

## **Evolutionary Tabu Search Algorithm for Graph Coloring Problem (ETA)**

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### **Abstract**

In this paper, a hybrid algorithm has been proposed for the Graph Coloring Problem to which many problems can be reduced. This approach which we name as "Evolutionary Tabu Search Algorithm" (ETA) has emerged by combining a tabu search method with a genetic algorithm. For Graph Coloring Problem, new crossover and mutation operators tested with many graph instances used in DIMACS challenge are designed. ETA has given successful results especially in small and medium graph instances.