Editorial

S.P. Anbuudayasankar

Department of Mechanical Engineering,
Amrita Vishwa Vidyapeetham,
Coimbatore 641 112, Tamil Nadu, India
E-mail: spanbu@yahoo.com

K. Ganesh*

Supply Chain Management – Center of Competence,
McKinsey Knowledge Center,
McKinsey & Company, 8th Floor, DLF City Phase 1,
DLF Plaza Tower, Gurgaon 122022, Haryana, India
E-mail: koganesh@yahoo.com
*Corresponding author

Rainer Leisten

Department of Mechanical and Process Engineering,
University of Duisburg-Essen,
Bismarckstr. 90, 47057 Duisburg, Germany
E-mail: rainer.leisten@uni-due.de

Immanuel Edinbarough

Department of Applied Technologies,
The University of Texas at Brownsville,
Brownsville, TX 78712, USA
E-mail: Immanuel.Edinbarough@utb.edu

Biographical notes: S.P. Anbuudayasankar is an Associate Professor in Mechanical Engineering Department at the School of Engineering, Amrita Vishwa Vidyapeetham, Coimbatore, India. He holds a Bachelor in Mechanical Engineering, a Master in Industrial Engineering, a Management degree in Production and a PhD in Supply Chain and Logistics. His main research interests include optimisation and greening the supply chain location and allocation problems. He has published several papers in leading research journals and conferences and in the editorial team of many international journals.

K. Ganesh is currently working as a Knowledge Specialist at Supply Chain Management – Center of Competence, McKinsey Knowledge Center, McKinsey & Company, Gurgaon, India. He holds a Doctorate from Indian Institute of Technology Madras, Chennai, India. His research interests lie in the application of heuristics, meta-heuristics, multivariate statistical techniques and multi-criteria decision-making tools to logistics and supply chain management. His consulting exposure includes supply chain network and inventory

optimisation. His teaching interests include combinatorial optimisation, green supply chain, knowledge management and balanced scorecard. He has published several papers in leading research journals such as the *European Journal of Operational Research*, *International Journal of Systems Science* and *International Journal of Advanced Manufacturing Technology*.

Rainer Leisten is a Professor of Business Administration and Operations Management in the Faculty of Engineering, University of Duisburg-Essen, Germany. He received his Diploma (Master) in Mathematics and PhD in Business Administration from the University of Cologne as well as the German Post-doc degree (Habilitation) in Business Administration from the University of Heidelberg. His main research interests include supply chain management, aggregation and complexity in production planning, scheduling, and production and operations management.

Immanuel Edinbarough is a Professor at the University of Texas at Brownsville. He is a hands-on manufacturing expert and educator who have worked in several areas of engineering, manufacturing, and technical management including research, design, and production of mechanical, electronic, and electromechanical systems. He has participated, managed, and coordinated a wide variety of multidisciplinary industrial and government programmes in advanced manufacturing systems, automation, robotics, quality improvement, and technology transfer. He is also a recognised expert in areas including managing the design-manufacturing, product design, design for manufacture, rapid prototyping, CNC machining, designed experimentation, and visual factory management. His other areas of interest include microsystems, MEMS, nano manufacturing, artificial intelligence, mechatronics, machine vision, remote manufacturing and robotics and automation and engineering technology education. Currently, he is serving as the Associate Dean of the College of Science, Mathematics, Engineering and Technology at the University of Texas at Brownsville.

In a fervently competitive environment, customer satisfaction is the most significant parameter for judging the successfulness of an enterprise. Day by day, the emergence of new tools and techniques help enterprises to achieve the same. The emergence of simulation and optimisation for solving complex and combinatorial problems in manufacturing systems and supply chains is one of the most prominent achievements in the field of operations research. The principle reason behind this is that problem-solving under uncertainty has a very high impact on real world contexts. In addition to this, complex and combinatorial problems arising in practice are becoming increasingly complex and dynamic. Simulation and optimisation in manufacturing systems and supply chains is therefore a critical area that is being developed and which needs much attention.

