

ON k -LIMITED DOMINATION IN GRAPHS

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In this talk, we present a new type of domination in graphs, called *k-limited domination*. The concept is motivated by applications in which dominating vertices have limited capacity and cannot serve too many vertices outside the dominating set. More precisely, for an integer $k \geq 1$, a dominating set $D \subseteq V(G)$ is said to be *k-limited* if every vertex of D has at most k neighbors outside D . The minimum size of such a set is denoted by $\gamma_k^L(G)$. While the case $k \geq \Delta(G)$ reduces to classical domination, the range $1 \leq k < \Delta(G)$ imposes an additional capacity constraint and therefore leads to a substantially different domination problem. The talk will survey the known results from [1, 2].

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References

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