Forbidden trees generating a finite set of 3-connected graphs with girth at least five

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Received January 13, 2022; revised February 14 2022

Abstract. For a family $\mathcal{F}$ of graphs, a graph G is said to be $\mathcal{F}$-free if G contains no member of $\mathcal{F}$ as an induced subgraph. We let $\mathcal{G}_3(\mathcal{F})$ denote the family of 3-connected $\mathcal{F}$-free graphs. In this paper, we propose a conjecture concerning trees T such that $\mathcal{G}_3(\{C_3, C_4, T\})$ is a finite family, and give a partial solution of the conjecture.