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Graphs that have clique (partial) 2-trees

Much of the theory—and the applicability—of chordal graphs is based on their having clique trees. Chordal graphs can be generalized to the graphs that have clique representations that are 2-trees, or even series-parallel graphs (partial 2-trees) or outerplanar or maximal outerplanar graphs. The resulting graph classes can be characterized by forbidding edge contractions of a few induced subgraphs. There is also a plausible application of such graphs to systems biology.