

GUEST EDITORIAL PREFACE

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

Fátima Dargam, ILTC, SimTech Simulation Technology, Graz, Austria

Shaofeng Liu, School of Management, University of Plymouth, Plymouth, UK

*Isabelle Linden, Department of Business Administration, University of Namur (FUNDP),
Namur, Belgium*

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

Fátima Dargam
Shaofeng Liu
Isabelle Linden
Guest Editors
IJDSST

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.

Shaofeng Liu is Professor of Operations Management and Decision Making at the University of Plymouth, UK. She obtained her PhD degree from Loughborough University, UK, specialising in Knowledge and Information Management for Global Manufacturing Co-ordination Decisions. Her main research interests and expertise are in knowledge-based techniques to support business decision making, particularly in the areas of knowledge management, integrated decision support, ERP systems and quantitative decision methods for lean operations, process improvement, resource management, quality management, and supply chain management. She is currently supervising 7 PhD students in above research areas. She has undertaken a number of influential research projects funded by UK research councils and the European Commission. She has published over 80 peer-reviewed research papers including 50 journal articles, 5 book chapters, 23 conference papers, and editorial for 6 journal Special Issues and 5 conference/workshop proceedings. She is currently an Associate Editor for the Journal of Decision Systems and on the Editorial Board for the International Journal of Decision Support Systems Technology. She conducts regular review for 3 research councils and 10 international journals.

Isabelle Linden is Professor of Information Management at the University of Namur in Belgium, Department of Business Administration. She obtained her Ph.D. in Computer Sciences from the University of Namur (2007) with a dissertation studying Temporal Coordination Languages. She also holds a M.Sc. in Philosophy (1999) and a M.Sc. in Mathematics (1995) from the University of Liège, Belgium. She is member of the CoordiNam Laboratory and the FoCuS Research Group. Combining theoretical computer science and business administration, Isabelle Linden's main research domain regards Information, Knowledge and Artificial Intelligence. She explores their integration within systems as Enterprise Information Systems, Decision Support Systems and Business Intelligence systems. She was involved in several research projects founded by the Walloon Region where her team was in charge of the conception of intelligent modules. Currently, 4 Ph.D. students are leading their research under her supervision. The work of Isabelle Linden can be found in several international edited books, journals, books chapters and conferences. She serves as reviewer and program committee member in several international journals, conferences and workshops.

REVIEWERS OF THIS SPECIAL ISSUE

Ana Rosa Borges, INESC Coimbra, Portugal

Bernd Brandl, The University of York, UK

Jacques Calmet, Karlsruhe Institute of Technology, Germany

João Clímaco, Faculty of Economics University of Coimbra, Portugal

Fátima Dargam, ILTC, Brazil & SimTech Simulation Technology, Austria

Boris Delibašić, University of Belgrade, Serbia

Jorge Hernandez, University of Liverpool, UK

Isabelle Linden, University of Namur, Belgium

ShaofengLiu, University of Plymouth, UK

Jason Papathanasiou, University of Macedonia, Greece

Stefan Pickl, Universität der Bundeswehr München, Germany

The guest editors of this Special Issue wish to acknowledge their gratitude for the prompt and highly constructive reviews received from the researchers above in the various phases of this Issue's reviewing process.