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Two Hybrid Genetic Algorithms for Solving the Super-Peer Selection Problem

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Abstract

The problem that we will address here is the Super-Peer Selection Problem (SPSP). Two hybrid genetic algorithm (HGA) approaches are proposed for solving this NP-hard problem. The new encoding schemes are implemented with appropriate objective functions. Both approaches keep the feasibility of individuals by using specific representation and modified genetic operators. The numerical experiments were carried out on the standard data set known from the literature. The results of this test show that in 6 out of 12 cases HGAs outreached best known solutions so far, and that our methods are competitive with other heuristics.

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