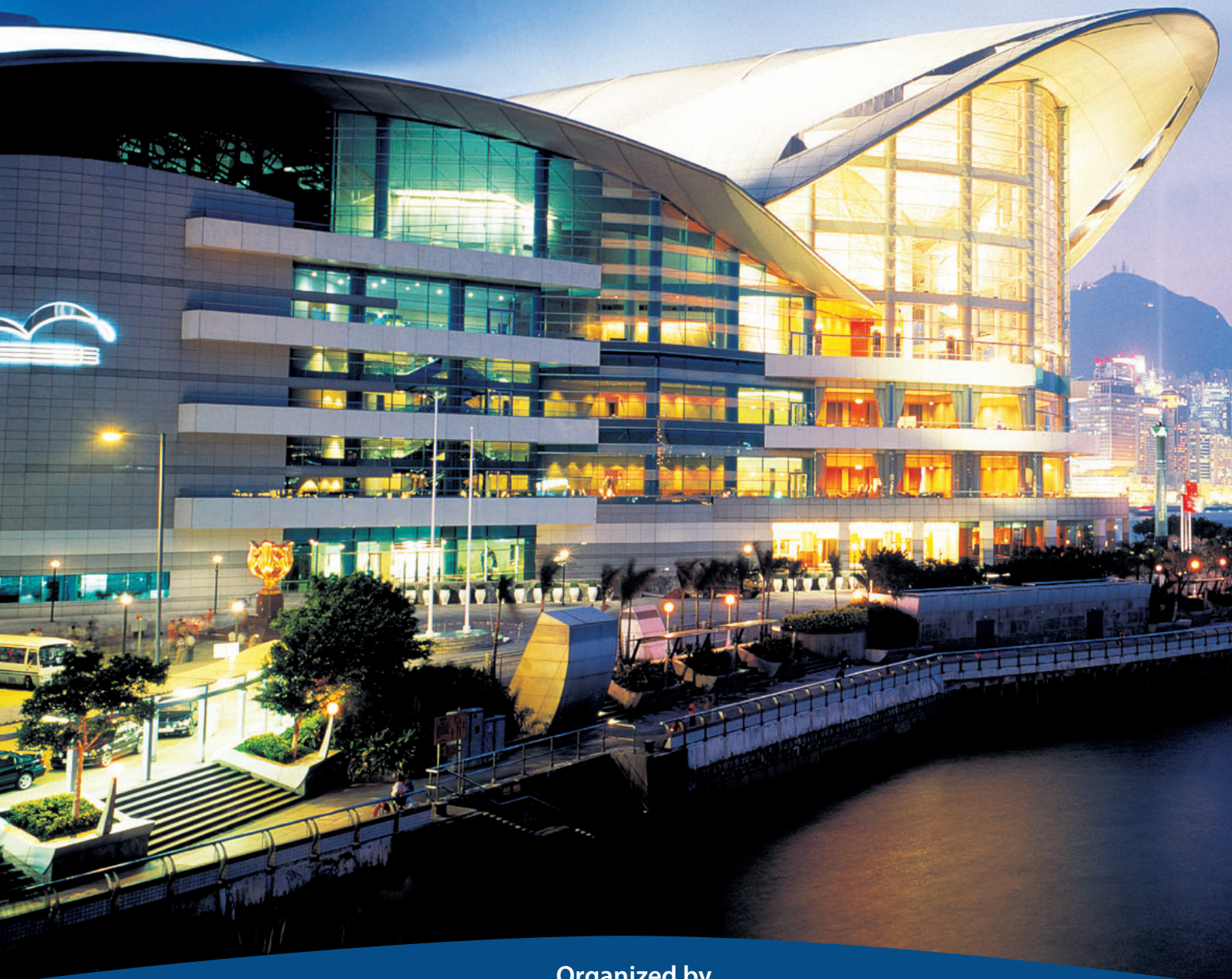


2012 IEEE International Conference on
Industrial Engineering and Engineering Management

IEEM2012

10 to 13 December 2012, Hong Kong
Hong Kong Convention and Exhibition Centre

www.IEEM.org



Organized by

IEEE Technology Management Council
Singapore Chapter

IEEE Singapore Section

IEEE Systems, Man, & Cybernetics
Society Hong Kong Chapter

ORGANIZERS & COMMITTEES

General Chair

Daniel Berg
*University of Miami,
USA*

Organizing Chairs

Min Xie
*City University of Hong Kong,
Hong Kong*

Roger Jiao
*Georgia Institute of Technology,
USA*

Program Chairs

Sam Kwong
*City University of Hong Kong,
Hong Kong*

Szu Hui Ng
*National University of Singapore,
Singapore*

Committee members

Kah Hin Chai (Publication)
*National University of Singapore,
Singapore*

Carman Lee (Publicity)
*Hong Kong Polytechnic University,
Hong Kong*

Hanxiong Li (International Liaison)
*City University of Hong Kong,
Hong Kong*

Anil Verma (Financial)
*Singapore Polytechnic,
Singapore*

Songlin Chen
*Nanyang Technological University,
Singapore*

Edwin Cheung
*Hong Kong Institute of Vocational
Education, Hong Kong*

Jason Choi
*Hong Kong Polytechnic University,
Hong Kong*

Richard Fung
*City University of Hong Kong,
Hong Kong*

Walter Fung
*City University of Hong Kong,
Hong Kong*

Tritos Laosirihongthong
*Thammasat University,
Thailand*

Zhaotong Lian
*University of Macau,
Macau*

James Liu
*Hong Kong Polytechnic University,
Hong Kong*

Hongyi Sun
*City University of Hong Kong,
Hong Kong*

Technical Program Committee

Michel Aldanondo
*University of Toulouse Mines Albi,
France*

Luciana Alencar
*Federal University of Pernambuco,
Brazil*

Teresa Alvarez
*University of Valladolid,
Spain*

Mehdi Amiri-Aref
*Mazandaran University of Science and
Technology, Iran*

Pedro Arezes
*University of Minho,
Portugal*

Pradip Kumar Bala
*Indian Institutes of Technology,
India*

Ana Paula Barroso
*UNIDEMI, FCT-UNL,
Portugal*

Rajendra Belokar
*PEC University of Technology,
India*

Arijit Bhattacharya
*Dublin City University,
Ireland*

Paul Chang
*National Changhua University of
Education, Taiwan*

Cheng-Wu Chen
*National Kaohsiung Marine University,
Taiwan*

Mu-Chen Chen
*National Chiao Tung University,
Taiwan*

Shin-Guang Chen
*Tungnan University,
Taiwan*

Chuang-Chun Chiou
*Dayeh University,
Taiwan*

Jui-Sheng Chou
*National Taiwan University of Science
and Technology, Taiwan*

Stefan Creemers
*IESEG School of Management,
France*

Yves De Smet
*Université libre de Bruxelles,
Belgium*

Maman Djauhari
*University of Technology Malaysia,
Malaysia*

Valerio Elia
*University of Salento,
Italy*

Chao Fang
*City University of Hong Kong,
Hong Kong*

Laurent Geneste

*University of Toulouse ENIT-LGP,
France*

Maria Grazia Gnani
*University of Salento,
Italy*

Antonio Grilo
*Universidade Nova de Lisboa,
Portugal*

Guillermo Gutierrez-Alcaraz
*Instituto Tecnológico de Morelia,
Mexico*

Md. Mamun Habib
*American International University-
Bangladesh, Bangladesh*

Rika Ampuh Hadiguna
*Andalas University,
Indonesia*

Siana Halim
*Petra Christian University,
Indonesia*

Takashi Hasuike
*Osaka University,
Japan*

Jishnu Hazra
*Indian Institute of Management
Bangalore, India*

Qingpei Hu
*Chinese Academy of Science,
China*

Chi-Cheng Huang
*Aletheia University,
Taiwan*

Chin-Yu Huang
*National Tsing Hua University,
Taiwan*

Shinji Inoue
*Tottori University,
Japan*

Raja Jayaraman
*Khalifa University of Science,
Technology & Research, UAE*

Minghai Jiao
*Northeastern University,
China*

Yuya Kajikawa
*University of Tokyo,
Japan*

Chompoonoot Kasemset
*Chiang Mai University,
Thailand*

Song-Kyoo Kim
*Asian Institute of Management,
Philippines*

Niak Wu Koh
Dell, Singapore

Chien-Liang Kuo
*Chinese Culture University,
Taiwan*

R. J. Kuo
*National Taiwan University of Science
and Technology, Taiwan*

ORGANIZERS & COMMITTEES

C.K. Kwong

Hong Kong Polytechnic University,
Hong Kong

M. Amri Lajis

Universiti Tun Hussein Onn
Malaysia,

Ka Wing Lau

Hong Kong Polytechnic University,
Hong Kong

Jun-Der Leu

National Central University, Taiwan

Chen-Ju Lin

Yuan Ze University,
Taiwan

Chu-Ti Lin

National Chiayi University,
Taiwan

Jia-Hua Lin

Liberty Mutual Research Institute for
Safety, USA

Tyrone T. Lin

National Dong Hua University,
Taiwan

Weidong Lin

Temasek Polytechnic,
Singapore

Bor-Shong Liu

St. John's University,
Taiwan

Mei-Chen Lo

National United University,
Taiwan

Huitian Lu

South Dakota State University,
USA

Rammohan Maikala

Liberty Mutual Research Institute for
Safety, USA

Renata Maciel de Melo

Federal University of Pernambuco
(UFPE), Brazil

Harekrishna Misra

Institute of Rural Management
Anand, India

Lars Moench

University of Hagen,
Germany

Keisuke Murakami

National Institute of Informatics,
Japan

Ville Ojanen

Lappeenranta University of
Technology, Finland

Mohamed k. Omar

Nottingham University Business
School, Malaysia

Taezoon Park

Nanyang Technological University,
Singapore

Jennifer Percival

University of Ontario Institute of
Technology, Canada

Leon Pretorius

University of Pretoria,
South Africa

Suksan Prombanpong

King Mongkut's University of
Technology Thonburi, Thailand

Kit Fai Pun

University of the West Indies,
Trinidad and Tobago

T Radha Ramanan

National Institute of Technology
Calicut, India

Suk-Chul Rim

Ajou University,
South Korea

Mohapatra S S

National Institute of Technology,
India

Rashed Sahraean

Shahed University,
Iran

Tomoko Saiki

Tokyo Institute of Technology,
Japan

Ichiro Sakata

University of Tokyo,
Japan

Ilias Santouridis

Technological Educational Institute of
Larissa, Greece

Kiyoshi Sawada

University of Marketing and
Distribution Sciences, Japan

Mahmood Shafiee

Chalmers University of Technology,
Sweden

AHM Shamsuzzoha

University of Vaasa,
Finland

Ali Siadat

Arts et Métiers ParisTech,
France

Nachiappan Subramanian

University of Nottingham Ningbo,
China

Syafii Syafii

University Putra Malaysia,
Malaysia

Vivian Tam

University of Western Sydney,
Australia

Pei-Lee Teh

Monash University,
Malaysia

Purit Thanakijkasem

King Mongkut's University of
Technology Thonburi, Thailand

Ramayah Thurasamy

Universiti Sains Malaysia,
Malaysia

Norbert Trautmann

University of Bern,
Switzerland

Wen-Hsien Tsai

National Central University,
Taiwan

Ming-Lang Tseng

Lung Hua University of Science and
Technology, Taiwan

Yuan-Jye Tseng

Yuan Ze University,
Taiwan

Enrico Vezzetti

Politecnico di Torino ,
Italy

Junqiang Wang

Northwestern Polytechnical
University, China

Min Wang

Chaoyang University of Technology,
Taiwan

Shengyong Wang

University of Akron,
USA

Yonggui Wang

University of International Business
and Economics, China

Seng Fat Wong

University of Macau,
Macau

Yanqiu Xiao

Zhengzhou University of Light
Industry, China

Bingwen Yan

Cape Peninsula University of
Technology, South Africa

Hsu-Hao Yang

National Chinyi University of
Technology, Taiwan

QZ Yang

Circular Economy Research Centre,
