H-supermagic labelings of graphs

Abstrak:

A simple graph $G$ admits an $H$-covering if every edge in $E(G)$ belongs to a subgraph of $G$ isomorphic to $H$. The graph $G$ is $H$-magic if there exists a bijection $f : V(G) \cup E(G) \rightarrow \{1, 2, 3, \ldots, |V(G) \cup E(G)|\}$ such that for every subgraph $H_0 \subseteq G$ isomorphic to $H$, $G$ is said to be $H$-supermagic if $f(V(G)) = \{1, 2, 3, \ldots, |V(G)|\}$. In this paper, we study cycle-(super)magic labelings of chain graphs, fans, triangle ladders, graphs obtained by joint of a star $K_{1,n}$ with one isolated vertex, ladders, and books and $P_3$-(super)magic labelings of cycles. Additionally, we study the dual labeling and present some lower and upper bounds of the magic constant of an $H$-supermagic labeling.

Keyword:

$H$-supermagic labeling, $H$-supermagic graph