EXTENDING THE MAX ALGORITHM FOR MAXIMUM INDEPENDENT SET

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The Maximum Independent Set problem is an NP-hard problem. In this talk we consider the algorithm MAX, which is a polynomial time algorithm for finding a maximal independent set in a graph $G$. We present a set of forbidden induced subgraphs such that the algorithm MAX always results in finding a maximum independent set of $G$. We also describe a modification of the MAX algorithm and a set of forbidden induced subgraphs for the new algorithm.

Keywords: Maximum Independent Set, MIN algorithm, MAX algorithm, Vertex Order algorithm.

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References