

A novel particle swarm optimization - Based algorithm for the graph coloring problem

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Abstract: In this paper, we study the problem of graph coloring and propose a novel particle swarm optimization (PSO) algorithm for it. We use the PSO evolutionary progress to improve a simple deterministic greedy algorithm. The new algorithm can achieve a result that is better than known heuristic algorithms do, as verified by an extensive simulation study. ??2009 IEEE.

Author Keywords: First-fit algorithm; Graph coloring; Particle swarm optimization

Index Keywords: Evolutionary progress; Extensive simulations; Graph coloring; Graph coloring problem; Graph colorings; Greedy algorithms; IMPROVE-A; Particle swarm; Particle swarm optimization algorithm; Coloring; Computer science; Graph theory; Heuristic algorithms; Particle swarm optimization (PSO)

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