



A tabu search based memetic algorithm for the maximum diversity problem

Submitted by Jin-Kao Hao on Mon, 01/26/2015 - 10:14

Titre	A tabu search based memetic algorithm for the maximum diversity problem
Type de publication	Article de revue
Auteur	Wang, Yang [1], Hao, Jin-Kao [2], Glover, Fred [3], Lü, Zhipeng [4]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2014
Langue	Anglais
Date	Jan-01-2014
Pagination	103-114
Volume	27
Titre de la revue	Engineering Applications of Artificial Intelligence
ISSN	0952-1976
Mots-clés	Combinatorial optimization; Maximum diversity problem; Metaheuristics; Tabu search; Memetic algorithm [5]
Résumé en anglais	<p>This paper presents a highly effective memetic algorithm for the maximum diversity problem based on tabu search. The tabu search component uses a successive filter candidate list strategy and the solution combination component employs a combination operator based on identifying strongly determined and consistent variables. Computational experiments on three sets of 40 popular benchmark instances indicate that our tabu search/memetic algorithm (TS/MA) can easily obtain the best known results for all the tested instances (where no previous algorithm has achieved) as well as improved results for six instances. Analysis of comparisons with state-of-the-art algorithms demonstrates statistically that our TS/MA competes very favorably with the best performing algorithms. Key elements and properties of TS/MA are also analyzed to disclose the benefits of integrating tabu search (using a successive filter candidate list strategy) and solution combination (based on critical variables).</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua7063 [6]
DOI	10.1016/j.engappai.2013.09.005 [7]
Lien vers le document	http://dx.doi.org/10.1016/j.engappai.2013.09.005 [7]
Titre abrégé	Engineering Applications of Artificial Intelligence

Liens

[1] [http://okina.univ-angers.fr/publications?f\[author\]=7544](http://okina.univ-angers.fr/publications?f[author]=7544)

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- [6] <http://okina.univ-angers.fr/publications/ua7063>
- [7] <http://dx.doi.org/10.1016/j.engappai.2013.09.005>

Publié sur *Okina* (<http://okina.univ-angers.fr>)