China

Min Yao

Zhejiang University,
China

Chui Young Yoon

Korea National University of
Transportation, South Korea

Suhaiza Zailani

Universiti Sains Malaysia,
Malaysia

Allan Nengsheng Zhang

Singapore Institute of Manufacturing
Technology, Singapore

Cai Wen Zhang

Sun Yat-sen University,
China

Linda Zhang

IESEG School of Management,
France

Table of Contents

Decision Analysis & Methods (1)

Performance Management in the Elementary and Secondary Schools' Information Unit in Taiwan: Using the Balanced Scorecard and the Fuzzy Analytic Hierarchy Process <i>Yi-Hui LIANG</i>	1
An Analysis Framework for Urban Construction Decision-making Based on Symbiosis <i>Chunying HUANG, Xiaoming WANG</i>	6
Establishing A New Preliminary Evaluation Criteria System Model for Green Restaurants <i>Ching-Yu LIEN, Bor Min TSAI, Hsin-Yen WU</i>	11
A Multi-Criteria Decision Support Model for TV Series Selection <i>Cigdem KADAIFCI, Ilker TOPCU, Umut ASAN</i>	16
A Matching PROCEDURE for Goal-oriented Productivity Improvements <i>Thomas CZUMANSKI, Jonina JONSSON, Hermann LODDING</i>	21
Ranking of Problematic Equipment using Six Big Losses and Analytic Hierarchy Process <i>Ratapol WUDHIKARN</i>	26
A Real Options Analysis with CVA on Optimal Decision of Regulatory Capital for the Basel Capital Accord III <i>Tyrone T. LIN, H. J. CHEN</i>	31

Decision Analysis & Methods (2)

A Methodology for Product Line Design with Consideration of Supplier Selection <i>S.F. DENG, C.K. KWONG, Xinggang LUO, H.M. JIANG</i>	36
Does Delighting Customers to Inspire Loyalty Moderated by Lodging Motivation?- A Case Study on Five-Star Hotels in Mid-Taiwan <i>Yung-Hsin CHEN, Xia WANG, Shuo-Chang TSAI, Ingrid TENG</i>	41
Objective Product Family Design Analysis Using Self-Organization Map <i>Ningrong LEI, Seung Ki MOON</i>	46
Evaluations on and Suggestions for the Sustainable Development of Shaanxi <i>Shuyan GONG, Weili XIA</i>	51
The Combination of Lean Thinking and Systems Thinking in the Design of Manufacturing Systems <i>Pascal HOFMANN, Daryl POWELL</i>	56
Portfolio Decision Analysis in Vague Domains <i>Tobias FASTH, Aron LARSSON</i>	61
A Decision-making Model on Concession Period of Public Rental Housing BOT Project <i>Jingjing ZHU, Guangmou WU</i>	66

Decision Analysis & Methods (3)

Business Feasibility Methodology for Introducing New Developed Local Food Product <i>Wasawat NAKKIEW, Jariwan WANNAGOAT, Wassanai WATTANUTCHARIYA, Anirut CHAIJARUWANICH</i>	71
---	----

An Investigation of Robust Optimal Design Using Artificial Neural Network and Genetic Algorithm <i>Kiatkajohn WORAPRADYA, Purit THANAKIJKASEM</i>	75
Design and Implementation of a Lean Six Sigma Framework for Process Improvement: a Case Study <i>Tarak SHAHADA, Imad ALSYOUF</i>	80
In-Service Inspection of Static Mechanical Equipment on Offshore Oil and Gas Production Plants: A Decision Support Framework <i>A.M.N.D.B. SENEVIRATNE, R.M. Chandima RATNAYAKE</i>	85
Customer-Driven Conceptual Design for Mid-sized Passenger Aircraft <i>S.Y. HAN, Hae-Jin CHOI</i>	91
Hybrid Fuzzy AHP-GA Approach to Supplier Selection and Order Allocation in SMEs Manufacturing Networks <i>Nan LI, Guiovanni JULES, Mozafar SAADAT</i>	96
Evaluation Model For the Sustainable Use of Information Technology <i>Patricia MARTINS, Antonio GRILO</i>	101

Operations Research (1)

A Study on Adaptive Particle Swarm Optimization (APSO) for Solving Bi-level Job-shop Scheduling Problem <i>Chompoonoot KASEMSET</i>	106
Optimization of the Annual Planning of Targeted Offers in Direct Marketing <i>Fabrice TALLA NOBIBON, Stephanie DELANOTE, Roel LEUS</i>	111
An Algorithm for the Sugar Cane Loading Station Location Problem <i>Wirekha KHAMJAN, Supachai PATHUMNAKUL, Kullapapruk PIEWTHONGNGAM</i>	116
A Variable Neighborhood Search Approach for Multiple Resources Constrained Parallel Machine Scheduling Problem <i>Zhengliang HOU, Xiuping GUO, Xiuli GUO</i>	121
A Mixed Integer Programming Formulation for Single Batch Processing Machine with Incompatible Job Families <i>Mohamed K. OMAR, Yasothei SUPPIAH</i>	126
Generating and Ordering of Transport Alternatives in Inter-Modal Logistics in the Presence of Cost, Time, and Emission Conflicts <i>Maria KALININA, Aron LARSSON, Leif OLSSON</i>	131
An Optimization Model for Removal of Zinc from Industrial Wastewater <i>Farah ASSADIAN, Pari BEIRAMI</i>	136

Operations Research (2)

Improving Business Process Performance Without Increasing Cost <i>Shin-Guang CHEN</i>	141
Clustering and Hub Selection for a Large Scale Delivery Problem <i>Suyan TENG, Edmund CHAN, Gabriel SIOW</i>	146
A Local-Search Based Algorithm for the Escherization Problem <i>Shinji IMAHORI, Shohei SAKAI</i>	151

Minimizing Total Tardiness in NFSSP with SDSTs and RDs by Using Hybrid Differential Evolution Algorithm <i>Bin QIAN, Zuocheng LI, Rong HU, Xiaohong ZHU</i>	156
Sequential Testing Policies for Complex Systems Under Precedence Constraints <i>Roel LEUS, Wenchao WEI, Kris COOLEN</i>	161
Incorporating Local Search in Heuristics for Dynamic and Stochastic Maritime Pick-up and Delivery Problems <i>Gregorio TIRADO, Lars Magnus HVATTUM</i>	166
A Markov Decision-Making Model for Emergency Medical Resource Allocation with Multi-Category Injuries <i>Hongyun XIA, Yiping JIANG, Lindu ZHAO, Micheal HERTY</i>	171

Operations Research (3)

Solving Euclidean Minimal Spanning Tree Problem Using a New Meta-heuristic Approach: Imperialist Competitive Algorithm (ICA) <i>S.Mohsen HOSSEINI, Abdullah KHALED, Mingzhou JIN</i>	176
A New Construction Heuristic Algorithm for the Rectilinear Block Packing Problem: A Bridge between the Best-Fit and Bottom-Left Algorithms <i>Yannan HU, Hideki HASHIMOTO, Shinji IMAHORI, Mutsunori YAGIURA</i>	182
Vehicle Refueling Planning for Point-to-Point Delivery by Motor Carriers <i>Shieu-Hong LIN</i>	187
Reformulation of Lawler's Algorithm by Auxiliary-information Dynamic Programming in a Minimax-cost Scheduling Problem <i>Eiji MIZUTANI</i>	192
An Optimization Approach of Product Design with Consumer Preference Uncertainty <i>Jing DU, Xiaoming HU, Qiang LU, Suxiu XU</i>	197
A Hybrid Algorithm for the Pickup and Delivery Problem with Time Windows: A Case Study at a Fresh Milk Plant <i>Mengjuan XU, Lindu ZHAO</i>	202
Enhanced Group Genetic Algorithm for the Heterogeneous Fixed Fleet Vehicle Routing Problem <i>Michael MUTINGI, Charles MBOHWA</i>	207
Inventory Systems with Power Demand, Deterioration and Backlogged Shortages <i>Joaquin SICILIA-RODRIGUEZ, Manuel GONZALEZ-DE LA ROSA, Jaime FEBLES-ACOSTA</i>	212

Supply Chain Management (1)

Identify Critical Success Factor of Knowledge Management in Supply Chain : Fuzzy DEMATEL Approach <i>Sachin PATIL, R. KANT</i>	217
A Predictive Model For Supply Chain Management Implementation Using AHP Methodology <i>Shrikant GORANE, R. KANT</i>	222
Predicting the Success Possibility of Implementing Information Sharing in Supply Chain Using Consistent Fuzzy Preference Relationship <i>R. KANT, Akshay PUJARA</i>	227

