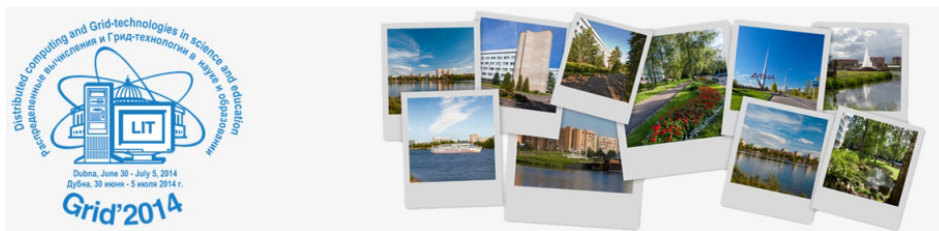


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THE MAXIMUM DISTANCE IN THE GRAPH WITH FIXED DOMINATION NUMBER

Monday, 30 June 2014 17:00 (15 minutes)

The study considers the problem of analysis of metric characteristics and structural features of graphs with a fixed smallest dominating set. It, in particular, provides opportunities for realization of various ways of data transmission in communication networks. The results also include methods of such transmission using decentralization and local interaction of elements (for example, in peer-to-peer environments).

The work shows an estimate of maximum distances, diameter and –for these values–the type of configurations of graphs with fixed domination number. A special place is given to situation when there are two dominating elements. The study formulates a number of conditions describing graphs of this type.

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