Noname manuscript No.
(will be inserted by the editor)

Algoritmo GRASP para o problema de tabela-horario de universidades

Walace Rocha · Maria Boeres · Maria Rangel

Received: date / Accepted: date

Abstract The timetabling problem is of great interest in the combinatorial optimization field. Given a set of disciplines, students, teachers and classrooms, the problem consists in to allocate lectures in a limited number of timeslots and rooms, respecting some restrictions. The formulations are varied, which sometimes makes it difficult to compare to other studies. Despite the differences, it is classified into three main classes: exams timetabling, schools timetabling and universities timetabling. This work specifically treats the universities timetabling and is adopted the third formulation of international timetabling competition - ITC-2007. The problem is solved with the GRASP metaheuristic. Hill Climbing and Simulated Annealing are used as local search phase of the algorithm and Path-relinking is implemented to improve the basic version. Tests were carried out simulating the same competition rules and the results are competitive with those obtained by the ITC-2007 finalists.

Keywords Educational timetabling · GRASP · Local Search

1 Introduction

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W. Rocha
first address
Tel.: +55-27-40092255
E-mail: walacesrocha@yahoo.com.br

M. Boeres
second address

M. Rangel
third address

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2 Section title

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2.1 Subsection title

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$$a^2 + b^2 = c^2 \tag{1}$$

References

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