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Bounding Clique-width via Perfect Graphs

Given two graphs H_1 and H_2 , a graph G is (H_1, H_2) -free if it contains no induced subgraph isomorphic to H_1 or H_2 . We continue a recent study into the clique-width of (H_1, H_2) -free graphs and present three new classes of (H_1, H_2) -free graphs of bounded clique-width. The three new graph classes have in common that one of their two forbidden induced subgraphs is the diamond. To prove our results we develop a technique based on bounding clique covering number in combination with reduction to subclasses of perfect graphs.

This is a joint work with Konrad Dabrowski and Daniel Paulusma.