



Design of cooperative algorithms for multi-objective optimization: application to the flow-shop scheduling problem

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Résumé en anglais This is a summary of the main results presented in the author's PhD thesis. This thesis was supervised by El-Ghazali Talbi, and defended on 21 June 2005 at the University of Lille (France). It is written in French and is available at <http://www.lifl.fr/~basseur/These.pdf> [2]. This work deals with the conception of cooperative methods in order to solve multi-objective combinatorial optimization problems. Many cooperation schemes between exact and/or heuristic methods have been proposed in the literature. We propose a classification of such schemes. We propose a new heuristic called adaptive genetic algorithm (AGA), that is designed for an efficient exploration of the search space. We consider several cooperation schemes between AGA and other methods (exact or heuristic). The performance of these schemes are tested on a bi-objective permutation flow-shop scheduling problem, in order to evaluate the interest of each type of cooperation.

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Liens

[1] <http://okina.univ-angers.fr/matthieu.basseur/publications>

[2] <http://www.lifl.fr/~basseur/These.pdf>

[3] <http://okina.univ-angers.fr/publications/ua7681>

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