

On edge domination of graphs

Jayme Luiz Szwarcfiter
Universidade Federal do Rio de Janeiro, Brazil

Denote by G , an undirected simple graph, with vertex set V , and edge set E . An edge $e \in E$ *dominates* itself and every edge adjacent to e . A set $E' \subseteq E$ is an (*edge*) dominating set of G , if each edge of E is dominated by some edge of E' . The domination is called *efficient* if each edge is dominated exactly once, and is called *proper* if each edge of $E \setminus E'$ is dominated exactly once. In this talk, we survey and describe complexity results on these three types of edge domination. In special, we consider the a class of graphs, where each edge is contained in some triangle. We mention hardness and polynomial time cases on subclasses of this class, for edge domination problems.