

FOREWORD

XVI LATIN-IBERO-AMERICAN CONFERENCE ON OPERATIONS RESEARCH / XLIV BRAZILIAN SYMPOSIUM ON OPERATIONS RESEARCH (CLAIO/SBPO – 2012)

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This special issue of Pesquisa Operacional includes some papers presented at the XVI Latin-Ibero-American Conference on Operations Research (CLAIO), the biannual conference organized by the Latin-Ibero-American Association of Operations Research Societies (ALIO), and the XLIV Brazilian Symposium on Operations Research (SBPO), the annual conference organized by the Brazilian Operations Research Society (SOBRAPO), held during September, 24-28, 2012, in Rio de Janeiro, Brazil. These events have been a great opportunity for researchers and practitioners in the region to further exchange their experiences, to contribute, establish, and deepen their ties and to help young undergraduate and graduate students in their professional development.

This special issue was negotiated by the organizers of the CLAIO/SBPO – 2012 that decided to bring out papers presented at the conference, in full, in a good scientific journal of the area. They contacted the Editor in Chief of Pesquisa Operacional and SOBRAPO that agreed with the idea. A public announcement on the special issue was made and the decision to submit a complete version of the papers presented at the conference was left to authors. All the manuscripts received were processed according to the norms and the rigor of publication of Pesquisa Operacional.

The result is this issue that features the following nine papers:

- 1 – Canale et al. deal with a problem related to the design of multilayer telecommunication networks;
- 2 – Martello presents two-dimensional packing problems that arise in an application in mobile telecommunication systems;
- 3 – Alves et al. present a metric based on local variability, which legitimizes the use of the ellipsoidal frontier model with the choice of distribution of eccentricities with the least variability in the data;

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- 4 – Létocart et al. propose a fast and efficient heuristic method for solving the 0-1 exact k -item quadratic knapsack problem that produces good lower and upper bounds on the value of the problem;
- 5 – Figueroa-García and Hernández propose a method for solving linear programming problems with type-2 fuzzy constraints, based on the Zimmermann's approach;
- 6 – Zanazzi et al. deal with an application of group decision support, trying to make the reduction of noise, combining the use of statistical techniques with multi-criteria decision aid procedures;
- 7 – Markenzon and Waga introduce two new classes of graphs and determine their subchromatic number and toughness;
- 8 – Ibrahim et al. investigate the separation problem on some valid inequalities for the elementary shortest path problem in digraphs containing negative directed cycles; and finally,
- 9 – Silva proposes a hybrid heuristic based on splitting the time horizon in intervals to solve a project scheduling problem.

We wish to express our deepest appreciation to the authors that submitted their papers to this edition. We are indebted to all the reviewers that analyzed the papers submitted to this special issue for their time and effort. Special thanks for the support of Reinaldo Morabito, the Editor-in-Chief of Pesquisa Operacional, who invited us to participate as guest editors of this special issue.