Editorial

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Biographical notes: Jason Papathanasiou is an Associate Professor at the Department of Business Administration, University of Macedonia, Greece. He obtained his PhD in Operational Research and Informatics and a degree in Physics from the Aristotle University of Thessaloniki. He has worked for a number of years at various institutes and has organised and participated in a number of international scientific conferences and workshops. He has published papers in international scientific peer-refereed journals like the *Environmental Monitoring and Assessment*, *Regional Studies*, *European Journal of Operational Research*, *PNAS* and has participated in many research projects in FP6, FP7, Interreg, Erasmus+ and COST. He also served as a member of the TDP panel and CSO committees of COST and currently serves at the coordination board of the EURO Working Group of Decision Support Systems. His research interests include decision support systems, operational research and multicriteria decision making.

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This *IJDSS* special section includes papers published in the 6th International Symposium and 28th National Conference on Operational Research focusing on 'OR in the digital era – ICT challenges'; an event that took place in the University of Macedonia, Thessaloniki, Greece during 8–10 June 2017, complemented by papers submitted due to an open call. The conference was co-organised by the Department of Applied Informatics of the University of Macedonia and by the Hellenic Operational Research Society (HELORS); about 100 papers were submitted and accepted after a review process. The three guest editors of this section are members of the Euro Working Group on Decision Support Systems (EWGDSS), a working group that has more than 30 years of active history and has strong links with HELORS.

In the first paper in this section, G. Tsaples and G. Fancello discuss about an agent-based model to explore urban policies, pedestrian behaviour and walkability. Their purpose is to use the agent-based methodology both as a research tool to study pedestrian behaviour and as a decision support system for urban authorities aimed to improve the walkability. The model they develop represents a typical urban environment with its citizens/agents performing movements under different means of transport and towards different destinations, under various scenarios.

In the second paper, M. Singh, S.P. Singh, A.K. Sinha and P. Singh report on the development of a decision support tool in order to analyse the avian conservation measures in a semi-arid region. This is nowadays a major concern for researchers because of their obvious scientific and environmental significance. They continue arguing that this is a complex decision making problem since it includes monitoring of the birds, determining the reasons for decline in bird species, and devising conservation strategies. They also present the design and development of an intelligent decision support tool to analyse the avian diversity. They conclude by suggesting measures for effective conservation and management of avian fauna in a semi-arid region.

F. Kitsios and M. Kamariotou consider the implementation of decision support systems crucial in order to sustain a competitive advantage because the business environment is getting more and more turbulent. This is especially the case of small-medium enterprises (SMEs) that face challenges such as the lack of conscious planning, the lack of strategic decision making and sharing information and the fact that it is rather difficult to increase profitability. The aim of their paper is to examine how strategic information systems planning contribute to a greater extent of profitability in SMEs. The results of their work indicate that managers should focus on implementing

situational analysis with greater meticulousness, so that they can implement strategy conception and strategy implementation planning with greater agility compared to current practice.

P. Vogiatzis, G.N. Aretoulis and J. Papathanasiou use the well known PROMETHEE multiple criteria aid method in order to rank Greek construction companies listed in the Athens Stock Exchange using investment ratios. It is widely accepted that the construction sector has always been one of the main developmental branches of the Greek economy. The aim of their study is to firstly evaluate the performance and then rank the four biggest construction companies, listed in the Athens Stock Exchange, using investment ratios; their research focusing on the period from 2004 to 2014. The results show that during the period 2004–2008, leading companies are those which their consolidated financial statements outweigh their corporate financial statements, whereas from 2008 and on when the financial crisis commenced, leading companies are regarded those which their consolidated financial statements are approximate to their corporate financial statements.

In the final paper, G. Aifadopoulou, E. Chaniotakis, I. Stamos, S. Mamarikas and E. Mitsakis present an intelligent decision support system (iDSS) for managing natural and man-made disasters. The DECIDE project, funded by the IPA cross-border cooperation program, has developed, validated and tested under realistic conditions an iDSS for aiding public authorities in safe-proofing and protecting transport networks and operations in case of extreme weather events (EWE) and related natural hazards (NH). The iDSS architecture and main functional characteristics are presented, the system being a web-based, GIS-enabled platform, able to suggest protection and management measures that optimally address occurring events, the affected modes of transport and transport networks and infrastructures.

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