Myopic Multi-Period Mean-Variance Inventory Policy for Fashion Products <i>Tsan-Ming CHOI</i>	232
Managing Health Care Perishable Apparel Products using Quick Response Program <i>Hau Ling CHAN, Tsan-Ming CHOI, Chi Leung HUI, Sau Fun NG</i>	236
Application of the Supply Chain Concept for Educational Services <i>Chiu Liang GAN, Ek Peng CHEW, Loo Hay LEE</i>	241
A Reverse Logistics Decision Model in Green Manufacturing Supply Chains <i>Tyrone T. LIN, Y.S. LU</i>	246
Supply Chain Management (2)	
A Thinking Framework for Managing Complexity in the Supply Chain <i>Seyda SERDARASAN</i>	251
Capacitated Multi-Item Dynamic Lotsizing with Random Demand <i>Horst TEMPELMEIER</i>	256
Developing a Genetic Algorithm to Optimise an International Supply Chain under (s, S) policy <i>Wei XU, Dongping SONG, Michael ROE</i>	261
Micro-organizational Supply Chain Management Influential Factors: A Case Study <i>Nayanapriya GUNAWARDHANA, Takao ENKAWA, Sadami SUZUKI</i>	267
Quantifying Supply Chain Disruption Risk Using VaR <i>Allan Nengsheng ZHANG, S.M. WAGNER, Mark GOH, M. TERHORST, B. MA</i>	272
Incentive Contracts between Fourth-party and Third-party Logistics Providers based on Performance Measurement with Intellectual Capital <i>Qin ZHU, Richard Y. K. FUNG</i>	278
Supply Chain Management (3)	
Container Pre-marshalling Problem: A Review and Solution Framework <i>Mohamed GHEITH, Amr ELTAWIL, Nermine HARRAZ</i>	283
Multi-Depot Vehicle Routing Problem with Time Windows Using Hybrid Metaheuristic Algorithm <i>Seyed Farid GHANNADPOUR, Amin JAMILI</i>	288
A Three Echelons Supply Chain Network Design in a Fuzzy Environment Considering Inequality Constraints <i>Mahdi BASHIRI, Mahtab SHERAFATI</i>	293
The Study of Tiered Pricing Model in Three-echelon Reverse Supply Chain <i>Fuwen LI, Ruizhu HAN</i>	298
Coordinating a Supply Chain for a Newsvendor-Type Product with Sales Effort Effects <i>Yao Yu WANG, Jian-Cai WANG</i>	303
Strategic Design of the Construction Supply Chain: A Case of Building Projects in Iran <i>Mohammad Reza SAFAIAN, Hossein MORADINASAB</i>	308
Matching of Intermodal Freight Transports Using Optimization in a Decision Support System <i>Leif OLSSON, Aron LARSSON</i>	313

A Classification and Review of Recent Models for Solving the Vehicle Routing Problem and a Proposed New Problem Framework <i>Alyaa ABDEL-HALIM, Amr ELTAWIL</i>	318
--	-----

Quality Control & Management (1)

Critical Success Factors for Six Sigma Deployment: Is a Centralized Deployment Structure Better Than a Re-integrated Deployment Structure? <i>Alan KEELEY, Corro VAN WAVEREN, Kai-Ying CHAN</i>	323
A Method for Product Quality Management Throughout Its Life Cycle <i>Dinh Son NGUYEN</i>	329
A Generalized Linear Test Model to Monitor AR(1) Autocorrelated Polynomial Profiles <i>M. KERAMATPOUR, S.T.A. NIAKI, Amirhossein AMIRI</i>	334
Identifying the Time of a Step Change in the Mean of a Two-Stage Process <i>Amirhossein AMIRI, S. ZOLFAGHARI, Ali ASGARI</i>	339
An Empirical Study of Critical Success Factors for Statistical Process Control Implementation: A Second-Order Factor Analysis <i>Jafri MOHD ROHANI, Sha'ri MOHD YUSOF, Ismail MOHAMAD</i>	343
Product Driven Quality Control <i>Samuel BASSETTO, Adeline MOTTE</i>	347
Quality Management for Leadership <i>Masayoshi USHIKUBO, Hisato TASHIRO, Nobuzumi FUJII, Ichiro SAKATA</i>	352

Quality Control & Management (2)

Nonparametric Design of Phase I X Control Charts with or without Sensitizing Run Rules <i>Giovanna CAPIZZI, Guido MASAROTTO</i>	357
DMAIC Methodology for Fold Defect Reduction in the Optical Blank Industry <i>Mohamed K. OMAR, Hock Kheng SIM, Geok Ching LIM</i>	362
Evaluating Intensity of Human Factors in TQM Using Analytical Network Process (ANP) Approach <i>Sandeep GROVER</i>	367
Field Data Analysis in Truck Production - a Case Study <i>Ralph RIEDEL, Egon MUELLER</i>	372
Barriers in Total Productive Maintenance Implementation in a Semiconductor Manufacturing Firm: A Case Study <i>Kam-Choi NG, Gerald Guan Gan GOH, Uchenna Cyril EZE</i>	377
On Detection of Spatiotemporal Clustering <i>Chen-ju LIN, Yen-ting CHEN</i>	382
The Role of Leadership Competencies for Implementing ISO 9000 <i>Kem RAMDASS</i>	386

Engineering Economy and Cost Analysis

Application of Robust Design Technique in SME Project Finance: A Case Study to Calculate Optimum Set-Points <i>R.M. Chandima RATNAYAKE, Harsha JAYATILAKA</i>	391
Strategic Fit in Value Added Networks of Electric Vehicle Production <i>Achim KAMPKER, Peter BURGGRAF, Carsten NEE</i>	396
Demand Response Mechanism and Simulation Research of Cold Storage Air Conditioner Supporting Consumption of the Onshore Wind Power <i>Yu CHENG, Su AN</i>	401
Managing the Economic Performance of Research-driven Initiatives in the Field of Transdisciplinary Research <i>Florian G. H. BEHNCKE, Martina WICKEL, Udo LINDEMANN</i>	406
The Optimal Allocation of the Investment Capital for R&D Projects at the Commercial Stage with the Kelly Criterion <i>Gyutai KIM</i>	411
Research on Life Cycle Management of Nuclear Power Plant equipment based on Economic Analysis <i>Kai-kai GU, Jiang GUO, Ming-shu FAN, Ke-fei ZHANG, Lei SHI</i>	418
Injection Mold Replacement Analysis in Automotive Industry <i>Tanasak SUWANNABOOL, Daricha SUTIVONG</i>	423
Service Provision, Subsidies and Revenue Maximization in Multitier Communities <i>Hailing ZHU, Mbuyu SUMBWANYAMBE, Andre L NEL</i>	428

Production Planning & Control (1)

Constructing Generic Processes based on Tree Unification for Process Family Planning <i>Linda ZHANG</i>	433
Batch Optimization Algorithm for Autoclave Curing of Fiber-Reinforced Composites <i>Tobias PHILIPP, Thorsten KLEIN, Gunther REINHART</i>	438
Approach for an RFID-based Situational Shop Floor Control <i>Philipp ENGELHARDT, Gunther REINHART</i>	444
21st Century Operational Excellence: Addressing the Similarities and Differences between Lean Production, Agility and QRM <i>Daryl POWELL, Jan Ola STRANDHAGEN</i>	449
Operations Scheduling in Make-and-Pack Production: Schedule Construction and GA-based Priority-Rule Generation Procedures <i>Philipp BAUMANN, Norbert TRAUTMANN</i>	454
Modeling the Master Production Scheduling System with Downgraded Products for a TFT-LCD Module Factory <i>Chun-Cheng LIN, Jia-Rong KANG, Wan-Yu LIU, Shu-Hsing CHUNG, Kai-Shin CHOU</i>	459

Production Planning & Control (2)

New Entropy Weight-Based TOPSIS for Evaluation of Multi-objective Job-Shop Scheduling Solutions <i>Junqiang WANG, Jian CHEN, Ting QU, George HUANG, Yingfeng ZHANG, Shudong SUN</i>	464
An Artificial Immune Based Algorithm for Parallel-machine Scheduling with Preference of Machines <i>Ching-Jen HUANG, Li-Man LIAO</i>	469
A Multi-Agent Based Rescheduling Framework for Mixed-Model Assembly Line Balancing <i>Li-Man LIAO, Ching-Jen HUANG</i>	474
A Finite Economic Production Quantity Model with Two Imperfect Modules <i>Dah-Chuan GONG, Gary C. LIN, Kai-Xun ZHUANG, Pei-Han LEE</i>	479
The Significance of Serendipity in New Market Creation <i>Akihiko NAGAI, Takayuki ITO</i>	483
Combined Economic and Emission Dispatch Using Harmony Search and Genetic Algorithm <i>Yun-Chia LIANG, Josue CUEVAS</i>	488

Production Planning & Control (3)

Research on Dynamic Dispatching Rule for Semiconductor Assembly Production Line <i>Chang LIU, Hai-Zan CHEN, Yuan RONG, Jun ZHU</i>	493
A Data Envelopment Analysis Approach to Resource Efficiency Evaluation <i>Jenny XU, Siddharth GOUTAM, Xun XU, Shane XIE</i>	498
Simulation Aided Disturbance Management in One-of-a-kind Production on the Assembly Site <i>Robert WANDT, Axel FRIEDEWALD, Hermann LÖDDING</i>	503
Solving the Problem of Product-Conversion in Semiconductor Assembly and Test Manufacturing System by a Novel Heuristic Scheduling Algorithm <i>Li-li YAO, Hai-bo SHI, Chang LIU</i>	508
Deterministic Joint Replenishment Problem with Multiple Restriction: A Lagrangian Relaxation Approach <i>Amit Kumar GUPTA, R R K SHARMA</i>	513
Optimization of Manufacturing Planning and Control Systems in Highly Dynamic Environments using Bernoulli Theorem <i>Johannes MAPOKGOLE, Tengen THOMAS</i>	518
A Multi-Crop Production Planning Model for Hydroponic Systems With Nutrient Mix Reusability <i>Haniel CHUA, Francis RAMIREZ, Kyle SY, Dennis CRUZ</i>	523
Bi-objective Simulated Annealing and Adaptive Memory Procedure Approaches to Solve a Hybrid Flow Shop Scheduling Problem with Unrelated Parallel Machines <i>Hmid MOHAMMADI, Rashed SAHRAEIAN</i>	528

Manufacturing Systems (1)

A Multi-objective Biogeography-based Optimization for Mixed-model Two-sided Assembly Line Balancing with a Learning Effect <i>Ronnachai SIROVETNUKUL, Uamporn JANSAME, Parames CHUTIMA</i>	533
---	-----

