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Algorithms for k -thin and proper k -thin graphs

The (proper) thinness of a graph is a with parameter generalizing (proper) interval graphs, which are exactly the (proper) 1-thin graphs. A wide family of problems (including list matrix partition with bounded size matrix) can be polynomially solved for graphs with bounded thinness, and it can be enlarged in the proper case. We will survey these results, along with some structural characterizations and algorithmic problems related to recognition, which is open. We will also describe the behavior of both parameters under some graph operations, and relate them to other graph invariants in the literature.