

Editorial Preface

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The issue 2 of the volume 12 is composed by several sub-issues.

The five following papers are published.

The first two papers are selected from the special issue: Recent Trends in Intelligent Decision-Making Approaches for Sustainability Modelling. This special issue was led by Dr. Morteza Yazdani, University of Loyola, Sevilla, Spain. Dr. Yazdani writes:

Recently, the conservation of environment has become indispensable due to the scarcity of natural resources and increasing population. Environmental deterioration and global warming have prompted public concern over sustainability and environmental issues. Such burning issues with legislation forces manufacturers to decrease pollution during the whole production process. Green issues have gained more importance in contemporary globalization. In the current era of sustainable development, energy planning has become complex due to the involvement of multiple benchmarks like technical, social, economic and environmental. This in turn puts major constraints for decision makers to optimize energy alternatives independently and discretely especially in case of rural communities. Real-world decision problems often require the consideration and analysis of a group of factors/attributes/criteria that affect the final evaluation. Therefore, the use of a multi-criteria decision-making (MCDM) approach to solving real-world problems has gained considerable attention in both academia and practice. This issue makes an effort to discuss and address the challenges in conceptualization and implementation of decision-making techniques in the context of green, lean and sustainable engineering, factor identification, quantification, comparison, selection, simulation modelling and analysis, system approach to manufacturing, supply chain, transportation, logistics and operations. Thus, this book aims to collect high-quality papers which apply different MCDM methods for sustainability modelling in diverse engineering applications that address valuable inputs related to sustainability.

Therefore, based on the above foundations, researchers were invited to submit their unpublished novel research papers to rationalize the process of optimal decision-making. In the previously published first issue of the Special Issue, 5 papers were published, and in the current issue, 2 papers from all the received submissions are published. The subsequent section presents a brief discussion on the contributions of the approved two papers focusing to the aim of the Special Issue.

The current issue of the Special Issue approved 2 original contributed articles on out of which the first article mounts a direction to relate mobile e-waste in a closed loop structure for supporting green issues. The paper is based on the generalized interval-valued trapezoidal fuzzy numbers (GIVTFNs) with an application of similarity measure approach to model the previously mentioned rationale. The authors developed a decision support system to prevent the quantity of e-waste by defining significant inadequacy liable for the larger alteration of working mobiles, while second paper focused on the agricultural farmers' injuries of Odisha state in India. Factor analysis followed by step-wise weight

assessment ratio analysis (SWARA) method was used to rank the causes for agricultural accidents. Finally, quality function deployment (QFD) & interpretive structural modeling (ISM) and Matrice d'Impacts Croisés Multiplication Appliquée à un Classement (MICMAC) analysis was also performed.

The topics of the Special Issue raised quite good excitement and curiosity among a number of researchers, thus ascertaining the suitability of decision-making methods for modelling sustainability issues.

The first paper is entitled: “An Integrated SWARA, QFD and ISM approach for Agricultural injuries in India” and authored by: Mr. Debesh Mishra, Dr. Suchismita Satapathy, KIIT, Bhubaneswar, India.

The second paper is entitled: “An investigation tool for mounting sustainable practice- Modeling based on Indian context using GIVTFNs” and authored by: Atul Kumar Sahu, Nitin Kumar Sahu, Guru Ghasidas (Central) Vishwavidyalaya, Bilaspur; Dr. Anoop Kumar Sahu, Madanapalle Institute of Technology & Sciences, Angallu, Madanapalle, Chittoor; Dr. Mridul Singh Rajput, Dr. Harendra Kumar Narang, National Institute of Technology, Raipur, India.

The next two papers are selected from a special issue on Models and Decision Support Systems with Sustainable Approach. The Guest editors for this special issue were Ana Paula Cabral Seixas Costa, Management Engineering Department, Universidade Federal de Pernambuco, Pernambuco, Brasil. This special issue is a selection of extended version of short papers presented during the International Conference on Decision Support System Technologies, 2018, Creta, Greece. The Guest Editors write:

This special issue of the IJDSST on “Models and Decision Support Systems with Sustainable Approach” includes articles selected by the EURO Working Group on the 4th International Conference on Decision Support System Technology - ICDSSST 2018 & PROMETHEE DAYS 2018 held in Heraklion, Crete, Greece, from 22 - 25 May 2018. This edition highlights the potential of applying models and decision support systems in the environmental domain, generating alternatives and supporting decisions that enable economic and social development, without destroying the environment. The 2 articles included in this volume present the importance of modelling and decision support in sustainability. The first article by Charalampos Nikolaos Roukounis, Georgios Aretoulis and T. Karambas, focuses on the evaluation of different areas for the allocation of water aerodromes, between different Greek islands using MCDM. The proposed approach is implemented in the investigation of the potential connection of Greece's second largest city and a transport hub to South-eastern Europe and the Balkans with the Cyclades Islands in the South Aegean Region. The second article by Peter Keenan, uses bibliographic analysis techniques to identify journals and articles in environmental domains that cite Search / Operations Management (OR / MS) journals. The research shows, among other findings, that of the modelling techniques used to treat problems in these domains, MCDM methods are the most cited. Thus, we consider that this special edition contributes to the overall objectives of the International Journal of Decision Support Systems Technology (IJDSST), providing opportunities for further research. We would like to thank the EWG-DSS and the Editor-in-Chief of the IJDSST, Pascale Zarate, for assistance in the realization of this special edition. Finally, we need to thank the authors of the articles and the reviewers for their valuable collaboration. We hope that you enjoy it and you find valuable and useful information for your research and practice in this publication!

The third paper is entitled: “A combination of PROMETHEE and Goal Programming methods for the evaluation of Water Airports Connection” and authored by: C. N. Roukounisa, School of Rural and Surveying Engineering, National Technical University of Athens, Athens, Greece; G. Aretoulis, T. Karambas, Department of Civil Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece.

The fourth paper is entitled: “Bibliographic analysis of operations research citation in the environmental domain” and authored by: Peter Keenan, University College Dublin, Dublin, Ireland.

The fifth and final paper is a regular paper, submitted to the IJDSST and evaluated. It is entitled: “Examining Critical Success Factors of Cloud Computing Adoption: Integrating AHP-Structural Mediation Model” and authored by: Dr. Pragati Priyadarshinee, Chaitanya Bharathi Institute of Technology, India.

As Editor in Chief of the IJDSST, I warmly thank the guest editors of the two special issues included in this volume 12 issue 2.

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