The Study Wood Furniture Which Made of Fast Growing Wood Specie of <i>Azadirachta exceisa</i> (Jack) Jacobs. for Wood Industrial Standard by Finite Element and Design Analysis of Experiments <i>Sakkarin CHOODOUNG, Chalermpon BUTTARD</i>	539
Analysis of Assembly Sequence for Effective Assembly Plan of Wooden Furniture <i>Sakkarin CHOODOUNG, Uttapol SMUTKUPT</i>	544
Robustness of Assemble-to-Order Systems against Unexpected Events <i>Henri TOKOLA, Esko NIEMI</i>	548
The Role of Total Productive Maintenance in Manufacturing Firms: A Review <i>Kam-Choi NG, Gerald Guan Gan GOH, Uchenna Cyril EZE</i>	553
Critical Success Factors for MES Implementation in China <i>Huasheng YANG, Li ZHENG, Yi HUANG</i>	558
How Dose Product Innovation Help New Firm Growth: The Moderating Effects of Knowledge from Demand Side and Business Environment <i>Chaoqun ZHANG, Xiaobo WU</i>	563

Manufacturing Systems (2)

Reconfigurable Mixed Model Assembly Line Design in a Dynamic Production Environment <i>Dida DAMAYANTI, Isa Setiasyah TOHA</i>	568
Deconstructing Emerging Business Ecosystems: Explorations of the Chinese Electric Vehicle Industry <i>Tianjiao SHANG, Yongjiang SHI</i>	573
A New Decision Making Approach for the Formation of Holonic Agent-based Manufacturing Networks <i>Guiovanni JULES, Mozafar SAADAT, Nan LI</i>	578
The Hybrid Manufacturing Cell: Determining Key Parameters in the Integration of Powder Bed Fusion with High Speed Milling <i>Vegard BROTAN, Klas Magnus BOVIE</i>	583
Linking Strategic Goals with Operational Performance: An Integrated Approach <i>Antonio ALMEIDA, Daniel POLITZE, Alvaro CALDAS, Americo AZEVEDO</i>	588
Performance Modeling of Reconfigurable Manufacturing System for Different Dispatching Strategies Under Exception <i>Faisal HASAN, P.K JAIN, Dinesh KUMAR</i>	593
Reactive Scheduling for Non-disruptive Job Processing Against Machine Breakdowns <i>Wan-Ling LI, Muhammed Hafidz FAZLI, Tomohiro MURATA</i>	597

Manufacturing Systems (3)

The Robust Scheduling Solutions for Parallel Machine Systems Under an Uncertain Environment <i>Xuanhao ZHOU, Yong-Zai LU</i>	602
Study on the Layered Predictive Control Algorithm for the Main Steam Temperature of Ultra-supercritical Units <i>Shihe CHEN, Wenkai HU, Xin LI</i>	607
Optimization of Power Station Boiler Coal Mill Output Based on the Particle Swarm Algorithm <i>Yanjun FANG, Xiaojie QIN, Yuan FANG</i>	612

Lean Manufacturing in Textile Industry of Pakistan <i>Ali Husnain RABBANI, Muhammad ASIM</i>	617
Scheduling a BPM with Incompatible Job-Families and Dynamic Job-Arrivals <i>Muthu MATHIRAJAN, M VIMALARANI</i>	622
Characteristic Simulation of High Pressure Common Rail Pipe <i>Jiping LU, Fan HONGLI, Wang LIANHONG, Song HAO, Pan YONG</i>	627
Integration of Sustainability and Mass Customization: Proposal of a Framework to Map Research Open Issues <i>Golboo POURABDOLLAHIAN, Mahnoosh ZEBARDAST, Marco TAISCH</i>	632
Deciphering Business Ecosystem Capabilities of the Emerging Electric Vehicle Industry <i>Tianjiao SHANG, Feifan CHANG, Yongjiang SHI</i>	638
Technology and Knowledge Management (1)	
Effective Wi-Fi Setting User Experience Design by Using Systematic Innovation Method <i>Song-Kyoo KIM</i>	643
Making Mergers More Effective Through Technology Management <i>Murali Krishna KUPPILI, Ramachandra ARYASRI</i>	647
A Study on the Job Satisfaction of Governmental Labor Inspectors in Taiwan <i>Fu-Man HSIEH, Yichun YU, Y.C. LIN, P.-J. TSAI</i>	652
Interpretive Structural Model of Key Performance Indicators for Sustainable Manufacturing Evaluation in Automotive Companies <i>Elita AMRINA, Sha'ri MOHD YUSOF</i>	656
How to Use the Big Data to the Technology Planning: A Data-Driven Technology Roadmapping Using ARM <i>Youngjung GEUM, Hyeonjeong LEE, Yongtae PARK</i>	661
E-service Concept Design in Recombinative Innovation: A Morphology Analysis Approach <i>Jieun KIM, Yongtae PARK</i>	666
Technology and Knowledge Management (2)	
Locating the Key Competitors: A New Tool for Technology Manager <i>Chung-Huei KUAN, Mu-Hsuan HUANG, Dar-Zen CHEN</i>	671
Leadership as a Determinant of Product Innovation: a Systematic Review of the Literature <i>Tharnpas SATTAYARAKSA, Sakun BOON-ITT</i>	677
A Knowledge Service Framework for Product-design Activities <i>Si CHEN, Yan YAN, Wang ZHAO, Wang GUOXIN, Zhao YIJING</i>	683
Capability Development - No Path, Response to Competition: The Cross-case of Google, Ericsson, Microsoft and Nokia <i>Mait RUNGI, Alar KOLK</i>	689
Analysis Individual Tacit Knowledge Toward Innovation <i>Augustina ASIH RUMANTI, Iwan Inrawan WIRATMADJA, Trifenaus Prabu HIDAYAT</i>	694
The Mediating Role of Absorptive Capacity between Financial Slack and Performance <i>Antonio VERDU, Lirios ALOS-SIMO, Jose Maria GOMEZ-GRAS, Maria Jose ALARCON-GARCIA</i>	698

Technology and Knowledge Management (3)

Technology Evaluation Practices in Universities Technology Transfer Offices <i>Fernando ROMERO, Antonio ROCHA</i>	703
Knowledge Visualization in Product Development using Trade-Off Curves <i>Maksim MAKSIMOVIC, Ahmed AL-ASHAAB, Robert SULOWSKI, Essam SHEHAB</i>	708
Impact of Enterprise Strategic Flexibility on Innovation Performance: Based on Dual Perspective of Proactive and Reactive <i>Zhigang FAN, Dongmei FAN, Sun YUAN</i>	712
Care Apparel Design Reuse System: Design and Implementation <i>Bibo YANG, Lei AI</i>	717
Patent-based Indicators for Analyzing the Wind Power Markets <i>Matti KARVONEN, Rahul KAPOOR, Tuomo KASSI</i>	722
The Role of Funding Source for Commercializing University Patents: Network Analysis on Technology - Industry Linkage Patterns <i>Yongrae CHO, Sanghoon LEE, Wonjoon KIM</i>	727
Knowledge Management and Learning Organization: Linking Knowledge-based System to Service Delivery Processes <i>Wen-Jung CHANG, Christina TAY</i>	732
A STEP-based Product Knowledge Model for One-of-a-kind Production <i>Bomiao LI, Shane XIE, Xun XU</i>	737

Reliability and Maintenance Engineering (1)

Optimal Maintenance Service Contract for Equipments with Availability Target <i>Bermawi ISKANDAR, Hennie HUSNIAH</i>	742
Specification of Change Points of Failure Rate or Intensity Function: A Non-parametric Approach <i>Renyan JIANG</i>	747
Reliability Analysis Based on Jump Diffusion Models for an Open Source Cloud Computing <i>Yoshinobu TAMURA, Hirona MIYAHARA, Shigeru YAMADA</i>	752
Quantification of Organizational Influences on Failure Rate: A Bayesian Approach <i>Hui JIN, Marvin RAUSAND, Ali MOSLEH, Stein HAUGEN</i>	757
Failure Rate Prediction in Various Life Cycle Phases: A Framework for Updating <i>Maryam RAHIMI, Marvin RAUSAND</i>	762
Optimal Transmission Lines Assignment in a Multi-source Multi-sink Computer Network <i>Yun ZHANG, ZhengGuo XU, JianGang LU, YouXian SUN</i>	767
Simulation Evaluation of State-based Preventive Maintenance for a Machine with Multiple Quality States <i>Chao QI, Hongwei WANG, Sivakumar APPA IYER</i>	772

Reliability and Maintenance Engineering (2)

Remaining Lifetime Assessment of a Deteriorating System Operating Under Permanent Effect of Fluctuant Environment <i>Elias KHOURY, Estelle DELOUX, Antoine GRALL, Christophe BERENGUER</i>	777
Thermooxidation Degradation and Life Prediction of Nitrile Butadiene Rubber Based on Kinetics Model <i>Kun ZHANG, Jinyong YAO, Tongmin JIANG</i>	782
Probabilistic Modeling of Solder Joint Thermal Fatigue with Bayesian Method <i>Limei XIE, Ying CHEN, Rui KANG</i>	787
Reliability-Based Structural Design: A Case Study of Car Wheels <i>Yitao LIU, Feng ZHOU, Roger JIAO</i>	792
Reliability Assessment and Analysis of Incorporating Fault Tolerance into Service-oriented Architectural Systems <i>Kuan-Li PENG, Chin-Yu HUANG</i>	797
Blade-based Maintenance Policy of Offshore Wind Turbine with the Presence of Covariate under Random Shock <i>Wenjin ZHU, Mitra FOULADIRAD, Christophe BERENGUER</i>	802

Project Management (1)

