

Call for Papers

GRASP AND PATH RELINKING

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Brief Description

The GRASP methodology was developed in the late 1980s (Feo and Resende, 1989) as an efficient multi-start metaheuristic. Each GRASP iteration consists of constructing a trial solution and then applying an improvement procedure to find a local optimum (i.e., the final solution for that iteration). The construction phase is iterative, greedy, and adaptive. It is iterative because the initial solution is built considering one element at a time. It is greedy because the addition of each element is guided by a greedy function. It is adaptive because the element chosen at any iteration in a construction is a function of those previously chosen. The improvement phase typically consists of a local search procedure.

Path Relinking (PR) was originally suggested as an approach to integrate intensification and diversification strategies in the context of Tabu Search (Glover and Laguna, 1997). This approach generates new solutions by exploring trajectories that connect high-quality solutions, by starting from one of these solutions, called an *initiating solution*, and generating a path in the neighborhood space that leads toward the other solutions, called *guiding solutions*. This is accomplished by selecting moves that introduce attributes contained in the guiding solutions. Laguna and Martí (1999) adapted PR in the context of GRASP in which the relinking consists in finding a path between a solution found with GRASP and a chosen elite solution. Resende and Ribeiro (2003) present numerous examples of GRASP with PR, including the variant known as Evolutionary Path Relinking.

GRASP with PR is by now a well-established meta-heuristic for optimization. In this volume we are interested in both theoretical and practical papers on this methodology, including successful applications.

Submissions

To submit your manuscript to the **Computers and Operation Research** special issue on *GRASP with Path Relinking*, please click on the url: <http://www.ees.elsevier.com/cor/> and follow the instructions found there. When submitting to the Special Volume, select the article type "Special Issue: GRASP with Path Relinking". The deadline for submissions is January 31, 2011

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