# Editorial

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**Biographical notes:** Maqsood Ahmad Sandhu is the Head of Business Administration Department at the College of Business and Economics, United Arab Emirates University. He earned his PhD from Swedish School of Economics and Business Administration in Management. He has over 20 years experience in academia and industry. He has been very active in initiating collaborative partnerships amongst academia, industry and policy making bodies. He is the author or co-author of over 30 international journals articles and has presented and or published over 60 papers in international conference proceedings. Currently, he is interested in doing research in the areas of project management, supply chain management and international business.

Alberto G. Canen is a Professor in the Department of Production Engineering at COPPE/Federal University of Rio de Janeiro. He has been a Visiting Professor at the University of Glasgow. He has also been a Visiting Professor at the University of Zagreb and at Kaunas University of Technology. Currently, he is the Vice-President of the International Centre for Innovation and Industrial Logistics (ICIIL). His main research interests are on logistics/supply chain management with multicultural aspects. He has wide experience of working in industrial organisations as well as being a consultant.

Goran Dukic is currently an Associate Professor at the Industrial Engineering Department, UNIZAG-FSB, teaching various courses from the fields of logistics and industrial engineering at undergraduate, graduate and postgraduate studies. He is a member of international board of International Centre for Innovation and Industrial Logistics (ICIIL), and was Chairman of International Conference of Industrial Logistics (ICIL) 2012 and Editor of ICIL 2012 proceedings, as well as co-editor of several other conference proceedings. His research interests are mainly from warehouse and material handling system design and operations.

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This special issue presents selected papers from the conference ICIL 2012, held in Zadar, Croatia from June 14–16, 2012, hosted by the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb and by the International Centre for Innovation and Industrial Logistics.

The International Centre for Innovation and Industrial Logistics (ICIIL) is a non-profit professional association which has for some time been developing an integrated view of Industrial Logistics, as well as sharing and exchanging ideas and research results among students, researchers, academics and industrialists. The biannual International Conference on Industrial Logistics (ICIL) is its main means of attaining these objectives worldwide. It has moved from Rennes (France) 1993 to Ouro Preto (Brazil) in 1995, Chico (USA) in 1997, St. Petersburg (Russia) in 1999, Okinawa (Japan) in 2001, Vaasa (Finland) in 2003, Montevideo (Uruguay) in 2005, Kaunas (Lithuania) in 2006, Tel Aviv (Israel) in 2008, Rio de Janeiro (Brazil) in 2010 and Zadar (Croatia) in 2012.

The ICIL 2012 conference featured a multidisciplinary programme which included original research results, together with developed concepts, ideas and real life case study examples as contributions in the fields of logistics and supply chain management (SCM). Those were geared towards promoting the understanding of and solutions to the evolving logistics challenges all over the world. After a blind review process, 63 papers from 21 countries and five continents were published in the conference proceeding and were presented in nine technical sessions by more than 50 authors. This shows the inherent cultural diversity of the conference, bringing together multicultural contributions from so many regions. These papers were again evaluated, bearing in mind the present volume of *IJLSM*. The present issue contains eleven of those articles, both theoretical and practical, which deal with the improvement of logistical operational management in a wide range of industries. It is hoped that the publication of this selection will augment the benefits of the conference at which they were first presented.

The first paper by Markus Gerschberger and Romana Traxler entitled ‘Benchmarking external product variety in the Austrian agricultural industry’, deals with external product variety management in value networks. It features a benchmark study using data from the Austrian agricultural sector and it shows the development of external variety in proportion to financial parameters in a case company over the last ten years. It outlines the existing and planned variety management approaches in the case company.

The second paper by Tadeusz Sawik entitled ‘Selection and protection of suppliers in a supply chain with disruption risks’, considers the selection and protection of part suppliers and order quantity allocation under disruption risks. A portfolio approach and a mixed integer programming with conditional value-at-risk are applied to control the risk

of worst-case cost. Numerical examples are presented and some computational results are reported.

