



# Lecture Notes in Computer Science Parallel Problem Solving from Nature - PPSN XV Comparative Study of Different Memetic Algorithm Configurations for the Cyclic Bandwidth Sum Problem

Submitted by Frédéric Lardeux on Mon, 12/17/2018 - 08:32

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Mots-clés	Cyclic Bandwidth Sum Problem [4], Graph Embedding Problems [5], Memetic algorithms [6]
Résumé en anglais	The Cyclic Bandwidth Sum Problem (CBSP) is an NP-Hard Graph Embedding Problem which aims to embed a simple, finite graph (the guest) into a cycle graph of the same order (the host) while minimizing the sum of cyclic distances in the host between guest's adjacent nodes. This paper presents preliminary results of our research on the design of a Memetic Algorithm (MA) able to solve the CBSP. A total of 24 MA versions, induced by all possible combinations of four selection schemes, two operators for recombination and three for mutation, were tested over a set of 25 representative graphs. Results compared with respect to the state-of-the-art top algorithm showed that all the tested MA versions were able to consistently improve its results and give us some insights on the suitability of the tested operators.
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## Liens

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