An Integer-Programming Approach to Benefit-Maximal Selection and Scheduling of Resource-Constrained Projects <i>Gianluca BRANDINU, Norbert TRAUTMANN</i>	807
An Investigation into the Relationship between Project Management Maturity and Project Performance in the Telecommunications Industry in Zimbabwe <i>Tapiwa MURAMBIWA, Marie-Louise BARRY</i>	812
Unlocking Critical Success Factors and Criteria in Capital Projects – A Perspective From the South African Petrochemical Industry <i>Marie-Louise BARRY, Danver JACOBS</i>	817
Responding to an Ageing Workforce and the Implications for Engineering Management <i>Julien POLLACK</i>	822
Risk Crash: a New Approach to Quantify the Relationship Between Risk of Delay and Project Duration <i>Tommaso SALVAGNINI, Giorgio LOCATELLI, Mauro MANCINI, Edoardo CESA BIANCHI</i>	827
Role Development for Interdisciplinary Collaboration Support in Biomimetics <i>Manuela Iulia PARVAN, Hendrik OEPKE, Katharina KAISER, Udo LINDEMANN</i>	832
A New Event-based MILP Model for the Resource-constrained Project Scheduling Problem with Variable Intensity Activities (RCPSVP) <i>Alain HAIT, Georges BAYDOUN</i>	837
Resource Constrained Project Scheduling Problem: A DEA based Genetic Algorithm <i>Behzad ASHTIANI, Fatemeh PAIDAR, Amir Masoud HOSSEINMARDI, Esmaeil NAJAFI TROJANI</i>	842

Intelligent Systems (1)

Intelligent Systems based in Hospital Database Malfunction Scenarios <i>Paulo SILVA, Cesar QUINTAS, Pedro GONCALVES, Gabriel PONTES, Manuel SANTOS, Antonio ABELHA, Jose MACHADO</i>	846
Monitoring Intelligent System for the Intensive Care Unit using RFID and Multi-Agent Systems <i>Rui RODRIGUES, Pedro GONCALVES, Luis Miguel MIRANDA, Carlos Filipe PORTELA, Manuel SANTOS, Jose NEVES, Antonio ABELHA, Jose MACHADO</i>	851
Image Analysis for Pig Recognition Based on Size and Weight <i>Apirachai WONGSRIWORAPHON, Supachai PATHUMNAKUL, Banchar ARNONKIJPANICH</i>	856
Ontology-Based Context Model of Turret <i>Qiqi YIN, Qing XUE, Minxia LIU, Kan ZHANG</i>	861
An Artificial Neural Network Approach for Estimating Suitable Ratio of Filling Fat in Animal Feed Production <i>Mongkon ITTIPHALIN, Supachai PATHUMNAKUL, Kullapapruk PIEWTHONGNGAM, S. HOMDEE</i>	866
Rule Extraction Using Firefly Optimization: Application to Banking <i>Naveen NEKURI, Ravi VADLAMANI, Raghavendra Rao C, Sarath K.N.V.D</i>	869

Intelligent Systems (2)

An AI-based System for Telecommunication Network Planning <i>Kin POON, Andrej CHU, Anis OUALI</i>	874
An Efficient Approach for Updating the Structure for Mining Frequent Patterns <i>Show-Jane YEN, Yue-Shi LEE, Jia-Yuan GU</i>	879
Architecture of Knowledgeable Manufacturing System and Knowledge Representation Methods <i>Youlong LV, Wei QIN, Jie ZHANG</i>	884
An Intelligent System for Production Resources Planning in Hong Kong Garment Industry <i>Kar Hang Carmen LEE, K.L. CHOY, Kris, M Y LAW, G.T.S. HO</i>	889
Buyer-Supplier Predicting Offers in Supply Contract Negotiation Using Neural Network <i>Yusraini MUHARNI, Chao OU-YANG, Chun Ching LEE</i>	894

Safety, Security and Risk Management (1)

Addressing IT Security in Practice: Key Responsibilities, Competencies and Implications on Related Bodies of Knowledge <i>Younes BENSLIMANE, Ankit PATEL, Bouchaib BAHLI, Zijiang YANG</i>	899
Hybridization of Statistical and Cognitive Experience Feedback to Perform Risk Assessment. Application to Aircraft Deconstruction <i>Eric VILLENEUVE, Cedrick BELER, François PERES, Laurent GENESTE</i>	904
A Study of Fire Evacuation from an Industrial Building Using Simulex <i>Diana FREITAS, Pedro AREZES</i>	909
Noise Risk Assessment of Taiwan High Speed Rail <i>Kang-Ting TSAI, Y. T. HUANG, Min-Der LIN</i>	913

The Effect of Maintenance Seen From Different Perspectives on Major Accident Risk <i>Peter OKOH, Stein HAUGEN</i>	917
Study on Classification of Safety-related Organizational Factors in a Nuclear Power Plant <i>Dai LICAO, Pengcheng LI, Huang SHUDONG, Zhao MING</i>	922
Quantitative Research of Risk Relationships of Sewage Treatment Plants Based on Concession Operation <i>Hui SUN, Yanhong LU</i>	927
Theoretical Research on Crossflow Pollution in Short Distance and Continuous Road Tunnels <i>Pai XU, Shu-ping JIANG, Zhi LIN, Jian-zhong CHEN</i>	932
Poster Session 1	
Integration of Supply Chains via Vertical Merger and Acquisition: Mechanism and Policy <i>Haiyan YAN, Wenbin ZHAO, Bo XU</i>	937
Enabling of Sustainable Supply Chain Management with Lean Thinking - A Comparative Study of Manufacturers in Kyoto Protocol Signatory Countries <i>Stuart SO, Hongyi SUN</i>	942
The Impact of Information Technology on Supply Chain Management Capabilities: A Resource-Based View <i>Yi- Fen SU</i>	947
A Heuristic Method based on Genetic Algorithm for Storage Location Assignment in a Pick-and-Pass Warehousing System with Multiple Pickers <i>Po-Hsun SHIH, Jason Chao-Hsien PAN, Ming-Hung WU</i>	952
Value Stream Mapping Analysis for Improving the Harvesting and Transport Processes of Cotton <i>Yulin LI, Shuping YI</i>	957
Decision to Refurbished Products Based on Cost-benefit of Remanufacturing Model in Closed Loop Supply Chain <i>Yan LIANG, Joseph CHEN</i>	961
Effects of Information Transparency on Supply Chain Quality Management <i>Jing Hua XIAO, Zhao Lin CHENG, Cai Wen ZHANG, Kang XIE</i>	966
Towards Better Supply Chain Visibility - the Design and Implementation of a Supply Chain System S-ConTrol to Support an Operational HQ in Singapore <i>Wen Jing YAN, Puay Siew TAN, Niak Wu KOH, Tan YONG QIANG, Allan Nengsheng ZHANG</i>	971
Hybrid Ant Colony Optimization for Library Distribution Network <i>Weidong LIN, E.S. CHAN, S.Y. CHIA, H. LI</i>	976
Using Decision Analysis Method to Evaluate the Cost-effectiveness of Similar effect Medical Materials in Hospital <i>Nai-Chuan FANG, Ming-Jong YAO, Tsueng-Yao TSENG</i>	981
2-tuple Linguistic Prioritized Harmonic Applied to Group Decision Making <i>Jin Han PARK, Jong Jin SEO, Young Chel KWUN</i>	986
The Associations between Professional Commitment, Learning Burnout, and Grade Point Average in Independent College Students <i>Aiqun YU, Ji-Wei MA, Yi-Wen CHEN</i>	991
AHP in Prioritizing Vibration Parameters for Maintenance of Machine Tools <i>Manjunath GOWDA, H. N. SURESH, K. M. BASAPPAJI</i>	996

Mathematical Programming Model for Type-I Two-sided Assembly Line Balancing Problem <i>Hsiu-Hsueh KAO, Din-Horng YEH, Sih-Ting HUANG</i>	1001
The Design of an AGV in the Manufacturing Cell <i>Suksan PROMBANPONG, W KIATTIPHATTHANANUKUL, A SONGSANAN, Assariya SUKIN</i>	1006
The Improvement in the Reliability Problem for Air Current Breaker's Over Current Protect Function <i>Cheng-Chung CHIEN, C.N. CHANG, Yung-Tang WU, C. C. TSENG, D.H. CHIU, J.K. WAN, C.S. WU, C.T. HSU, E.D. CHEN, F.H. LI, T.H. SHAO</i>	1010
A Study of Software Reliability Growth Model for Time-dependent Learning Effects <i>Kuei-Chen CHIU</i>	1015
Research on Machining Process Reliability in Multi-procedure Machining Processes <i>Ping JIANG, Yunyan XING, Yajie LIU, Bo GUO, Gan LIN</i>	1020
Vibrations of Timoshenko Beams with Damping and Forcing Terms <i>Norio YOSHIDA</i>	1025
A Performance Comparison Between the Base Stock (BS), Traditional Kanban Control System (TKCS) and Extended Kanban Control System (EKCS) <i>Alvin ANG</i>	1030
Air Traffic Management of an Airport Using Discrete Event Simulation Method <i>Maurizio BEVILACQUA, Filippo CIARAPICA, Giovanni MAZZUTO, Leonardo POSTACCHINI</i>	1034
Insertion Loss Analysis of Perforated Panel Muffler Using Finite Element Method with Equivalent Fluid Model <i>Jingxiang LI, Shengdun ZHAO, Kunihiko ISHIHARA</i>	1039
Personnel Selection System Framework Research <i>Zhengsheng HAN, Hongyan DUI, Shudong SUN</i>	1043
From Individual Creativity to Team Creativity <i>Liqun WEN, Mingjian ZHOU, Qiang LU</i>	1047
Application of Affective Engineering in the Opening and Closing of Sport Utility vehicle Tailgates <i>Taebeum RYU</i>	1052
The Impact Study of Transformational Leadership Style on Organizational Success <i>Akechai JUDKRUE</i>	1056
The Effect of Online Service Failures on Consumer Repurchase Intention Basing on Mainland China Online Retailing <i>Junfeng LIAO, Linlin ZHONG</i>	1061
Exploring the Intention of Customers to Use Innovative Digital Content Information Technology <i>D.Y. SHA, Guo-Liang LAI</i>	1065
New Formal Approach To Project Critical Buffer <i>Tomasz BLASZCZYK, Pawel BLASZCZYK</i>	1070
Investment Decisions on the Case Industrial Port BOT Project <i>Tyrone T. LIN, H.C. SU</i>	1075
A Trimming Design Method for Product Innovation <i>Yao-Tsung KO, Ping-Hong KUO</i>	1080
Multi-project Planning and Optimisation for Shipyard Operations <i>Allan Nengsheng ZHANG, B. MA, D. LOKE, S. KUMAR, Y. Y. CHAN</i>	1085

