

On interpolation theorems for graph parameters

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Abstract.

Let \mathcal{G} be the class of all simple graphs, a function $f : \mathcal{G} \rightarrow \mathbb{Z}$ is called a graph parameter if $f(G) = f(H)$, whenever $G \cong H$. If f is a graph parameter and $\mathcal{J} \subseteq \mathcal{G}$, f is called an *interpolation graph parameter with respect to \mathcal{J}* if there exist integers a and b such that $\{f(G) : G \in \mathcal{J}\} = \{k \in \mathbb{Z} : a \leq k \leq b\}$. If f is an interpolation graph parameter with respect to \mathcal{J} , then we will also say that f interpolates over the set \mathcal{J} .

In this talk, various graph parameters are discussed, some of which are shown to be interpolated with respect to the class of all graphs with a fixed degree sequence.