

## GUEST EDITORIAL PREFACE

# Special Issue on Prediction, Simulation and Optimization Methods for Decision Making

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This IJDSST Special Issue on “Prediction, Simulation and Optimization Methods for Decision Making” includes extended and revised versions of papers selected from the 25<sup>th</sup> EURO Conference – DSS Stream, complemented by open call submissions from members of the EWG-DSS / EURO Working Group on Decision Support Systems. The 25<sup>th</sup> EURO Conference was held between 8<sup>th</sup> and 11<sup>th</sup> July 2012 in Vilnius, and the DSS Stream was organised by the EWG-DSS.

As guest editors of this Special Issue, we are extremely proud to confirm that this publication’s initiative has reached its main objective of gathering high quality research papers, devoted to the development of new approaches to decision making and decision support, covering approaches that include prediction and optimization methods, as well as simulation experiments and collaborative decision systems.

The main focus of this IJDSST Special Issue was to exploit web-platforms and methods, offering support to preventive and collective decision making processes. The 4 papers included in this Special Issue address the key issues of the topic from different perspectives. The first paper, by Leonid Kirilov, Vassil Guliashki, Krasimira Genova, Mariana Vassileva and Boris Staykov, presents the WebOptim decision support system, which offers support to solve multiple-objective optimization problems in a platform characterised by user-independence, multisolver-admissibility, method-independence, heterogeneity, as well as web-accessibility. In the second paper, Martin Winter, Felix Riedel, Felix Lee, Rudolf K. Fruhwirth, Florian Kronsteiner, Herwig Zeiner and Heribert Vallant describe their decision support system, which helps to avoid critical events by monitoring potential hazards and by recommending preventive measures in

sub-surface drilling environments. The third paper, authored by Abdelkader Adla, proposes to use multi-agents systems to model cooperative decision support systems. Finally, Tanja Feit and Ulrike Leopold-Wildburger present, in the fourth paper of this issue, their simulation experimental study on how people are influenced by olfactory stimulation while solving an economic problem.

We are very proud to have included in this IJDSST Special Issue a set of four high quality and interesting pieces of research, authored by experienced professionals and their teams, from different research institutions across the

continents. Editing this Special Issue was a great pleasure for us. We hope that you also enjoy as much reading it and that you can eventually refer to its contents in further research projects. Last, but not least, we would like to express our gratitude to the reviewers of this Special Issue, for their collaboration and their top-rated feedback.

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*Fátima Dargam is a senior IT professional at SimTech Simulation Technology, where she works on research and development of software for computer-based simulation since 1995. She is a founding member (1989) and Coordinator of the EURO Working Group on Decision Support Systems (EWG-DSS) since 2007. She cooperates as senior researcher with the Research Institute ILTC, in Rio de Janeiro - Brazil since 1988. Dr. Fátima Dargam holds a Ph.D. in Computer Sciences from Imperial College London – University of London (1996); a M.Sc. in Artificial Intelligence from Instituto Militar de Engenharia (IME), Rio de Janeiro (1989); an Engineering degree in Electronics from Universidade Santa Ursula (USU-RJ) (1983); and a B.A. in English from USU-RJ (1983). Fátima's research interests reside mainly in the development of intelligent, distributed and cooperative web-based decision support systems for various applications; bridging the areas of knowledge management and decision making. In those areas she has been engaged in research for the last 20 years. She is Associate Editor of the Journal IJDSST and belongs to the Editorial Board of the Journals: IJDSST, IJDSS, and IJASCA. She regularly acts as reviewer as well as guest-editor for several international Journals related to the area of Decision Systems. Fátima Dargam also serves as project reviewer for the European Commission as expert in the area of DSS.*

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## REVIEWERS OF THIS SPECIAL ISSUE

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