
Editorial

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Biographical notes: John Psarras is a Professor of Operational Research and Management Science at the School of Electrical and Computer Engineering of the National Technical University of Athens (NTUA) and the Director of the Management and Decision Support Systems Laboratory (MDSSL) of the NTUA. His main research interests focus on operational research, multiple criteria decision-making and energy economics. He has a very extended research activity in the above fields and has published numerous articles in prominent international journals. He has also an extended consulting experience, having assisted numerous private firms and government organisations to develop innovative and successful business strategies.

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It is our great pleasure to announce the launch of the *International Journal of Multicriteria Decision Making (IJMCDM)* by Inderscience Publishers. The journal aims at publishing high quality original research on all aspects of multicriteria decision-making (MCDM). We think that *IJMCDM* will provide a constructive forum among researchers for developing and exchanging new ideas on multicriteria analysis and decision aid. We would like to thank all the leading researchers in the field that accepted our invitation to take part in this effort as members of the editorial board. With their valuable support and together with the associated editors, we shall do our best to ensure the success of the journal.

Real world decision-making problems are usually too complex and ill-structured to be considered through the examination of a single criterion, attribute, or point of view that will lead to the 'optimum' decision. In fact, such a unidimensional approach is merely an oversimplification of the actual nature of the problem at hand, and it can lead to unrealistic decisions. A more appealing approach would be the simultaneous consideration of all pertinent factors that are related to the problem. However, through this approach two very essential issues/questions emerge: how can several and often conflicting factors be aggregated into a single evaluation model? Is this evaluation model unique and optimal?

MCDM is an advanced field of operations research that has evolved rapidly over the last three decades, in an attempt to address the aforementioned issues. MCDM is devoted to the development and implementation of decision support tools and methodologies to confront complex decision problems involving multiple criteria, goals or objectives of conflicting nature, with respect to the decision-maker's preferences, experiences, and decision-making policy.

To this end, the objective of *IJMCDM* is to act as an international forum for academic researchers who work on MCDM, thus promoting the theory of management science, operations research, decision analysis, as well as their applications in business, management, and engineering. In that regard, *IJMCDM* intends to:

- raise the awareness of importance regarding the exploitation of the MCDM modelling framework
- focus on the excellence in developing MCDM methodologies, models, and techniques to deal with decision-making problems in management and engineering
- provide insights on the latest MCDM developments
- offer a networking forum for academic researchers and practitioners.

The first issue of *IJMCDM* comprises of six papers.

The first three papers were presented at the 69th Meeting of the EURO Working Group 'Multiple Criteria Decision Aiding', which was held in Brussels, on April 2–3, 2009. The meeting, coorganised by Yves De Smet (Université Libre de Bruxelles) and Marc Pirlot (Université de Mons, Faculté Polytechnique) gathered 88 participants coming from 21 different countries. We would like to express our profound gratitude for them.

Sewer sludge is a residue of wastewater treatment plants. Working in the framework of an additive value model, A. Valls, J. Pijuan, M. Schuhmacher, A. Passuello, M. Nadal and J. Sierra assess the risks related to disposing different types of sludge at different types of agricultural soils. A distinctive feature of their approach is in the use of fuzzy rules for assessing the interaction of sludge and soil in complex criteria.

In the second paper, F. Macary, D. Uny and D. Ombredane study the risk of erosion in watersheds of the Norman 'bocage' in France. The spatial aspect of the problem is crucial so that use is made of a geographic information system coupled with ELECTRE III as a decision aiding tool.

The third paper is of methodological nature. Pierre Louis Kunsch considers situations in which alternatives are ranked or scored on different criteria and/or by different experts and little inter-criteria preferential information is available. The proposed method derives a set of rankings of the alternatives, using stochastic weights that take the inter-criteria

information into account. From there, a frequency of occupying each rank can be derived for each alternative.

The fourth paper by B. Roy models and investigates the two fundamental conceptions of decision aiding.

In the fifth paper, D. Giannopoulos and M. Founti propose an improved version of the PROMETHEE multicriteria methodology, which uses the fuzzy sets theory to handle the uncertainty in the decision-making process. The innovative features of the proposed methodological extension are the incorporation of a reliable fuzzy ranking method, which removes the necessity of defuzzification and the adoption of post-ranking uncertainty analysis, applying a satisfaction function on the fuzzy ranking.

In the final paper of this issue, B. Perez-Gladish and B. M'Zali present a ranking method for the appraisal of mutual funds based on their socially responsible performance, which could complement financial information and help socially responsible mutual fund managers and individual and institutional investors in their portfolio selection process. The proposed methodology is based on the popular analytic hierarchy process method.

Sincere thanks must be expressed to all the authors whose contributions have been essential in creating this special issue. We also owe a great debt to those who worked long and hard to review all the submitted papers and contributed to the achievement of this special issue's high standard (more than 30 reviewers). Special thanks should also be given to Dr. Panos Xidonas (*IJMCDM* Associate Editor) for his valuable assistance in our contacts with the authors and his help in the material collection and management.