Mathematical Sciences Colloquium
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Survey on Distance Magic Graphs

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ABSTRACT: Let $G = (V,E)$ be a graph of order n. A *distance magic labeling* of G is a bijection $l:V \rightarrow \{1,2,\dots,n\}$ for which there exists a positive integer μ such that $\sum_{x \in N(v)} l(x) = \mu$ for all $v \in V$, where $N(v)$ is the open neighborhood of v.

Moreover, we also consider a Γ-*distance magic labeling* of a graph $G(V,E)$ with $|V| = n$ is an injection f from V to an Abelian group Γ of order n such that the weight $\sum_{x \in N(v)} f(x)$ of every vertex $x \in V$ is equal to the same element $\mu \in \Gamma$. A graph G is called a *group distance magic* graph if there exists a Γ-distance magic labeling for every Abelian group Γ of order $|V(G)|$.

The recent results in the topics will be presented in the talk.