graph, interval graphs, corona