

**Special Issue on “Knapsack Problems and Applications”**  
*Computers and Operations Research*

Knapsack related problems are encountered in numerous industrial domains such as transportation, logistics, cutting and packing, telecommunication, reliability, advertisement, investment, budget allocation, and production management. They appear either as standalone problems or as subproblems of more complex programming models. Because of their wide range of applicability, knapsack problems have known a large number of variations such as:

- single and multiple-constrained knapsacks,
- knapsacks with disjunctive constraints,
- multidimensional knapsacks,
- multiple choice knapsacks,
- single and multiple objective knapsacks,
- integer, linear, non-linear knapsacks,
- deterministic and stochastic knapsacks,
- knapsacks with convex / concave objective functions, etc.

Despite the technological and knowledge advance, solving certain knapsack problems remains a challenging problem. “Efficient” resolution techniques have been and are being proposed for the different variations of this problem.

This special issue of Computers & Operations Research on the theme of “Knapsack problems and applications” is intended to present the recent advances in using Operations Research resolution techniques for knapsack related problems. It will focus on techniques such as:

- Exact methods
- Approximate methods
- Hybrid and/or Cooperative approaches
- Adaptive methods
- Sensitivity analysis and stability of the optimum
- Reoptimization

Similarly, it will provide a wide variety of applications of knapsack related problems in occurring in the diverse sectors of the industry.

Authors are encouraged to submit both theoretical and applied articles addressing the theme of the special issue. Submissions need to have good OR models with **extensive** numerical computational results. No paper with the computational results limited to illustrative examples will be considered in this special issue.

To prepare their manuscript, authors are asked to closely follow the “Instructions to Authors” of Computers & Operations Research. Authors should submit their paper via EES <http://www.ees.elsevier.com/cor> and select “Special Issue: Knapsack problems and Applications” as the “Article Type”. Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Refereeing and the selection of papers will be carried out according to the standards of Computers & Operations Research.

### **Publication Schedule**

Manuscript submission to begin: June 30, 2009

Manuscript submission to close: November 30, 2009

### **Special Issue Guest Editors**

Pr. Mhand Hifi

UFR des Sciences

Laboratoire MIS, Axe Optimisation Discrète et Réoptimisation

Université de Picardie Jules Verne

5 rue du Moulin Neuf

80000 Amiens, France

e-mail : [hifi@u-picardie.fr](mailto:hifi@u-picardie.fr)

Dr. Rym M'Hallah

Department of Statistics and Operations Research

Kuwait University

P.O. Box 5969

Safat 13060, Kuwait

e-mail : [mhallah@kuc01.kuniv.edu.kw](mailto:mhallah@kuc01.kuniv.edu.kw)