



Hybrid Metaheuristics for the Graph Partitioning Problem

Submitted by Jin-Kao Hao on Tue, 01/27/2015 - 21:37

Titre	Hybrid Metaheuristics for the Graph Partitioning Problem
Type de publication	Chapitre
Type	Ouvrage scientifique
Année	2013
Langue	Anglais
Pagination	157-185
Volume	434
Titre de l'ouvrage	Hybrid Metaheuristics
Auteur	Benlic, Una [1], Hao, Jin-Kao [2]
Pays	Allemagne
Editeur	Springer Berlin Heidelberg
Ville	Berlin, Heidelberg
ISBN	978-3-642-30670-9

Résumé en anglais

The Graph Partitioning Problem (GPP) is one of the most studied NP-complete problems notable for its broad spectrum of applicability such as in VLSI design, data mining, image segmentation, etc. Due to its high computational complexity, a large number of approximate approaches have been reported in the literature. Hybrid algorithms that are based on adaptations of popular metaheuristic techniques have shown to provide outstanding performance in terms of partition quality. In particular, it is the hybrids between well-known metaheuristics and multilevel strategies that report partitions of the minimal cut-size value. However, metaheuristic hybrids generally require more computing time than those based on greedy heuristics which can generate partitions of acceptable quality in a matter of seconds even for very large graphs. This chapter is dedicated to a review on some representative hybrid metaheuristic approaches including genetic local search, basic multilevel search and recent development on hybrid multilevel search.

URL de la notice	http://okina.univ-angers.fr/publications/ua7145 [3]
DOI	10.1007/978-3-642-30671-6_6 [4]
Collection	Studies in Computational Intelligence
Lien vers le document	http://dx.doi.org/10.1007/978-3-642-30671-6_6 [4]

Liens

- [1] [http://okina.univ-angers.fr/publications?f\[author\]=7482](http://okina.univ-angers.fr/publications?f[author]=7482)
- [2] <http://okina.univ-angers.fr/jinkao.hao/publications>
- [3] <http://okina.univ-angers.fr/publications/ua7145>
- [4] http://dx.doi.org/10.1007/978-3-642-30671-6_6

