

## Preface

These proceedings of the third edition of EWG-DSS contain extended and revised versions of a set of selected papers submitted and presented at the EWG-DSS research events held in Thessaloniki and Rome in May and July 2013, respectively. These events include the EWG-DSS annual workshop and the EWG-DSS DSS stream organization in the 2013 EURO-INFORMS OR international conference. Both were supported and sponsored by the EURO Working Group on Decision Support Systems (EWG-DSS) and the Association of European Operational Research Societies (EURO), in cooperation with: the Business Administration Department of the University of Macedonia in Greece; SimTech Simulation Technology, Austria; University of Toulouse and the Institut de Research en Informatique de Toulouse (IRIT) in France; the University of Liverpool Management School (ULMS) in the UK; UNINOVA Computational Intelligence Research Group (CA3) in Portugal; School of Management, University of Plymouth in the UK; Instituto de Lógica Filosofia e Teoria da Ciência (ILTC) in Brazil; the University of Namur in Belgium; and the University of Belgrade in Serbia.

The major objective of the EWG-DSS 2013 Workshop in Thessaloniki and of the EURO-INFORMS DSS Stream at the 26th European Conference on Operational Research in Rome was to bring together academics, researchers, practitioners, and enterprises interested in modelling, implementing, and deploying decision support systems for enhancing the decision-making process in different types of environments, considering conceptual as well as applied approaches with emphasis on the impact of DSS in global environments and on exploring new directions for decisions in the Internet age. The scientific areas of interest for selected contributions from these two outstanding events were: decision making using social networks and Web resources; spatial-temporal Web-based decision making; technical, legal, and social aspects of Web-based decision making; group support systems/distributed/collaborative decision making; methods, languages, and tools to support decision making; Web 2.0 systems for decision support and globalization context spatial-temporal decision support systems; knowledge management and decision support systems; knowledge and resource discovery and decision making; business intelligence and data warehousing; and negotiation support systems. This rich variety of themes in the contributions allowed us to present in this edition a high-quality selection of approaches and applied solutions for the implementation of decision-making processes for various global environments. In this context, the selected papers are representative of the current and relevant research activities in the area of OR and decision support systems.

Both 2013 EWG-DSS events, in Thessaloniki and Rome, considered 45 papers presentations, respectively. From the total of 45 papers, 15 papers were selected for publication in this edition on the basis of their content, structure, and presentation qualities. This yields a full-paper acceptance ratio of about 33 %, which enforces the EWG-DSS tradition in preserving a high-quality forum for the EWG-DSS editions. The selection and publication phase of these proceedings considered a triple-blind paper

evaluation method: Each selected paper was reviewed by at least three internationally renowned experts, partially from the EWG-DSS Program Committee of the 2013 research events and partially from external international experts in the field of Decision Support Systems. The editors of this volume are very grateful for the high-level evaluation support from this edition's reviewers.

The EWG-DSS 2013 Thessaloniki Workshop program was enhanced by six keynote lectures, delivered by distinguished invited speakers who are renowned experts in their fields. Their lectures were very interesting and there was a high level of information exchange for further fruitful cooperation among all participants. The Thessaloniki Workshop keynote lectures included:

- Alexis Tsoukias, the University Paris Dauphine, France, with the talk: "What Is a Decision Problem?"
- Francesca Toni, Department of Computing, Imperial College London, UK, with the talk: "Computational Argumentation for Decision Support on the Web"
- Petraq Papajorgji, Canadian Institute of Technology, Tirana, Albania, with the talk: "Model-Driven Architecture in Designing and Developing Complex Agricultural and Environmental Information Systems"
- Robert Kenward, Vice-Chair of IUCN Sustainable Use and Livelihoods Specialist Group, with the talk: "Concepts, Case Studies and Design for Environmental Decision Support: The TESS Project"
- Max Henrion, Chief Executive Officer, Lumina Decision Systems, Inc., with the talk: "Decision Analytics: From Big Data to Clear Decisions with Analytica"
- Giuseppe Lugano and Mafalda Quintas, COST Office Science Officers, Trans-Domain Proposals, with the talk: "COST TDP Pilot: Introducing a Pilot Evaluation Procedure for Trans-Disciplinary Proposals"

