

Overlap representations and overlap numbers of graphs

An overlap representation of a graph is an assignment of sets to the vertices of the graph in such a way that two vertices are adjacent if and only if the sets assigned to them intersect and neither set is contained in the other. The overlap number of a graph is the minimum number of elements needed to form such a representation. We discuss overlap representations and overlap numbers in general and in cases where the graphs or the sets are required to have certain properties.