For a graph $G$, the packing number, $\rho(G)$, is defined to be $\max\{|S| : S \subseteq V(G) \text{ and } |N[v] \cap S| \leq 1 \text{ for each } v \in V(G)\}$.

Notice that for every vertex in $V(G)$ there is a restriction on the number of vertices in the packing set $S$ which lie within that vertex’s closed neighborhood. Set-sized packing extends the notion of packing beyond restrictions for individual vertices to collections of vertices. We define the set-sized packing number $\rho_{\{c_1,c_2,...,c_t,...\}}(G)$ to be the maximum cardinality of a set $S \subseteq V(G)$ such that, for each set of $k$ vertices, there are no more than $c_k$ vertices of $S$ in the union of their closed neighborhoods. An introduction to set-sized packing will be discussed along with preliminary results. (Received September 20, 2016)