This EWG-DSS Springer LNBIP edition includes the following contributions: "A Decision Support Framework for Crisis Management", authored by Daouda Kamissoko, Pascale Zaraté, and Francois Peres; "Spatio-Temporal Decision Support System for Natural Crisis Management with TweetComp1", authored by Stuart E. Middleton, Andrea Zielinski, Öcal Necmioğlu, Martin Hammitzsch; "Near Real-Time Decision Support for Disaster Management: Hurricane Sandy," authored by Tina Comes; "A Web-Based Decision Support System for the Capacitated Facility Location Problem", authored by Jason Papathanasiou, Nikolaos Ploskas, and Nikolaos Samaras; "A Web-Based Decision Support Platform for Multidimensional Modeling of Complex Engineering Systems", authored by Mariam Nouh, Ahmad Alabdulkareem, Waleed Gowharji, Anas Alfaris, and Abel Sanchez; "Purchase Decision Processes in the Internet Age", authored by Sahar Karimi, K. Nadia Papamichail, and Christopher P. Holland; "Dynamic Process Building to Support Business Process Exception Management with the BEM Framework", authored by Isabelle Linden, Myriam Derbali, Gabriel Schwanen, Jean-Marie Jacquet, Ravi Ramdoyal, and Christophe Ponsard; "An Agent Architecture for Concurrent Bilateral Negotiations", authored by Bedour Alrayes and Kostas Stathis; "Integrating Environmental Policies into Business Strategy: A Framework for Decision Support", authored by Maria de Fátima Teles and Jorge Freire de Sousa; "A Web-Based Decision Support System for Supply Chain

Operations Management in an Automotive Industry”, authored by Joel Carvalho, Leonilde Varela, Goran Putnik, Jorge E. Hernández, and Rita Ribeiro; “Optimal Strategies of Risk-averse Dual-Channel Supply Chain with Consumer Returns”, authored by Lin-Lin Zhang and Zhong Yao; “Scaling Issues in Additive Multicriteria Portfolio Analysis”, authored by Adiel Almeida, Rudolf Vetschera, and Jonatas Almeida; “A New Fuzzy Multicriteria Decision Making Approach: Extended Hierarchical Fuzzy Axiomatic Design Approach with Risk Factors”, authored by Hacer Guner Goren and Osman Kulak; “A DSS for Resolving the Importance of Criteria Using a Flexible Elicitation Procedure”, authored by Adiel Almeida, Ana Paula Costa, Jonatas A. Almeida, and Adiel T. De Almeida-Filho; and “Robustness Analysis in Multicriteria Disaggregation – Aggregation Approaches for Group Decision Making”, authored by Denis Yannacopoulos, Athanasios Spyridakos, and Nikos Tsotsolas.

We would like to take this opportunity to express our gratitude to all those who contributed to the EWG-DSS research events in 2013, including authors, reviewers, Program Committees and institutional sponsorships. Finally, we hope you will find all the addressed contents of this EWG-DSS LNBIP edition useful and interesting for your own research activities.

July 2014

Fátima Dargam  
Jorge E. Hernández  
Pascale Zaraté  
Shaofeng Liu  
Rita Ribeiro  
Boris Delibašić  
Jason Papathanasiou

Decision Support Systems III - Impact of Decision  
Support Systems for Global Environments  
Euro Working Group Workshops, EWG-DSS 2013,  
Thessaloniki, Greece, May 29-31, 2013, and Rome, Italy,  
July 1-4, 2013, Revised Selected and Extended Papers  
Dargam, F.; Hernández, J.E.; Zaraté, P.; Liu, S.; Ribeiro,  
R.; Delibasić, B.; Papathanasiou, J. (Eds.)  
2014, XVIII, 181 p. 65 illus., Softcover  
ISBN: 978-3-319-11363-0