

Forbidden Minors for Edge Searching

Edge searching is a combinatorial game where a team of searchers are following a strategy to capture a hidden intruder. It is played on the edges and vertices of a graph. When a fixed number of searchers are available, there is a finite number of forbidden minors, exclusion of which will guarantee that the graph will be intruder free.

In this talk, we give the set of forbidden minors for 4-searchable graphs of several graph classes: outerplanar graphs, series parallel graphs, and generalized wheel graphs. Finally, we will give a conjecture on the search number of circulant graphs of prime order.

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