Editorial

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This special issue brings peer reviewed selection of results presented at 13th International Symposium on Operations Research, SOR'15, that took place in Bled, Slovenia in September 23–25, 2015. The participants at this conference came from many countries but the majority was from Central Europe. In nearly hundred talks, they have presented state-of-the-art results in several emerging areas, like complex networks, high performance computing and big data analysis. Beside these issues, new results in traditional areas like inventory planning, econometric modelling, multi-criteria decision making and mathematical programming were presented.

The talks were supported by publications of short, at most 6 pages long, papers printed in the conference proceedings (Zadnik Stirn et al. 2015), which finally contained 93 papers/abstracts written by 191 authors. All authors were also invited to submit the extended and modified version of conference papers or new scientific papers covering topics in operations research for a special issue of Central European Journal of Operations Research by January 31, 2016. Although, the call was open at the conference SOR'15, the submissions that were not necessarily presented at the conference were welcomed as well. In the due time 15 papers were received and a peer review process according to highest academic standards started. After several rounds of major and minor revisions the editorial board of guest editors accepted 12 papers for publication in this special issue.

The accepted papers cover wide range of applications: multi-criteria decision making, heuristics and meta-heuristics, routing and scheduling problems and new approaches to solve selected mathematical optimization problems.

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A number of authors consider problems of distribution of goods of different types under uncertain conditions. For distribution of perishable goods, such as newspapers or food, [Bala et al. \(2016\)](#) propose heuristics that maintains the product availability of several products within specified time windows. Another heuristics, adaptive large neighborhood search algorithm, is experimentally studied on the probabilistic time-dependent vehicle routing problem searching near optimal routes for fleet of vehicles visiting customers within given time windows. When a novel product is introduced on the market, it is quite complicated to define probabilities or even probability-like quantities to forecast the future demand ([Režnar et al. 2016](#)). A novel approach to handle the situation taking into account the decision maker's attitude towards risk and the dispersion of the payoffs connected with particular order quantities is studied in [Gaspars-Wieloch \(2016\)](#). Economic model predictive strategy for the inventory routing problem under demand uncertainty is proposed and illustrated on an industrial gas distribution system ([Nikolakopoulos and Ganas 2017](#)). In planning the electric energy production, strategic decisions have to be made with long term and costly consequences in case of mistakes. A methodological approach based on qualitative multi-criteria modelling method DEX is presented by [Bohanec et al. \(2016\)](#), aiming to provide a transparent and reproducible identification of reliable, rational, and environmentally sound production of electric energy in Slovenia by 2050. The DEX method itself is further studied theoretically in [Mihelčič and Bohanec \(2016\)](#), where the problems with incompletely defined utility functions were considered.

Two papers consider location problems including capacitated p -median problem ([Janošikova et al. 2017](#)) and semi-fair emergency system design problem ([Janaček and Kvet 2016](#)). [Chocholatá and Furková \(2016\)](#) test the regional income convergence of EU regions showing among other also that the convergence process is essentially related to the neighboring regions growth performance. [Tomat and Gradišar \(2017\)](#) deal with usable leftovers in one-dimensional stock cutting, and propose a method that reduces the amount of lost material.

Frequency assignment problems gave rise to several graph theoretical models including numerous versions of graph labeling. As the resulting problems are typically NP-hard on general graphs, it is interesting to provide optimal solutions at least for topologies that may be used as practical communication networks, such as hexagonal lattices and square lattices ([Shao et al. 2016](#)). Convex quadratic programming problem with additional constraint that the problem coefficients are subject to perturbations within given intervals is addressed by [Hladik \(2016\)](#).

All these publications demonstrate that operations research is still a very dynamic area and is still a non-trivial extension of the experimental research. Modelling real life problems, solving the models, evaluation of the results and improving the models is still a process that eventually yields much better understanding of the underlying problems and much better solutions at the final stage. Operations research also demonstrates that bridging the gap between the theory and the practices is a never ending story and needs a continuous effort from both sides ([Fores and Krarup 2013](#)).

We believe that OR is still one of the areas where theory comes closest to the practice. However, huge efforts to attract more researchers, more funding and more PhD students into this area are needed to make operations research further vibrant.

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