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Maximum cardinality search for computing minimal triangulations of graphs. (English)

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Summary: We present a new algorithm, called MCS-M, for computing minimal triangulations of graphs. Lex-BFS, a seminal algorithm for recognizing chordal graphs, was the genesis for two other classical algorithms: LEX M and MCS. LEX M extends the fundamental concept used in Lex-BFS, resulting in an algorithm that not only recognizes chordality, but also computes a minimal triangulation of an arbitrary graph. MCS simplifies the fundamental concept used in Lex-BFS, resulting in a simpler algorithm for recognizing chordal graphs. The new algorithm MCS-M combines the extension of LEX M with the simplification of MCS, achieving all the results of LEX M in the same time complexity.

MSC:

68R10 Graph theory (including graph drawing) in computer science

68W05 Nonnumerical algorithms

Cited in **1** Review
Cited in **24** Documents

Keywords:

chordal graphs

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