Research on Jiangsu PV Solar Industrial Cluster Upgrading Driven by RJVs <i>Lan CHEN, Bo WU</i>	1090
Exploring the Impact of Patent Expenditures on Performance: Evidence from Chinese Stock Market <i>Xin LI</i>	1095
Leader's Values, Abusive Supervision, and Employee Performance: A Theoretical Model <i>Xiaoli WEN, Chunhua CHEN</i>	1099
Research on the KMS for Small and Medium Manufacturing Enterprises based on ASP and CSP <i>Huiyu HUANG, Jianying LUO, Zhicong ZHANG</i>	1104
Temporal Network Analysis of Emerging Technologies: Topic Transition in World Wide Web (WWW) Conferences <i>Kazuma ARINO, Takao FURUKAWA, Nobuyuki SHIRAKAWA, Kumi OKUWADA</i>	1108
Knowledge Asset-based Three-stage Model of Innovative Enterprises Evolution <i>Yunmei WANG, Chunlin SI, Fan XIA, King-Lien LEE</i>	1113
Modelling Ontology for Supporting Human Resource Planning Process <i>Rohayati RAMLI, Mohd. Noah SHAHRUL AZMAN, Mohd Yusof MARYATI</i>	1118
Patent Portfolio Efficiency Using Data Envelopment Analysis: Case of Wind Power Market <i>Rahul KAPOOR, Matti KARVONEN, Tuomo KASSI</i>	1122
Study of Supplier Support through New Product Development in System Integration Industry - Comparison of Case Studies based on Different Product Newness <i>Min-Sun WUANG, Kuei-Fei YANG</i>	1127
Impact of Passionate and Charismatic Leadership on Creativity and Innovation within SMEs <i>Wilson MALADZHI, Bingwen YAN, Oluwole Daniel MAKINDE</i>	1132
Analysis of RFID Technology on Controlling Shrinkage and Anti-counterfeiting in Luxury Industry <i>Wei XU, Zhaotong LIAN, Xifan YAO</i>	1137
The Service Science Practice Research: A Proof of Service Concept on i236 Project in New Taipei City <i>Hung Chih LAI, Yao Cheng YU, Kae Kuen HU, Hui Shan KUO</i>	1142
The Evaluation of Enterprise Manufacturing Services Maturity Model <i>Hao LI, Yangjian JI, Xinjian GU, Guoning QI</i>	1147
Ten Steps in Mixed Engineering Education and Training <i>Hsing-yu HOU, Huey-shing TSAI</i>	1152
Bilingual Teaching Practices of "Quality and Reliability Engineering" Course <i>R. JIANG, T. WANG</i>	1156
An Empirical Study on Influencing Factors of Consumer Behavior of Engineering Insurance <i>Li DONG, Yan-ling LIU</i>	1161
Evaluating the Reliability of Infrastructure Networks by Resilience Analysis <i>C.Y. LAM, K. TAI</i>	1165
Visionary Leadership as a Catalyst for Innovative Culture in SMEs <i>Bingwen YAN, Wilson MALADZHI, Oluwole Daniel MAKINDE</i>	1170
Extra-cluster Knowledge Search and Innovation Performance: An Empirical Study Based on Industrial Cluster Firms from Yangtze River Delta in China <i>Ru-yan HONG, Jianmei MIAO</i>	1175

A Study of Regional Distributions and Dissimilarity Measures for Multi-Scale Nonlinear Structure Tensor in Texture Segmentation <i>Shoudong HAN, Yong ZHAO, Wenbing TAO</i>	1180
Research on Project Portfolio Management of Product Development based on 3D Visualization <i>Angang WEI, Gang ZHAO, Changyu CHEN, Fei WANG</i>	1185
Research of Idea Generation Process for Fuzzy Front End Based on Patent Analysis <i>Jing GUO, Ping JIANG, Jingwei GUO, Runhua TAN</i>	1190
Virtual Human Emotional Behavior Model based on Neural Network <i>Na REN, Tingting ZHAO, Hongjiang WANG, Rongxue ZHANG, Wenqiang ZHANG, Nan ZHANG</i>	1195
Research on Image Matting Technology Based on Image Edge Detection <i>Rongxue ZHANG, Tingting ZHAO, Renna , Hongjiang WANG</i>	1199

Decision Analysis & Methods (4)

Factors for the Introduction of RFID on the Distribution Industry <i>Hsin-Pin FU, Z.J DU, A LIN, Y.L LIN</i>	1204
Decision Evaluation for Damage Evaluation and Prevention Analysis in Bank Operational Risk Management <i>Aron LARSSON, Sara VICKMAN</i>	1209
Evaluating GHG Components using Artificial Intelligence: Connection Weight Approach <i>Oludolapo OLANREWAJU, Adisa JIMOH, Pulek KHOLOPANE</i>	1214
The AHP-based Decision Making on Innovation Trajectories in Public Research and Development Organisations <i>Pawadee MEESAPAWONG, Yacine REZGUI, Haijiang LI</i>	1218
An Optimal LED Allocation System Based on Multilevel Integer Programming Method <i>Haw-Ching YANG, T.H. TSAI, H.W. CHEN, F.T. CHENG</i>	1223
Analyzing Consequences of Diabetes Mellitus Using Intuitionistic Fuzzy Set <i>Sujit DAS, Samarjit KAR</i>	1228
Effects of Buyers Capacity Limitation in an Integrated Lead Time Controllable Consignment Stock Inventory System <i>Huizhi YI, Bhaba SARKER</i>	1233

Human Factors (1)

Assessment of Architectural and Physical Factors in Human Resources Performance in Project-Oriented Organizations <i>Mona FOROOZANFAR, Mahmood GOLABCHI, Saied YOUSEFI</i>	1238
Effects of Load-Carrying Postures and Gender on Postural Sway <i>Xingda QU</i>	1243
Study on Construction and Implement of User Model in Turret Display and Control System <i>Kan ZHANG, Qing XUE, Minxia LIU, Qiqi YIN</i>	1248
Human-computer Interaction Analysis of Turret Based on Context-Aware <i>Li-Ying FENG, Qi-qi YIN, Li-tao WANG, Qing XUE</i>	1253
The Comparison of Ergonomics Postures Assessment Methods in Rubber Sheet Production <i>Panya WINTACHAI, Nivit CHAROENCHAI</i>	1257

A Paper Prototype Usability Study of a Chronic Disease Self-management System for Older Adults 1262
Da TAO, Calvin OR

Property of Worker Allocation Optimization with Two Professional Workers in Limited-Cycle Multiple Periods 1267
Xianda KONG, Jing SUN, Hisashi YAMAMOTO, Masayuki MATSUI

Human Factors (2)

Applied Human Factors Engineering in Advanced Carriage Design of Mass Transport System 1272
Seng Fat WONG, Qili CHEN

Managerial Compensation and Earnings Management: From the Managerial Overconfident Perspective 1277
Jing SUN, Xiaofeng JV, Yanmin PENG, Yue CHANG

A Study and Survey on the Service Condition of Barrier-free Facilities in the Transportation System with Ergonomic Evaluation 1282
Seng Fat WONG, Lili ZHONG, Weng Keong CHAN, Weng Hou LEONG, Kin Seng HO

Association of Visual Abilities, Motor Skill and Anticipation Responses on Parking Performance 1287
Bor-Shong LIU, Hsien-Yu TSENG, Tung-Chung CHIA, Tsung-Yen HO, Yu-Ho CHEN

An Airworthiness SHELL Model for Aircraft Maintenance 1292
Tsun Tat WONG, Sun TONG

The Mediating Impact of Ergonomics Between Existing Safety Culture And Targeted Safety Culture Amongst Safety And Health (SH) Practitioners 1297
Rozlina MD SIRAT, Awaluddin MOHAMED SHAHAROUN, Norhayati ZAKUAN, Syed Abdul Hamid SYED HASSAN

Ergonomics Effects of Work Pace And Work:Rest Ratio on Repetitive Powered Handtool Operations 1302
Jia-Hua LIN, Raymond MCGORRY, Rammohan MAIKALA

Causing Mechanism Analysis of Human Factors in the Marine Safety Management Based on the Entropy 1307
Haiyan WANG, Tingting DAI

Operations Research (4)

Investigating Sensitivity of Multi Response Optimization Methods 1312
Nitendra GAUTAM, Om Prakash YADAV, Bimal NEPAL

Comparing Two Proposed Meta-Heuristics to Solve a New P-Hub Location-Allocation Problem 1317
Ali GHODRATNAMA, Reza TAVAKKOLI-MOGHADDAM, Armand BABOLI

Real Options Between Three Asymmetric Firms 1322
Takashi SHIBATA

Modeling Fixed-Sequence Multi-Stage News Agency for Efficient Message Total System Time 1325
Abdullah ABDUL JABBAR, Nashat FORS, Seraj ABED, Sherif RABIA

Use of Shrinkage and Grouping Approaches to Forecasting Seasonal Demand 1330
Kui ZHANG, Pengyi GAO, Ziwu LONG

DEA Sensitivity Analysis on the Factors Responsible for Industrial Energy Consumption: Case Study on the Canadian Industrial Sector 1334
Oludolapo OLANREWAJU, Adisa JIMOH, Pulek KHOLOPANE

Arbitrage and Spread in FX market: an Extended Glosten and Milgrom Model 1338
Ming MA, Yufei ZHANG

Operations Research (5)

Optimal Pricing and Lot-sizing for Fresh Produce and Foods with Quality and Physical Quantity Deteriorating Simultaneously 1341
Yiyan QIN

Online Dispatching of Rail-Guided Vehicles in an Automated Air Cargo Terminal 1344
Wuhua HU, Jianfeng MAO

Maximizing the Total Weight Value of Just-In-Time Jobs in Identical Parallel Machines with Periodic Time Slots 1349
Eishi CHIBA, Takao KAGEYAMA, Yoshiyuki KARUNO, Hiroyuki GOTO

A New Lagrangian Decomposition and Coordination Approach for Energy Portfolio and Production Planning for Multiple Companies 1354
Eiji SEKIYA, Tatsushi NISHI, Masahiro INUIGUCHI

Maximum-Profit Rooted Not-Necessarily-Spanning Tree Problem 1359
Eishi CHIBA, Yusuke ABE, Toshiaki SAITOH, Takao KAGEYAMA, Hiroki KOGA, Takashi KOBAYASHI, Hiroyuki GOTO

An Optimal Model for Adding Relation to an Indirect Subordinate in a Linking Pin Organization Structure 1364
Kiyoshi SAWADA

MTS Lead Time Uncertainty Study in Periodic Review MTS-MTO System 1368
Feng Yu WANG, Rajesh PIPLANI, Laura Xiao Xia XU, Amrik Singh BHULLAR

