

EDITORIAL PREFACE

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Welcome to Volume 4, Issue 1 of the *International Journal of Green Computing* (IJGC).

The need of the hour is environmentally responsible use of computers and related resources for designing, manufacturing, using and disposing of the products as well as associated systems. The six papers in this issue would reflect these ideas directly as well as indirectly.

The first paper by Amala and Vishnu focuses on providing an alternative approach for the tradeoff plot of ROC curve and the computation of AUC using a special function of sigmoid shape called Error function. The entire work has been carried out for providing a new approach for the construction of Binormal ROC curve, which makes use of Error function which can be called as ErROC curve. The summary measure AUC of the resulting ErROC curve has been estimated and defined as ErAUC.

In the second paper, Tom Page provides an exploration into the influence of mobile apps and mobile devices on the design of products. It forms the initial part of a longitudinal study on the use of smartphone applications in product design. The research provides a review of how mobile device design has changed as well as the usage of mobile devices.

In the third paper, Premjit and Meenakshi Gupta investigated that how task difficulty and time constraint affect prospective memory

(ProM) performance in programmer multitasking. The results indicate that an increase in task difficulty and time constraint has a detrimental effect on ProM performance.

In the fourth paper, Anis Ismail and Aziz Barbar proposed a new technique based on a dynamically growing multilevel list structure, which is stochastically balanced rather than self-balanced, is discussed and compared to the B-Tree. An analogy between the technique and the structures is established to better compare the computational complexities.

Sanjay Mohapatra and Tripti Naswa discussed an approach for eco-tourism. The paper also addresses the cost-benefit analysis of different parameters which can help in designing a framework. The principles of eco-tourism emphasize on the win-win situation for both the Commercial and Environmental concerns; with focus on creating alternatives for sustainable ventures.

The last paper by Eugenio Capra et al. proposed a methodology and related tools that support the incremental redesign of data centers toward greater energy efficiency based on three main levers: 1) physical repositioning of servers to optimize air flow circulation and cooling, enabling higher set temperatures of the cooling system; 2) replacement of server models; and 3) virtualization. This paper describes the

approach and provides evidence on the effectiveness of the methodology by showing how the combined effect of the three levers has led to 62% reduction of energy consumption in a real case study.

Largely, readers will find this issue of the IJGC very much informative and will get

resourceful information from the papers presented to practice.

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K. Ganesh is working as Knowledge Specialist in Supply Chain Management - Center of Competence, McKinsey Knowledge Center; McKinsey & Company, Gurgaon, Haryana, India. He has graduated in Mechanical and Production Engineering from Annamalai University, TamilNadu, India with the university first rank. He pursued his Masters' degree in Industrial Engineering at National Institute of Technology, Tiruchirapalli, TamilNadu, India and secured college first. He then moved to Indian Institute of Technology Madras, Chennai, TamilNadu, India where he obtained his doctoral degree in Logistics and Supply Chain Management. He was a half-time teaching and research assistant at IIT Madras awarded by MHRD research fellowship for 4 years. He then joined the supply chain management department of Lakshmi Machine Works Limited, Coimbatore as Research Analyst and worked for 2 years. He served as project leader for the five major consulting assignments namely business transformation, balanced score card, business optimization by supply chain synchronization, strategic cost reduction and knowledge management. He then joined as Assistant Consultant at Integrated Supply Chain, Manufacturing Industry Solutions Unit, Tata Consultancy Services Limited, Mumbai and worked mainly in the areas of supply chain network design and optimization for 2 years. Later he joined as Senior Consultant in Global Business Services-Global Delivery of IBM India Private Limited, Mumbai, India and worked in Supply Chain Transformation projects for various industries for the span of 2 years. He worked as visiting professor for DJ Academy for Managerial Excellence, Coimbatore, India (1st Jan 2006 to 30th July 2007), Sree Saraswathi Thyagaraja College, Pollachi, Coimbatore, India (1st July 2006 to 30th December 2006), Sardar Vallabhai Patel Institute of Textile Management, Coimbatore, India (2nd Jan 2007 to 30th June 2007), Amrita Deemed University, Coimbatore – India (Adjunct Faculty of Research from 2006) and Swayam Siddhi College of Management and Research, Mumbai – India (12th July 2008 to Till Date). He is having 6 years consulting experience in top consulting companies and cumulative of 14 years of research, teaching and consulting experience in the supply chain domain for manufacturing, process and chemical industry. He has published 66 papers in leading international research journals such as the European Journal of Operational Research and Expert Systems with Applications and 4 papers in leading national journals. He has presented and published 51 papers in the reputed international conferences and 8 research articles in the national conferences. He has written a chapter for six books. He is Editor-in-Chief for 3 international journals (IJLSCM, IJDMSC, IJOSHRM and AJMS), Editor for IJENM and associate editor for IJLEG, AJCST and IJISSCM. He is in the editorial board for various international journals. He is referee for 12 reputed international journals. He has been honored with 3 awards for his bachelor degree and one award for his master's degree for academic excellence. He has obtained 4 awards from Tata Consultancy Services Limited and received 5 appreciation awards from IBM India Private Limited. Dr. K. Ganesh is expertise in areas such as Supply Chain (SC) Transformation, Strategic SC Network Design and Optimization, Production Planning Optimization, Inventory optimization, Demand Planning and Forecasting, Product Flow Optimization, Production Scheduling and Transportation Optimization. Among his other interests are music, counseling, website designing, interior decoration and photography. He is himself a lyricist and has written several poems in both English and Tamil.