# STABILITY OF HEREDITARY GRAPH CLASSES UNDER CLOSURE OPERATIONS

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If $\mathcal{C}$ is a subclass of the class of claw-free graphs, then $\mathcal{C}$ is said to be stable if, for any $G \in \mathcal{C}$, the local completion of $G$ at any vertex is also in $\mathcal{C}$. If $\mathfrak{cl}$ is a closure operation that turns a claw-free graph into a line graph by a series of local completions and $\mathcal{C}$ is stable, then $\mathfrak{cl}(G) \in \mathcal{C}$ for any $G \in \mathcal{C}$. In the talk we consider stability of hereditary classes of claw-free graphs defined in terms of a family of connected closed forbidden induced subgraphs. We characterize line graph preimages of graphs in families that yield stable classes, we identify minimal families that yield stable classes in the finite case, and we also give a general background for techniques for handling unstable induced hereditary classes by proving that their closure may be included into another (possibly stable) class.

**Keywords:** forbidden subgraph, stable class, closure.

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