Engineering Education and Training

Research on Foundation and Practice of 123 Modes in Professional Engineer Education Training Plan 1373
Wang JINGHUA, Zhou JUN, Li JING, Yang ZEHUI, Zhang XINGUANG

Improving Capacity for Engineering Systems Thinking (CEST) among Industrial Engineering Students 1378
Sigal KORAL KORDOVA, Moti FRANK

Management Model to Certification and Recertification Criteria to Professional Engineers 1381
Oscar Alejandro VASQUEZ BERNAL, Felix Antonio CORTES ALDANA

Analyzing International Scientific Collaboration Pattern for China by Using ESI Database 1386
Dan XIANG, Huaxing LI

Externalization Of Knowledge In Indian Higher Education Through Increase In Research Publications 1391
Kalyan Kumar BHATTACHARJEE

Towards Modeling Manufacturing Flexibility Information in Metalcasting SMEs 1396
Rhythm WADHWA

Experience – An Essential Component to Improve the Confidence in Using Technology For Learning: An Empirical Study in Hong Kong Higher Education 1401
Hon Keung YAU, Alison Lai Fong CHENG

Applying Fuzzy MADM Approach for the Selection of Technical Institution 1405
Victor GAMBHIR, N.C. WADHWA, Sandeep GROVER, Sanjeev GOYAL

Supply Chain Management (4)

Fuzzy Power Stream Mapping to Measure Dominating Power in Supply Chain <i>Anirban KUNDU, Vipul JAIN</i>	1409
Developing a Web-based Collaborative Forecasting Platform to Support Tourism Supply Chain Management <i>Xinyan ZHANG, Haiyan SONG</i>	1414
Determination of Size of Supply Base under Uncertain Cost Information <i>Jishnu HAZRA, B. MAHADEVAN</i>	1419
A Quantity-Flexibility Contract in Two Periods with Supply Chain Coordination <i>Xin LI, Zhaotong LIAN, Wenhui ZHOU</i>	1424
Stochastic Demand Fulfillment Model with Multiple Demand Classes: Using Revenue Management <i>Wen YANG, Richard Y. K. FUNG</i>	1429
Virtual Depot Approximation for the Transshipment Problem <i>Dmitry KRASS, Oleksandr SHLAKHTER</i>	1434

Supply Chain Management (5)

Ranking of Automotive Supplier Selection Criteria in Pakistan: An AHP Approach <i>Fikri DWERI, Sharfuddin Ahmed KHAN</i>	1439
Modeling the Macro-environmental Influences: An International Logistics View <i>Supachart IAMRATANAKUL, Bordin RASSAMEETHES, Vatcharapol SUKHOTU, Sununta SIENGTHAI, Voratas KACHITVICHYANUKUL, Ravi SHANKAR</i>	1443
Information Security in Supply Chains - A Process Framework <i>Arup ROY, A.D. GUPTA, S.G. DESHMUKH</i>	1448
A Modeling of Retailers Pricing in Advance Selling Based on Fairness and Reciprocity <i>Junfeng LI, Shuping YI</i>	1453
A MILP Model and Heuristic Approach for Supply Chain Network Design with Minimum Volume Constraints <i>Mouna KCHAOU BOUJELBEN, Celine GICQUEL, Michel MINOUX</i>	1458
Academic Supply Chain Management for Tertiary Educational Institutions <i>Bishwajit Banik PATHIK, Md. Mamun HABIB</i>	1463

Supply Chain Management (6)

A Group Genetic Algorithm for the Fleet Size and Mix Vehicle Routing Problem <i>Michael MUTINGI, Charles MBOHWA</i>	1468
Optimizing Replenishment Policy for Deteriorating Item Considering Inventory Dependent Demand, Inspection and Imperfect production <i>Chun-Jen CHUNG</i>	1473
Integrated Supplier-Buyer Inventory Model with Optimal Reorder Point, Controllable Lead Time, and Service Level Constraint <i>Yosi Agustina HIDAYAT, Suprayogi SUPRAYOGI, Sifa ISLAM, David Try LIPUTRA</i>	1478

New Approaches for Analyzing the Logistical Synchronization of Material Provision in Production Networks <i>Patrick PRUSSING, Sven BAUMGARTEN, Georg ULLMANN</i>	1483
An Optimization Based Decision Support Model for Thai Rubber Industry Supply Chain : Preliminary Results <i>Janya CHANCHAICHUJIT, Mohammed QUADDUS, Martin WEST, Jose SAAVEDRA-ROSAS</i>	1488
Modeling an Industrial Strategy for Inventory-Distribution Coordination of Telecom Operators in China: the ‘Consignment Stock’ Case <i>Tianjian YANG, Yujia FAN, Xinzhe WANG</i>	1493
A Bi-objective Stochastic Programming Model for a Green Supply Chain with Deteriorating Products <i>Zeinab SAZVAR, S.M.J. MIRZAPOUR AL-E-HASHEM, Armand BABOLI, M.R. AKBARI JOKAR, Yacine REKIK</i>	1497
An Order Splitting Policy for Deteriorating Products with Non-linear Holding Cost under Stochastic Supply Lead Time <i>Zeinab SAZVAR, M.R. AKBARI JOKAR, Armand BABOLI</i>	1502

Quality Control & Management (3)

Customer Value Creation through Product Quality and Customer Usage of Product Functions: Managing the Industry Shift towards Smartphones <i>Bjoern FRANK, Boris HERBAS TORRICO, Takao ENKAWA</i>	1507
A Simple Method on Power Calculation in Experiments for Treatment Comparison <i>Huirui GUO, Pengying NIU, Ferenc SZIDAROVSKY</i>	1512
Empower the Future: A Culture of Empowerment - The Link to Organisational Effectiveness <i>Jurgens FRERK, Charles MBOHWA</i>	1517
Process Reliability Modeling Based on Characteristic Mapping <i>Wei DAI, Fen KUANG, Jin AN, Yu ZHAO</i>	1523
A Case Based Approach for Modeling Process Elements and Overall Service Quality Perception <i>Sheila ROY, Indrajit MUKHERJEE</i>	1528
An Integrated Architecture for Lean Waste Analysis <i>Mohamed K. OMAR, Rohana ABDULLAH, Md Nizam ABD RAHMAN</i>	1533

Information Processing and Engineering (1)

Improvement of Retrieval in Case-based Reasoning for System Design <i>Thierry COUDERT, Elise VAREILLES, Laurent GENESTE, Michel ALDANONDO</i>	1538
Construction of Transport Networks that Combine Building Pathways and Roads for Evacuation Routing and Scheduling Problem <i>Mojahid SAEED OSMAN, Bala RAM</i>	1543
A Case Study on Real-Time Parcel Delivery Sequence Optimization <i>Jaekyung YANG, Wooyeon YU, Myoung Jin CHOI</i>	1548
Comparing Complex Business Process Models <i>Philip WEBER, Paul TAYLOR, Basim MAJEED, Behzad BORDBAR</i>	1553
Critical Business Objects and Its Applications in Designing Performance Management Systems <i>Mohamad AGHDASI, Ehsan MALIHI, Yasaman ASADI, Shohreh GHADAMI</i>	1558

Lossless Image Compression with Areas of Cross-Point Regions for Modeling 1563
Tin Thanh DANG, Canh Xuan HUYNH

Information Processing and Engineering (2)

Usability of an Electronic Health Record 1568
Rui PEREIRA, Julio DUARTE, Maria SALAZAR, Manuel SANTOS, Antonio ABELHA, Jose MACHADO

A Hybrid Evolutionary-based Process Mining Technology to Discover Parallelism Structures 1573
Hsin-Jung CHENG, Yeh-Chun JUAN, C. OU-YANG

Logistics Process Modeling and Execution in the Cloud 1578
Jens LEVELING, Damian DANILUK, Arkadius SCHIER

Application of Exploratory Data Analysis in Healthcare: the Case of Warfarin Initiation Phase in a Swedish Hospital 1583
Hendry RAHARJO, Baris TEKIN, Jingren CHANG

Exploring How Add-On Software Development Affects Graphic Editors' Learning Results 1588
Liang-Yuan HSIUNG, Mu-Hui LAI, Hwa-Ming NIEH, Yuan-Du HSIAO

Extendible Data Model for Real-time Business Process Analysis 1593
Marcello LEIDA, Andrej CHU, Maurizio COLOMBO, Basim MAJEED

Research on Real-time Temperature Monitoring System of Thermal Power 1598
Jiang GUO, Ming-shu FAN, Kai-kai GU, Xiao-Lu XU, Ke-fei ZHANG

Developing Kernel Intuitionistic Fuzzy C-Means Clustering for E-Learning Customer Analysis 1603
Kuo-Ping LIN, Ching-Lin LIN, Kuo-Chen HUNG, Yu-Ming LU, Ping-Feng PAI

Production Planning & Control (4)

Economic Production Quantity Model with Imperfect Quality During a Process Adjustment Period 1608
Ismail AL-ME'RAJ, Shokri Z. SELIM, Yahya CINAR

A Review of Key Research Streams for Managing Uncertainties in Production Planning and Control 1612
Emrah ARICA, Jan Ola STRANDHAGEN, Hans Henrik HVOLBY

A Novel Process Planning Approach for Hybrid Manufacturing Consisting of Additive, Subtractive and Inspection Processes 1617
Zicheng ZHU, Vimal DHOKIA, Stephen NEWMAN

A Real Time Event Supervisor System for Efficient Production Control 1622
Emrah ARICA, Sindre GRINDHEIM, Olivier ROULET-DUBONNET

The Problem of One-Dimensionally Cutting Bars with Alternative Cutting Lengths in the Tubes Rolling Process 1627
Richard LACKES, Markus SIEPERMANN, Torsten NOLL

Assembly Process Driven Product Architecting 1632
Harrys DANILIDIS, Udo LINDEMANN

Systems Modeling and Simulation (1)

