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On the recognition of probe graphs of some self-complementary classes of perfect graphs

In this paper we consider the recognition of some probe graph classes. Given a class of graphs $\mathcal{G}$, a graph G is a *probe graph* of $\mathcal{G}$ if its vertices can be partitioned into a set $\mathbb{P}$ of *probes* and an independent set $\mathbb{N}$ of *nonprobes*, such that G can be extended to a graph of $\mathcal{G}$ by adding edges between certain nonprobes. We show that there are polynomial-time recognition algorithms for probe cographs, probe P_4-reducible graphs, probe P_4-sparse graphs, and probe splitgraphs.

Joint work with Maw-Shang Chang, Ton Kloks, Dieter Kratsch and Sheng-Lung Peng.