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## Editorial

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**Biographical notes:** P. Sasikumar is pursuing his PhD in the Department of Production Engineering at National Institute of Technology, Tiruchirappalli. He has a Master's degree in Industrial Engineering and a Bachelor's degree in Mechanical Engineering. He is also a university rank holder in PG Programme. He has 11 years of teaching and research experience. His research interests are reverse logistics, logistics and supply chain management, vehicle routing, multi-criteria decision making, non-traditional optimisation techniques. He has published nearly 20 research papers in the referred international journals and more than 15 papers in the international and national conference proceedings.

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A *supply chain* is the system of organisations, people, technology, activities, information and resources involved in moving a product or service from supplier to customer. Supply chains exist in both service and manufacturing organisations, although the complexity of the chain may vary greatly from industry to industry and firm to firm. In the new millennium, the structure of supply chain is undergoing rapid transformation due to market pressures which demand higher quality and lower prices. This has led to the emergence of new paradigms in the area of SCM like collaborative relationship, logistics, outsourcing, information sharing, life cycle engineering, vehicle routing, reverse and green supply chain management. Keeping this in mind, this special issue seeks to highlight the research and practices on *Modelling and analysis of supply chain network*.

I am very pleased to select 11 articles for this special issue, written by researchers and practitioners of supply chain management from different part of the world. Here a brief overview of the papers that appear in this issue is provided.

The first paper by Abbas Afrazeh and Iman Zarinozv develops a framework to bring effective factors in human resource productivity and social network analysis methods together to represent and promote knowledge sharing in the supply chain.

The second paper by Wafik Hachicha, Ahmed Ammeri, Faouzi Masmoudi and Habib Chabchoub deals with the Lot-sizing Problem in make-to-order supply chain. The authors developed a simulation optimisation approach for solving the problem. The objective of the proposed approach is to determine the fixed optimal lot size for each manufacturing product type.

The third paper by C.N. Vijeyamurthy and R. Panneerselvam presents a comprehensive review of literature of the covering problem in operations management.

In the fourth paper, Julie Drzymalski, N.G. Odrey and G.R. Wilson use analytical hierarchy process and analytical network process to measure the performance of a multi-echelon supply chain.

The fifth paper by Guiwu Xiong and Yong Wang investigates the optimal of job integration of multi-agent in multimodal transportations with time windows. The authors used a genetic algorithm based Taguchi method to find the optimal route with multimodal transportations through K-shortest paths.

The sixth paper by Bobin Cherian Jos and S. Kumanan proposes a fuzzy-analytic hierarchy process model for the selection of partner companies in the formation of an extended enterprise.

In the seventh paper, M. Saravanan and K.A. Sundararaman describe Ant Colony Optimisation based approach for one-sided time constraint vehicle routing problem, where the delivery of products from the depot to distribution centres has to take place within the maximum permissible time.

The eighth paper by P. Murugesan and A. Noorul Haq uses analytic hierarchy process and fuzzy analytic hierarchy process for the selection of third-party reverse logistics provider.

In the ninth paper, B.S.E. Zoraida, Michael Arock, B.S.M. Ronald and R. Ponalagusamy utilise the thermodynamic properties of DNA for the first time, along with other bio-chemical operations to obtain the optimal solution of capacitated vehicle routing problem.

The tenth paper by D. Elangovan, G. Sundararaj, S.R. Devadasan and P. Karuppuswamy investigates the major time delay issues in supply chain of an automobile components manufacturing organisation.

In the eleventh paper, C.Z. Gurgur addresses the optimal configuration of a capacitated production/inventory system with multiple products. The author utilised response surface methodology, a heuristic sequential optimisation technique based on design of experiments and meta-modelling, as an optimisation tool.

This special issue is beneficial to anyone who is interested in the subjects of operations and supply chain management. We hope readers will find these scholarly works very interesting and useful. I hope readers will enjoy the articles of this special issue as much as I have putting them together.