Editorial

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Biographical notes: Chandra K. Jaggi is a Professor at the Department of Operational Research, University of Delhi, former Head of the Department of Operational Research. He has received his BSc (Honours) in Mathematics, MSc, MPhil, and PhD in Operational Research from the University of Delhi. He is a recipient of the Amity Academic Excellence Award in February 2019 by Amity University and was honoured with International Best Researcher Award 2017 by the International Science Community Association at Bhutan. He was awarded 'IEOM Outstanding Service Award' by IEOM Society, USA in 2016. He is a Fellow Member of the Operational Research Society of India and the International Science Community Association, India. He is Associate Editor of OPSEARCH, IJSAEM, Springer, and in the Editorial Board of IJSS: Operations & Logistics, and *IJSOI*. His research interest lies in the field of Supply Chain and Inventory Management. He has published more than 150 papers. His papers have Google Scholar citation as 2381 (4308) with i10-index 50(67).

Hui-Ming Wee is an Adjunct Chair Professor in the Department of Industrial and Systems Engineering, former Associate Dean at Chung Yuan Christian University (CYCU). He has received his BS (honors) in Electrical and Electronics Engineering from Strathclyde University (UK), MEng. from Asian Institute of Technology (AIT), and PhD in Industrial Engineering from Cleveland State University, Ohio (USA). He has received an excellent research award from the Taiwan Ministry of Science & Technology, excellent life researcher award and the Medal for Distinguished Industrial Engineer Award. He has published more than 280 SCI papers. His papers were cited over 5777 (9201) times in Scopus (Google scholar) with h-index: 44 (52).

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Amrina Kausar is working as an Assistant Professor and Head, Department of Management Studies in Shaheed Sukhdev College of Business Studies, University of Delhi. She has earned her MPhil and PhD in Inventory Management from the Department of Operational Research, Faculty of Mathematical Sciences, University of Delhi. She received Junior Research fellowship and Senior Research Fellowship in Mathematical Science by Council of Scientific and Industrial Research (CSIR). She has published many research papers in various reputed journals. Her area of interest includes optimisation, inventory and supply chain management and operations management.

This special issue on *Emerging Trends in Inventory, Supply Chain and Reliability Modelling, (ETISCRM 2018)* presents recent developments in the area of *Inventory Control, Supply Chain Management, and Reliability Modelling* to foster discussion among researchers, academicians, industry professional, and scientists. It provides a unique focus by linking supply chains with inventory management and reliability modelling, with an objective to advance the theory and practice as well as to identify major trends and applications in these interdisciplinary areas. The research papers included in the special issue comprised of the following areas:

- Inventory planning and control
- Production management
- Interfaces between inventory
- Management and other areas (Marketing, Finance, etc.)
- Sustainable management
- Emerging technology in supply chain
- Closed-loop supply chain
- Reverse logistics
- Operational and strategic issues in inventory control
- Block chain
- Global supply chain
- Humanitarian/disaster management supply chain
- Supply chain management under risk and uncertainty
- Software reliability

Certainly, inventory management strategies aim to minimise costs while ensuring high service levels. At the same time, environmental and social aspects of inventory management should be considered to jointly ensure sustainability and profitability. Further, Supply Chain Management (SCM) is the effective integration to manage all possessions and flows for products or services in a distribution channel, which includes suppliers, manufacturers, distributors, and customers. SCM has evolved from manual, logistical, and mechanisation optimisation to digital and automated integration and

coordination of all supply chain elements. It optimises the flows of products, information, and finances, allowing companies to create better values and business efficiencies. Moreover, when creating new electronic functionalities and/or increasing performance, the concerns of reliability and functional safety should be accounted for right from the start of development. This avoids wrong choices that otherwise may lead to costly and time-consuming repetitions of several development steps or even major parts of the development.

The purpose of this special issue is to collect quantitative articles reflecting the latest developments in different fields of inventory, supply chain and reliability modelling. The special issue is open to receiving academic and realistic studies on different topics related to inventory, supply chain, and reliability modelling.

Summary of the papers included in the special issue

The special issue of IJSOI in *Emerging Trends in Inventory, Supply Chain and Reliability Modelling (ETISCRM 2018)* presents 12 quality research papers which mainly focus on the recent development of inventory, supply chain and reliability modelling. The first paper mainly focuses on sustainable inventory policy for an imperfect production system with imperfect rework and defective sales return. The second paper shows the EOQ modelling for non-instantaneous deteriorating items with ramp-type demand in a two-warehouse facility. In the third paper, the researcher developed a production-inventory model with price-sensitive demand, volume agility and investment in preservation technology. The fourth paper builds up a vendor-buyer inventory model when demand is governed by innovation rate under DCF and game theoretical approach. The fifth paper develops an EOQ model for freshness and stock dependent demand with an expiration date under the cap-and-trade mechanism. The sixth paper deals with an EOQ model for non-instantaneous deteriorating items with two storage facilities under progressive trade credit policy in the financial environment. The seventh paper builds up an intuitionistic fuzzy AHP based reliability allocation model for the multi-software system. In the eighth paper, the researcher is trying to investigate the effect of inflation on an inventory system for defective items with inspection errors, sales returns and shortages. The ninth paper deals with an integrated inventory model for imperfect production systems incorporating marketing decisions with an investment in preservation technology. In the tenth paper, a concept of block chain is discussed in detail and shown how block chain is a pathway to improve performance measures of the supply chain. The eleventh paper establishes a relation between production rate and product quality in a single-vendor multi-buyer supply chain model. The twelfth paper is doing multigenerational modelling incorporating time lag in innovation adoption.