Editorial

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Biographical notes: Fouad Ben Abdelaziz is a Professor at Rouen Business School, France. He received his PhD in Operations and Decision Systems from Laval University, Canada in 1992. He has been working at the University of Tunis, the American University of Sharjah UAE, and visiting many universities around the world, including the University of Paris 6, France, and the American University of Beirut, Lebanon. He is a leading Researcher in multiobjective stochastic optimisation. He was among the first to propose solutions to the combinatorial multiobjective problems. His actual research interests are in R&D games and in modelling the coalition formation problem in supply chain management. He has consulted for the Tunisian chemical industry for many years and was appointed as an Assessor for the Dubai Business Award for the year 2006.

This special issue of *IJEME* is dedicated to selected and refereed papers presented at the Second International Conference on Engineering Systems Management & Applications (ICESMA 2010), held at the American University of Sharjah, UAE, 30 March to 1 April 2010. Among the 13 submitted papers, eight are accepted and presented in this issue.

The paper by Raid Al-Aomar and Mahmoud Awad presents an approach to analyse the patient no show rates to reduce the cost of no shows along with the application of several overbooking strategies. A dynamic discrete event simulation model is developed to enhance performance.

Asma Fekih, Olfa Jellouli and Atidel Boubaker Hadj-Alouane propose a new methodology based on genetic algorithms and learning by partial injection of sequences to solve the flexible job shop scheduling problem. Their algorithm provided good solutions in a reasonable time.

The paper by Tarik Aouam introduces two formulations for assemble-to-order (ATO) systems based on clearing functions. An important planning issue is the trade off between capacity utilisations and component inventory holding cost in order to meet uncertain demand. The formulations deal with both certain demand and uncertain demand showing that high costs are endured with uncertain demand due to lack of information about probability distribution of the demand. The model is illustrated using a real case.

Nadine J. Ghandour and Mohamad Diab study the effect of military spending on development opportunities. They conclude that spending on human development and education is one of the most important development opportunities along with healthcare and other sectors in the economy. They also concluded that military spending should be optimum to achieve the objectives which are security, stability, stimulating economic growth and creating favourable environment for attracting investments.

The paper by Nacira Ghoualmi-Zine and Rachid Mahmoudi applies spanning trees algorithm in topological conception in wireless and connected networks to cover all nodes in order to minimise diffusion. The authors propose new genetic operators for the degree constrained minimum spanning tree problem to find the minimum weight while satisfying requirements.

Issam Zidi, Kamel Zidi, Khaled Mesghouni and Khaled Ghedira address the dial a ride problem (DRP) using the simulated annealing algorithm. Their aim is to offer an alternative to displacement optimised individually and collectively. Their tests show competitive results on benchmarked datasets while improving processing times.

The paper by Nasser Al Jurf and Salwa Beheiry studies the main causes and consequences of cost and schedule deviations of construction projects in Qatar. The study indicated that over 85% of projects were deviated from cost and schedule mainly due to the material delay. Other causes included design changes, labour changes, deficient estimation and cash flow planning.

Issam M. Srour, Ghassan R. Chehab and Nicolas Gharib paper identifies, assesses and documents the existing level of sustainability practices awareness amongst the different participants in the Lebanese construction industry. The analysis, based on a survey, showed that there was an acceptable level of awareness but lack of implementation practices which was limited to green design efforts and uncoordinated attempts to recycle construction demolition materials. The paper concludes by providing recommendations on how to further improve the awareness and overcome some of the obstacles preventing higher recycling rates.

The contributions in this issue address diversified topics while providing an idea about the wide range of the engineering management field. I hope that this issue will be beneficial for the *IJEME* community.

Note: I would like to thank Noha Tarek Amer, my research assistant in the American University of Sharjah, for helping me in arranging the special issue.