Special issue on Integration of metaheuristics and constraint programming techniques

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Constraint programming and metaheuristics share the same objective: offering effective tools to aid decision makers in solving real-life problems. Several attempts have been made to combine the two paradigms in order to provide new efficient tools. In this special issue of the journal of mathematical modelling and algorithms, we aim to provide an overview of the advances in this field.

Interested researchers are invited to submit papers on the following (non-exhaustive) list of topics:

- Metaheuristics and CP for continuous/discrete linear/nonlinear single/multiple objective optimization problems
- CP embedded in metaheuristics
- Metaheuristics embedded in CP
- Space reduction/decomposition with CP or metaheuristic techniques for optimization problems
- Hybrid methods between CP and Local Search based metaheuristics (simulated annealing, tabu search, etc.)
- Hybrid methods between CP and Evolutionary metaheuristics (genetic algorithms, memetic algorithms, etc.)

- Hybrid methods between CP and Constructive metaheuristics (ant colony optimization, GRASP, etc.)
- Hybrid methods between CP and other aspects of metaheuristics (path relinking, neural networks)
- New Local Search strategies in CP
- CP and preference-based methods
- Hybrid approaches dedicated to problems characterized by their combinatorial structures (knapsack, covering, partitioning, etc.)
- Applications (transportation, networks, scheduling, engineering, timetabling, business, bioinformatics, datamining, etc.)
- Success stories
- Software aspects (software class libraries, algorithms and data structures, reusable software, parallel computing).

The deadline for submission of full papers is 15/01/2006. The approximate completion time is November 2006. Manuscripts should be submitted electronically to:

ppcro@free.fr

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