THE LIST DISTINGUISHING NUMBER EQUALS THE DISTINGUISHING NUMBER FOR INTERVAL GRAPHS

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Abstract

A distinguishing coloring of a graph $G$ is a coloring of the vertices so that every nontrivial automorphism of $G$ maps some vertex to a vertex with a different color. The distinguishing number of $G$ is the minimum $k$ such that $G$ has a distinguishing coloring where each vertex is assigned a color from $\{1, \ldots, k\}$. A list assignment to $G$ is an assignment $L = \{L(v)\}_{v \in V(G)}$ of lists of colors to the vertices of $G$. A distinguishing $L$-coloring of $G$ is a distinguishing coloring of $G$ where the color of each vertex $v$ comes from $L(v)$. The list distinguishing number of $G$ is the minimum $k$ such that every list assignment to $G$ in which $|L(v)| = k$ for all $v \in V(G)$ yields a distinguishing $L$-coloring of $G$. We prove that if $G$ is an interval graph, then its distinguishing number and list distinguishing number are equal.

Keywords: distinguishing, distinguishing number, list distinguishing, interval graph.

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References


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