

Planarity of Edge Ordered Graphs

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Abstract

An edge ordered graph is an undirected graph together with cyclic orderings of the edges at each vertex. An edge ordered graph is said to be planar, if there is a planar embedding of the graph in which the cyclic orderings of the edges at the vertices are preserved. These graphs have applications in VLSI layout problems. In this paper, we describe a linear time algorithm for recognizing planar edge ordered graphs.