Editorial

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Biographical notes: Hatem Masri is an Associate Professor at the College of Business Administration, in the University of Bahrain, Kingdom of Bahrain. He received his PhD in Management in 2004 and Master in Operations research in 1999 from the University of Tunis, Tunisia. His research interests include stochastic programming, multiple objective stochastic programming, supply chain management, financial engineering, vehicle routing problems. His research has been published in several international journals (*EJOR*, *FSS*, *IJAR* …) and funded by the University of Tunis, the University of Nizwa and the University of Bahrain. He is a member of the International Society on Multiple Criteria Decision Making, IEEE, Tunisian Decision Aid Society and Tunisian Management Sciences Society.

This special issue includes 20 papers selected among the best contributions to the International Conference on Modeling, Simulation and Applied Optimization (ICMSAO'13), that took place in Hammamet, Tunisia, from 28 to 30 April 2013. The ICMSAO'13 is the fifth of the series of conferences and provides an international forum for presentations and discussion of research in all areas of science, business and engineering involving the modelling and simulation of processes and systems. The first conference was held at the American University of Sharjah (UAE) in 2005, the second was held at the Petroleum Institute in Abu Dhabi (UAE) in 2007, the third was held again at American University of Sharjah in 2009 and the fourth was organised in Kuala Lumpur, Malaysia in 2011. The 2013 edition of the conference is organised by the Tunisian Decision Aid Society with the co-sponsorship of the IEEE Tunisia section and the IEEE SMC Tunisia chapter.

The ICMSAO'2013 received 415 papers, and after a long peer review process by international reviewers, 199 were accepted to be presented in the conference programme. Authors with the best paper reviews were invited to submit an extended version of their papers for this special issue. Three criteria were required for the selection which is, originality, relevance and technical contribution. At the end of the careful peer review process, the accepted papers for this review were the ones agreed upon by the reviewers. I hope that this special issue will represent a solid reference for the readers and thus manage to present an authentic material for those who are willing to do researches in the field of modelling and applied optimisation in business and engineering.

The following accepted papers include both theoretical and application research works from very diversified areas related to business and engineering:

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1 ‘Effects of probable inflation on a two-warehouse partial backlogging inventory model with permissible delay in payment for deteriorating and imperfect items’

Milad Abdoli, Abolfazl Mirzazadeh and Mohammad Mohammadi

2 ‘An integrated genetic algorithm approach to 1D-cutting stock problem’

Jaya Thomas and Narendra S. Chaudhari

3 ‘Improved performance of digital filters approximation’

Lahcène Mitiche and Amel Baha Houda Adamou-Mitiche

4 ‘Solving a load balancing problem with a multi-objective particle swarm optimisation approach: application to aircraft cargo transportation’

Nadia Dahmani and Saoussen Krichen

5 ‘Arnoldi model reduction for switched linear systems’

Kouki Mohamed, Abbes Mehdi and Mami Abdelkader

6 ‘Optimal approximants for MIMO model reduction systems using genetic algorithms’

Amel Baha Houda Adamou-Mitiche, Lahcène Mitiche and Mohamed Lamine Hebchi

7 ‘Scheduling of multiple projects with constrained resources and preemption’

Carlos A. Salazar-García, Jairo R. Montoya-Torres and Edgar H. Alfonso-Lizarazo

8 ‘An interval linear programming approach for portfolio selection model’

P. Kumar, G. Panda and U.C. Gupta

9 ‘Comparison of multi-criteria decision methods through a ranking stability index’

Mbarka Selmi, Tarek Kormi and Nizar Bel Hadj Ali

10 ‘Solving the bilateral group selection problem using optimal stopping options’

Sihem Ben Jouida, Hajer Ben Romdhane and Saoussen Krichen

11 ‘A new method to detect and remove a beard from 3D human face model’

Rokaya Dhahri and Samir Belaid

12 ‘One-hour-ahead wind power forecast using hybrid grey models’

Ahmed H. Osman, Mohamed S. Hassan, Fatemeh Marzbani and Taha Landolsi

13 ‘A multiobjective interval goal programming method using penalty function’

Shyamal Sen

14 ‘A consistent test for unit root against fractional alternative’

Ahmed Bensalma

15 ‘Relative efficiency of hardware retail stores chains in Canada’

Pawoumodom Matthias Takouda and Mohamed Dia

16 ‘Energetic parameters in approximation of discrete systems: a MIMO extension problem’

Amel Baha Houda Adamou-Mitiche and Lahcène Mitiche

17 ‘Non-smooth singular Newton’s method for positive semidefinite solution of nonlinear matrix equations’

Boubakeur Benahmed, Khadra Nachi and Adnan Yassine

18 ‘Human factor modelled by fuzzy logic in preventive maintenance actions’

María Agustina Segura, Sophie Hennequin and Brigitte Finel

19 ‘Optimisation techniques for planning the petrol replenishment to retail stations over a multi-period horizon’

Chefi Triki and Nasr Al-Hinai

20 ‘Supplier selection criteria and methods: past, present and future’

Krishnendu Mukherjee

I would like to thank all the authors for their efforts to submit high quality papers as well as the international referees for their relevant comments and suggestions that improved the quality of this special issue. I would also like to thank the Editor-in-Chief of the *International Journal of Operational Research*, Professor Angappa Gunasekaran, the journal editorial board and Inderscience Publishers for the opportunity to publish this special issue. Finally, I would further like to thank the Tunisian Decision Aid Society members for their efforts in organising the ICMSAO’13.