

Comparative Evaluation Of Parallelization Strategies For Evolutionary And Stochastic Heuristics

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Summary

In this paper we present an evaluation of selected parallel strategies for Simulated Annealing and Simulated Evolution, identifying the impact of various issues on the effectiveness of parallelization. Issues under consideration are the characteristics of these algorithms, the problem instance, and the implementation environment. Observations are presented regarding the impact of parallel strategies on runtime and achievable solution quality. Effective parallel algorithm design choices are identified, along with pitfalls to avoid. We further attempt to generalize our assessments to other heuristics.

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