The main objective of the special issue is to focus on the application of simulation and optimisation in solving various issues in manufacturing systems and supply chains. Accordingly, this special issue is aimed at meeting the challenges posed and overcoming the existing gaps. It includes state-of-the-art manufacturing and services industries on some critical research trends pertaining to simulation and optimisation in manufacturing systems and supply chains. The papers of this special issue have real value relevance, be primarily focused on real time implementation and the target audiences of this special issue are researchers, managers, practitioners and consultants.

We are delighted to offer six articles in this issue of the *International Journal of Logistics Economics and Globalisation* to address these matters.

Business process reengineering (BPR) necessitates fundamental rethinking of the way we do the work, simultaneously understanding and measuring the existing process while implementing BPR is crucial. In the first paper, Olawumi Dele Awolusi investigates the effectiveness of the critical success factors of BPR on customer services in the Nigerian banking industry. The author conducted the empirical study through questionnaires to a randomly selected junior and senior staff of the Central Bank of Nigeria. His analysis reveals that successful BPR can positively affect customer services in Nigerian banks.

It is imperative to look into the expansion of the transportation of the medicine in view of the fact that Indian pharmaceutical industry is one of the fastest growing sectors of Indian economy. In the second paper of this issue, Sandeep Puri and Jayanthi Ranjan highlight the importance of providing the right medicine to the right patient at the right time, right place and at right dosage and most importantly at the right price. The authors discussed about the major challenges in pharmaceutical logistics and thrash out suitable managerial implications. Based on both field visits and secondary data they stressed upon the adoption of innovative logistics solutions specifically designed for Indian market conditions.

The third paper of the issue is also about the logistics by Reshma Farhat but focuses on food supply chain. The author focuses on the application of information and communication technologies and various factors affecting the performance of the logistics management system in farm sector in India. The author's aim is to provide the conceptual study of the logistics in the farm sector in India and impact of ICTs in improving the efficiency to its various stakeholders such as input dealers, farmers, food processors, wholesalers, retailers and the government functionaries for taking proper decisions. They also developed a framework for key performance indicators to measure its performance and the effectiveness.

Customisation accommodates and integrates cultural flows since they are unavoidable. This is revealed in case of the products they use particularly when a new system is introduced. In the fourth paper, Bijan Aryana and Casper Boks claim that customisation can be positioned in different phases of a product lifecycle and it can be even continued during the use of a product. They considered Iran and Turkey to study on first time users of smart phones in their markets. The authors used many tools like interviews, group study, usability evaluation, etc., and found that there are some country specific needs and usability problems which may need country specific customisation.

Sustainability of a business depends upon the concern and importance shown on the stake holders of the system. Being in rural areas they cannot be deprived from given opportunities to get served. The authors, Sanjay Mohapatra and Neha Agarwal, of the fifth paper argue that the need of the hour is to provide a beneficial and easy to use technology for the people, particularly in rural areas. The authors considered the rural areas in the state of Odisha, India to analyse the needs of different stakeholders. The result of their study is suggestion of a business model, detailed ROI calculations for all the stakeholders in the value chain and a road map for implementing the model.

Disposal of hazardous and toxic wastes has become a challenge since it is not only important to take care for a shorter period but a long term perspective is involved in decision making. Selection of the transportation system is equally crucial. The authors, Golam Kabir and Razia Sultana Sumi, of the sixth paper proposed a selection procedure integrating fuzzy Delphi with graph theory and matrix method for a hazardous industrial waste transportation firm. Their proposed approach was validated in an automotive battery manufacturing company.

We hope that our readers are able to benefit as much from the work of these impressive researchers and practitioners as we have. Our team welcomes comments and suggestions from our visitors, and greatly appreciates your feedback. We look forward to building on this special issue with many more issues over the coming years, as we engage in productive dialogue that confronts the dynamic social science challenges faced in today's world.