

On the average eccentricities of some forbidden subgraphs

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Let G be a connected graph. Let H be a family of connected graphs. Then G is said to be H -free if it contains no induced sub-graph isomorphic to H . There are several important graph classes characterized by a single forbidden induced sub-graph. Examples of graph classes defined in terms of a single forbidden sub-graph is the K_3 -free graphs and the C_4 -free graphs.

In this talk, I would discussed the average eccentricities of K_3 -free graphs and C_4 -free graphs in terms of their order and minimum degrees. This can be interpreted as a method of minimizing the average of the maximum time delay of transferring messages from one vertex to the other in a modeled communication network.