Editorial

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As a multi-criteria analysis method, PROMETHEE has a long and fruitful history. Developed in the '80s by Jean-Pierre Brans and his collaborators, many scholars have been using and further refining the method over the years. Today, PROMETHEE is still being used a lot within decision making in research settings but also in business contexts. With the PROMETHEE days, which started in 2014, the applications and further developments on the method are again shared on a regular basis. This special issue is the result of the second PROMETHEE days. The workshop was held in Brussels on the 23rd of January 2015, at the Université libre de Bruxelles (ULB) and organised by Yves De Smet and Cathy Macharis and their respective teams. It gathered 30 participants from nine countries. Twenty-two papers were presented.

During the event, the best paper award (called the Jean-Pierre Brans award) was awarded by the end of the day to Rana Pratap Singh and Hans Peter Nachtnebel for their presentation 'Developing hydropower decision aid on project prioritising applying Visual PROMETHEE – case study from Nepal'.

For the special issue we received nine contributions. They were evaluated by at least three referees. After the refereeing process, four were accepted for publication.

In what follows, a short introduction to the selected papers will be given.

In the paper of Dimitri Van Assche and Yves De Smet, 'FlowSort parameters elicitation based on categorisation examples' a metaheuristic based on a genetic algorithm is developed and tested to determine the technical parameters characterising the FlowSort method (weights, thresholds, profiles, etc.). In addition, the authors address the problem of interval sorting, i.e., the possible assignment of a given alternative to several successive categories.

In the paper of Imre Keseru, Jeroen Bulckaen and Cathy Macharis, 'The multi-actor multi-criteria analysis in action for sustainable urban mobility decisions: the case of Leuven', the MAMCA methodology is shown in a very interesting case study. The MAMCA methodology allows to integrate stakeholders from the very beginning of the decision process and by doing so adds an extra layer to the traditional multi-criteria analysis methods.

The paper by Jean-Philippe Hubinont, 'SMAA-GAIA: a complementary tool of the SMAA-PROMETHEE method' further extends the recent work published about SMAA-PROMETHEE. In this context, the data characterising the multi-criteria problems (both evaluations and preference parameters) are assumed to be subject to uncertainties. The well-known SMAA methodology is used to extend the traditional GAIA visual tool. This work allows to complement sensitivity and robustness tools that are available in the PROMETHEE methodology.

In the paper of Loganathan Anojkumar, Mani Ilangkumaran and Sitheeque Mohamed Hassan, 'An integrated hybrid multi-criteria decision-making technique for material selection in sugar industry', PROMETHEE is integrated with analytic hierarchy process (AHP) and fuzzy analytic hierarchy process (FAHP). The latter are used for the weight elicitation. The integrated method is adapted for selecting the pipe material in sugar industry and the results are contrasted to show the effectiveness of FAHP over the traditional AHP.