Editorial

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Published online: 28 March 2013
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This special issue presents some innovative methodological and application OR approaches generated by the members of the Section for Operations Research of the Slovenian Society Informatika (SDI-SOR) and their colleagues and collaborators from abroad. In particular during economical crisis it is important to emphasize that the mathematical, statistical and informational theories and methods to analyze and optimize complex situations can contribute to responsible decision making, planning and efficient use of the resources, and that there is a growing need for such approaches in many fields of our society.

The call for papers for the special issue of CEJOR was launched during the 11th International Symposium on Operations Research, SOR'11, that took place in Dolenjske Toplice, Slovenia, in September 2011. The call was not restricted to the participants of the conference, however we found the symposium an excellent opportunity for the call to be answered by a sufficient number of high quality submissions. There were 65 participants at the symposium from 11 countries (Slovenia, Croatia, Austria, Hungary, Serbia, Germany, Czech Republic, Slovakia, Denmark, Spain, and Uruguay) who gave 6 invited plenary talks and 47 contributed presentations. Conference versions of papers co-authored by 100 authors were published in a proceedings volume available at the time of conference ([Zadnik Stirn et al. 2011](#)). A selection of refereed journal versions of papers were collected in a special issue of BSR (Business Systems Journal) ([Dumičić et al. 2012](#)).

The second post-conference volume is the present special issue of CEJOR. Altogether we have received 11 submissions for the special issue including

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submissions not presented at the symposium. Each manuscript was reviewed by two or three anonymous reviewers, and after some rounds of peer reviewing, 6 papers were accepted. The seventh paper was accepted for CEJOR by a regular procedure, since it is co-authored by one of the editors of this special issue.

The accepted papers cover a wide range of theoretical and application aspects of operations research: combinatorial optimization and graph theory, econometrics and applications in transportation and production. Personal consumption behaviour is studied in [Dumičić \(2013\)](#). The next two papers consider two challenging classical problems of combinatorial optimizations: graph coloring ([Govorčin et al. 2013](#)) and job-shop scheduling ([Hvalica 2013](#)). A reverse logistic model is studied in [Kovačić and Bogataj \(2013\)](#) in a context of extended MRP theory. Transportation problems are considered in the next two contributions; the first paper presents a GIS technology supported implementation of a heuristics ([Kramberger et al. 2012](#)), and the second applies a heuristics to a real life bus driver scheduling problem ([Kresz 2012](#)). The last paper ([Mladenović et al. 2013](#)) in this special issue proposes a new algorithm for the bi-criterion sequential clustering problem.

References

- Dumičić K, Zadnik Stirn L, Žerovnik J (2012) Editorial, special issue Innovative approaches to operations research methodology and its applications in business, economics, management and social sciences. *Bus Syst Res* 3(2):4–5
- Dumičić K, Čeh Časni A, Palić I (2013) The short-run and long-run behaviour of personal consumption in Croatia. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0254-7](#)
- Govorčin J, Gvozdenović N, Povh J (2013) New heuristics for the vertex coloring problem based on semidefinite programming. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0276-1](#)
- Hvalica D (2013) Solving job shop problems in the context of hypergraphs. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0268-1](#)
- Kovačić D, Bogataj M (2013) Reverse logistics facility location using cyclical model of extended MRP theory. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0251-x](#)
- Kramberger T, Žerovnik J, Štrubelj G, Prah K (2013) GIS technology as an environment for testing an advanced mathematical model for optimization of road maintenance. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0265-4](#)
- Kresz M (2013) An efficient solution approach for real-world driver scheduling problems in urban bus transportation. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0274-3](#)
- Mladenović N, Hansen P, Brimberg J (2013) Sequential clustering with radius and split criteria. *Cent Eur J Oper Res*. doi:[10.1007/s10100-012-0258-3](#)
- Zadnik Stirn L, Žerovnik J, Povh J, Drobne S, Lisec A (2011) Proceedings of the 11th international symposium on operational research in Slovenia, SOR'11, Dolenjske Toplice, Slovenia, Slovenian Society Informatika, Section for Operations Research, Ljubljana, Sept 28–30, 2011