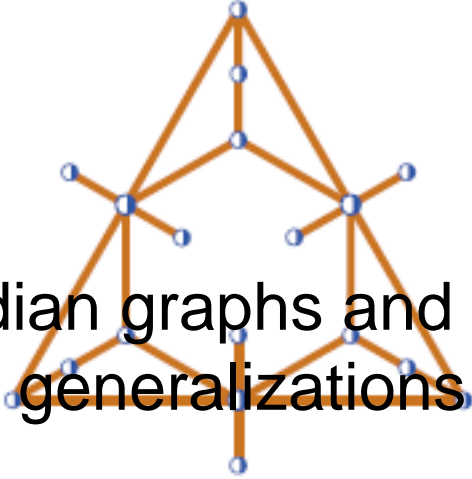


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Median graphs and their generalizations

Content :

Median graphs, one of the central classes of graphs in metric graph theory, appear in different guises and applications, and relate to several other mathematical structures. They are an important model in communication networks, mathematical biology and sociology. After a brief, incomplete presentation of the theory, related to median graphs, we will focus on some recent results. In particular we will present connections between median graphs and some other well-known classes of graphs, such as clique-graphs and diamond-free graphs, which are established by analyzing the structure of maximal hypercubes in median graphs. By using similar amalgamation concepts, we will then concentrate on a frame-work for the study of classes of graphs that generalize median graphs, and apply it in the characterizations of two recently introduced classes of graphs, notably the retracts of the Cartesian products of chordal graphs, respectively bridged graphs.

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