The third paper by Alberto Gomez, Arif Imran and Said Salhi entitled 'Solution of classical transport problems with bee algorithms', presents an analysis of the results obtained by applying a bee meta-heuristic to a classic CVRP problem. Applying a variation of the ABC bee algorithm to the classical transport problem showed its capacity to find high quality solutions for the difficulties of vehicle routing. Some drawbacks were also identified as requiring future research.

The fourth article by Ingrid Göpfert and Wanja Wellbrock is entitled 'The development process for innovative concepts in supply chain management'. This paper analyses the suitability of existing SCM concepts to resolve present problems and also to meet the imminent challenges in SCM. It analyses how far the concepts related to the optimisation of supply chains contribute to attaining the objectives set by the SCM. It also discusses how they can be adapted for future supply chain challenges. Based on an analysis of the survey results from some German companies, the paper concludes that the development of innovative solutions for SCM will become a crucial competitive factor.

The fifth contribution is by Katharina Winter and Uwe Clausen. This paper, which is entitled 'Development of a model for the tactical identification of prospective clients in multiuser warehouses', presents a decision model aimed at supporting the process of finding new contracts in multiuser warehouses operated by third party logistics providers (3PLs). Based on three checks of the different characteristics and requirements of prospective products, this model can arguably help to make decisions about active tenders, and supply advice for proactive acquisitions without great effort on the part of the salespersons. This allows them to concentrate on the main acquisition.

The sixth paper by Marianna Jacyna is entitled 'Cargo flow distribution on the transportation network of the national logistic system'. It presents the model of a national logistics system in Poland, focusing on transport modality. Its aim is to allow for a rational distribution of flows in the transport networks, by highlighting some variants related to specific criteria. The model therefore shows the impact of strategic decisions on cargo distribution.

The seventh paper named 'Chosen aspects of logistics network design method for production service companies' by Ilona Jacyna-Gołda, presents a method of designing logistics network for manufacturing companies in such a way as to minimise the cost of servicing, whilst meeting manufacturing companies' requirements within the technical and economic potential of the providers of logistical services. The model itself was built to take account of specificities of both manufacturing companies and logistical network structures.

The eighth paper by Amanda Jane Marshall-Ponting, Khairy A.H. Kobbacy, Stelios Sapountzis and Michail Kagioglou entitled 'A multi-faceted approach to optimising a complex unplanned healthcare system', discusses the development of a multifaceted approach towards both the study and the optimisation of an unscheduled and urgent healthcare system. The proposed approach is to integrate four different methodologies in order not only to gain a better understanding of the nature of the system, but also to develop ways to enhance its performance.

The ninth paper by Bartosz Sawik also deals with problems in healthcare. The paper entitled 'A single and triple-objective mathematical programming models for assignment of services in a healthcare institution' presents models for the optimal allocation of

workers among the supporting services in a hospital. The applicability of the developed models was tested with authentic data and the paper also offers examples and results.

The tenth paper entitled 'Optimal preventive and corrective maintenance for equipment with Erlangian life-time distribution' written by Raymond A. Marie, deals with decision-making problems in the maintenance of important systems located on some operational sites far away from logistic support forces. Assuming an *Erlang k* distribution of equipment's life-time, the developed model proposes a preventive maintenance policy within a calculated optimal preventive period and calculates its cost.

The final contribution by Maria Cristina Fogliatti de Sinay, Laura Sinay and Isolina Cruz entitled 'Ports dredging licensing process. A case study in two Brazilian ports: Porto de Santos and Porto de Paranaguá', deals with the process of licensing dredging services which have to perform various important tasks in the access canals of ports, while at the same time fulfilling strict requirements subject to complex studies. The paper presents both the process of licensing and the benefits achieved in two Brazilian ports.

The editors would like to thank all the authors who submitted their extended papers for this special issue. Gratitude is also expressed to the anonymous reviewers, who have kindly provided their assistance and expertise. Special thanks are extended to the Editor-in-Chief, Professor Angappa Gunasekaran, who kindly invited us to edit this special issue of the *IJLSM*.

We trust you will enjoy this issue.