

ACADEMY OF DISCRETE MATHEMATICS AND APPLICATIONS

ADMA LECTURE SERIES

(ONLINE)

ABOUT ADMA

The Academy of Discrete Mathematics and Applications (ADMA) is a registered professional body functioning with the aim of promoting active and quality research in Discrete Mathematics and allied subjects. Established in 2005, it has been successfully disseminating front-line research culture among the discrete mathematicians in India.

First Lecture

TITLE: SET-DOMINATION IN SUB-DIVISION GRAPH
SPEAKER: DR. SANA AEJAZ, KHAJA BANDANAWAZ UNIVERSITY, KARNATAKA
Date: 07th December, 2024 (Saturday)
TIME: 07:30PM TO 08:15PM (IST)

Registration Link: <https://forms.gle/QWavrtpYSgq89QCRA>

Registration Deadline: **5th December 2024 5:00pm (IST)**

ABSTRACT

In this talk, we initiate the study of Set-Domination in the Sub-Division graph of a graph G . The Sub-division graph $S_1(G)$ of a graph G is a graph obtained from G by inserting a vertex of degree two for each edge of G . Let $S_1(G) = (V_1, E_1)$ be a Sub-division graph. A Set $D \subseteq V_1[S_1(G)]$ is a Set-dominating set (SD-set) of $S_1(G)$ if, for every subset $T \subseteq V_1 - D$, there exists a non-empty subset $S \subseteq D$ such that the graph $\langle S \cup T \rangle$ is connected. The Set-Domination number $\gamma_{sd}[S_1(G)]$ of G is the minimum cardinality of an SD-set. Here we find Set Domination number of Subdivision graphs of some standard graphs and specifically subdivision graph of a non-trivial tree and create comparative inequalities between $\gamma_{sd}[S_1(G)]$ and other domination parameters of graph G .



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