Sayar, Mohamed Yahia
Critical support of an indecomposable graph. (Support critique d’un graphe indécomposable.) (French) Zbl 1187.05040

Summary: Given a digraph $G = (V, A)$, with each subset $X$ of $V$ is associated the subgraph $G[X] = (X, A \cap (X \times X))$ of $G$ induced by $X$. A subset $I$ of $V$ is an interval of $G$ provided that for any $a, b \in I$ and $x \in V \setminus I$, $(a, x) \in A$ if and only if $(b, x) \in A$, and $(x, a) \in A$ if and only if $(x, b) \in A$. For example, $\emptyset, V$ and $\{x\}$, where $x \in V$, are intervals of $G$ called trivial intervals. A digraph is indecomposable if all its intervals are trivial. Given an indecomposable digraph $G = (V, A)$, the support of $G$ is the set $\sigma(G)$ of vertices $x \in V$ such that $G[V \setminus \{x\}]$ is indecomposable. Its critical support is the set $\sigma_C(G)$ of the elements $x$ of $\sigma(G)$ such that $\sigma(G[V \setminus \{x\}]) = \emptyset$. For every digraph $G = (V, A)$, we prove that if $G$ is indecomposable and if $|V| \geq 7$, then $|\sigma_C(G)| \leq 2$.

MSC:
05C20 Directed graphs (digraphs), tournaments

Full Text: DOI

References:

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.