
ASIYEH SANA EI, Kwantlen Polytechnic University

Damage Number of Small Graphs

The damage variation in the game of Cops and Robber on graphs is a version of the game in which the robber damages each distinct vertex that he moves onto without capture. The parameter “damage number of a graph” is then the minimum number of unique vertices of the graph that can be damaged by the robber. It has been shown that in almost all graphs the damage number is less than $\frac{n}{2}$, where n is the order of the graph, and upper bounds on the damage number of the graphs with $n \leq 8$ are known. After introduction and a brief review of the existing results, recent developments on the damage number of the graphs of order nine will be presented.