



EMBEDDING OF GRAPH INTO ITS COMPLEMENT IN TRANSITIVE TOURNAMENT

AGNIESZKA GÖRLICH*, MONIKA PILŚNIAK

Let \overrightarrow{TT}_n be a transitive tournament on n vertices. It is known [1] that for any directed acyclic graph G of order n and of size not greater than $\frac{3}{4}(n-1)$ two directed graphs isomorphic to G are arc disjoint subgraphs of \overrightarrow{TT}_n . In this paper we consider a problem of embedding of graphs into its complement in transitive tournament. We show that any directed acyclic graph \overrightarrow{G} of size not greater than $\frac{2}{3}(n-1)$ is embeddable into its complement in \overrightarrow{TT}_n . Moreover, this bound is generally the best possible.

References

- [1] A. Görlich, M. Pilśniak, M. Woźniak, *A note on a packing problem in transitive tournaments* *Graphs and Comb.* (2006) 22:233–239.