Antimagic and local antimagic labelings of graphs
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Let $G = (V, E)$ be a graph of order n and size m. Let $f \colon E \to \{1, 2, \ldots, m\}$ be a bijection. The weight $w_f(v)$ of a vertex v is defined by $w_f(v) = \sum_{v \in e} f(e)$. The edge labeling f is called an *antimagic labeling* if $w_f(u) \neq w_f(v)$ for any two distinct vertices u and v. The labeling f is called a *local antimagic labeling* if $w_f(u) \neq w_f(v)$ for any two adjacent vertices u and v. Thus a local antimagic labeling induces a proper vertex coloring of G where the color of a vertex v is $w_f(v)$. The local antimagic chromatic number $\chi_{la}(G)$ is the minimum number of colors taken over all colorings induced by a local antimagic labeling of G. In this talk we present a survey of of results on antimagic labelings, local antimagic chromatic number, the status of several conjectures related to these concepts and problems for further investigation.