Estimating Machine Startup Timing with Petri Nets 1637
Reggie DAVIDRAJUH

Simulating Staffing Needs for Patient Registration in a Hospital <i>Sung SHIM, Arun KUMAR, Roger JIAO</i>	1642
Simulation Based MANOVA Analysis of Pharmaceutical Automation System in Central Fill Pharmacy <i>Debiao LI, San Wong YOON</i>	1647
Enriching the Generic Simulation Modeling and Executing Framework with the Statistical Software Package R and the SQLite Database <i>Dae-Eun LIM, Jangwon CHO, Haejoong KIM, Hyun-Min PARK</i>	1652
Coil Baking Process Modeling with Neural Network <i>Wimalin S. LAOSIRITAWORN</i>	1656
Integrated Optimization of Pricing, Production and Delivery Decisions in a SVMB System of Deteriorating Items and PSO Algorithm <i>Zhixiang CHEN, Bhaba SARKER, Bingqing WU</i>	1661
System Reliability Modeling for Multi-state Hierarchical System with Multi-level Information Aggregation <i>Mingyang LI, Byoung Uk KIM, Jian LIU</i>	1666
Systems Modeling and Simulation (2)	
A Case Study of Using Simulation for Process Improvement in a Hospital Admission Center <i>Pei-Fang TSAI, Jian-Ciang CHEN, Jhih-Han CHEN, Fu-Man LIN, Pornnipa ONGKUNARUK</i>	1671
Applying the Informatinal Approach to Global Optimization to the Homoscedastic Stochastic Simulation <i>Jun YUAN, Chengwei HAN, Szu Hui NG</i>	1676
SLA-Based Virtualized Resource Allocation for Multi-tier Web Application in Cloud Simulation Environment <i>Haitao YUAN, Jing BI, Bo Hu LI, Xudong CHAI, Ming TIE</i>	1681
Simulation Study on the Effect of Diagnosis Related Group Design in Length-of-Stay and Case-Mix Index for Hospitals in Taiwan <i>Jian-Ciang CHEN, Pei-Fang TSAI, Fu-Man LIN</i>	1686
Synthetic Population - A Case Study of Hong Kong Population <i>Yam Hon CHAN, Kwok Leung TSUI</i>	1691
Consideration of Human Reliability in Actor-Oriented Simulation of New Product Development <i>Soenke DUCKWITZ, Raymond DJALOEIS, Malte HINSCH, Joerg FELDHUSEN, Christopher M. SCHLICK</i>	1696
Layout Redesign of a Warehouse through Modeling and Simulation <i>Chin Soon CHONG, Feng Yu WANG, Laura Xiao Xia XU, Eng Hock LUA</i>	1701
Picking Path Optimization of Automated Storage and Retrieval System <i>Xiaocui MIAO, Lindu ZHAO</i>	1706
Service Innovation and Management (1)	
Modeling Population Dynamics on a Spatially Distributed Service Network: Depicting the Influence of Socio-economic Factors on Service Delivery <i>Joymariel MELECIO-VINALES, Alexandra MEDINA-BORJA, J MEDIN</i>	1711

Microfoundations of Dynamic Capabilities: A Case Study in Airline Catering Industry <i>Emre EKSI, Ayberk SOYER, Sezi CEVIK ONAR</i>	1716
An Operational Definition of Path Dependency <i>Cigdem KADAIFCI, Ayberk SOYER, Sezi CEVIK ONAR</i>	1721
Developing a Measurement Model for Path Dependency <i>Burcu AKYILDIZ, Sezi Cevik ONAR, Ayberk SOYER</i>	1726
The Driving Forces of Customer Involvement in Service Innovation from the Customer <i>Jun JIN, Junying CHEN</i>	1731
Characterizing Product-Service Systems in the Healthcare Industry - An Internal Stakeholder Perspective <i>Man Hang YIP, Robert PHAAL, David ROBERT</i>	1736
 Service Innovation and Management (2)	
Applying Quality Function Development to Develop the Home Delivery Service Model for Specialty Foods in Traditional Market <i>Mu-Chen CHEN, Chia-Lin HSU, Ying-Yi LEE</i>	1741
Research on Service-oriented Manufacturing Based on Service Knowledge Integrated Platform <i>Gao NA, Zhao SONGZHENG</i>	1746
The Application of Value Innovation from Blue Ocean Strategy in Cultural Creative Industry <i>Tain-Fung WU, Chih-Lan KAO</i>	1750
Pathway Identification via Process Mining for Patients with Multiple Conditions <i>Xiaojin ZHANG, Songlin CHEN</i>	1754
Service Recovery Matrix: Matching Service Failures and Recovery Options <i>Victor John CANTOR, Richard LI</i>	1759
Utilizing QFD in Creation of a New Industrial Service Concept <i>Ville OJANEN, Tatiana SHUNINA, Tuomo KASSI</i>	1764
Exploring Innovation Model for Business Technology Incubator in Developing Countries <i>James K. C. CHEN, Chu-Shiu LI, Amrita BATCHULUUN</i>	1769
 Service Innovation and Management (3)	
The Impact of Culture, Leadership, Governance, and ICT Systems on Service Innovation in Service Value Networks <i>Renu AGARWAL, Willem SELEN</i>	1774
The Relationships Between Beach Vacationers' Motivation and the Physical Settings of Beaches <i>Huey-Hsi LO</i>	1779
Equilibrium Strategic Behavior and Optimal Pricing with Experience Service <i>Zhaotong LIAN, Jinbiao WU, Lihua CAO</i>	1785
Exploring CRM Implementation - The Conceptual Model of the Impact of CRM on Service Operations <i>Pimjai TONGMEE, Prattana PUNNAKITIKASHEM</i>	1790
An Exploratory Study on Preferred Open Innovation Types and Partners in South African SMEs <i>Willie KRAUSE, Corne SCHUTTE, Niek DU PREEZ</i>	1795

External Marketing and Internal Marketing: Which Capability Holds the Key to an Outstanding Performance? 1800
Wen-Jung CHANG, Christina TAY

Technology and Knowledge Management (4)

Do Individual Emotion and Corporative Environment Influence Technology Transfer in Taiwan Technology Industry? 1805
Meng-Shan TSAI, Meng-Chen TSAI, Chi-Cheng CHANG

Research on Knowledge Innovation Oriented Post-evaluation Method of Basic Research Project 1810
Lin GONG, Zixu CHEN, Guoxin WANG, Jiping LU

Analyzing the Building and Using Situations of E-learning Platform: From Total Quality Management and Knowledge Management Perspectives 1815
Meng-Shan TSAI, Meng-Chen TSAI, Chi-Cheng CHANG

The Financial Impact of Using RFID in Healthcare 1820
Ibrahim AL KATTAN, Taha ANJAMROOZ

Technology Evaluation: Fitting Tools and Techniques to the Stages of the Evaluation Process 1825
Fernando ROMERO, Fernando BARBOSA

Knowledge Management Maturity Assessment in Research Institutions Using Analytic Hierarchy Process and Fuzzy Comprehensive Evaluation Method 1830
Jingwen LI, Yaoguang HU, Jialin HAN

Quality Dimensions Relevant to a First Tier Automotive Supplier: Case Study at an Automotive Seat Cover Supplier 1835
Kem RAMDASS

Technology and Knowledge Management (5)

Government as the Decision Maker in Infrastructure Projects: What Diffusion Models Tell Us 1840
Ann KLOBUCHER, Dan EDGAR, Jessica HILDAHL, Melissa ELFERING, Harm-Jan STEENHUIS

Knowledge Engineering in Interdisciplinary Research Clusters 1845
Claudia JOOSS, Rena VOSSSEN, Ingo LEISTEN, Anja RICHERT, Sabina JESCHKE

The Complementary of TQM on Technology Management Strategy: A Multinational Perspective from the ASEAN Automotive Industry 1853
Pei-Lee TEH, Tritos LAOSIRIHONGTHONG, Dotun ADEBANJO

Does Science and Technology Correlation with Academic Ability? a New Science and Technology Linkage Evaluation Ranking System Introduce 1858
Yi-Ching LIAW, Chin-Yuan FAN, Te-Yi CHAN, K. L. CHI

Critical Knowledge Sharing Barriers: An Interpretive Structural Modeling Approach 1863
Bhupendra Prakash SHARMA, M. D. SINGH

A Comprehensive Instrument to Efficiently Measure Firm IT Capability in an IT Environment 1868
Chui Young YOON, Seung Yong KIM

Facilities Planning and Management

Process Management within a Multi-project Large-scale Plant Engineering Environment 1873
Egon MUELLER, Ralph RIEDEL, Martin DOMAGK, Christian BARNSTEDT, Florian MEURS

A New Multi-objective Mathematical Model for Relief Logistic Network under Uncertainty <i>Mohammad REZAEI-MALEK, Reza TAVAKKOLI-MOGHADDAM</i>	1878
Bibliometric Analysis of Power Grid Research: Identifying Knowledge Domain <i>Ichiro SAKATA, Hisato TASHIRO</i>	1883
Exploring the Antecedent and Subsequence Factors for Knowledge Management <i>Meng-Chen TSAI, Chi-Cheng CHANG</i>	1888
A Location - Routing Problem with Emergency Referral Solved by Using a Genetic Algorithm <i>Phongchai JITTAMAI, Jarupong BANTHAO</i>	1893
A Single Phase Optimization of Stochastic Location Allocation Problem in a Two Echelon Supply Chain <i>Mahdi BASHIRI, Mehdi JAFARIAN</i>	1898
Factory Layout Benchmark with Extended Failure Mode and Effect Analysis <i>Uwe DOMBROWSKI, Christoph RIECHEL</i>	1903
Major Accident Prevention in the Planning Process of Offshore Operation and Maintenance Activities - Initial Study <i>Sizarta SARSHAR</i>	1909

Reliability and Maintenance Engineering (3)

Risk Metrics: Interpretation and Choice <i>Inger Lise JOHANSEN, Marvin RAUSAND</i>	1914
How to Develop the Grouping Strategy for Offshore Wind Turbines at the Wind Farm Level <i>Zafar HAMEED, Jorn VATN</i>	1919
Reliability and Spare Parts Estimation Taking into Consideration the Operational Environment - A Case Study <i>Abbas BARABADI, Behzad GHODRATI, Javad BARABADY, Tore MARKESSET</i>	1924
Using Piecewise Exponential Model to Schedule Preventive Maintenance Interval in Manufacturing Systems <i>Liangpeng CHEN, Boray HUANG, Loon Ching TANG, Min XIE</i>	1930
Simulation on Optimum Operation of Ship Main Engine Support System by Using System Dynamics <i>Dhimas HANDANI, Makoto UCHIDA</i>	1935
Reliability Optimization of a Series System with Multiple-choice and Budget Constraints Using a Genetic Algorithm <i>Alireza ZAREI, Ahmadreza ZAREI</i>	1940
Optimal Replacement Threshold and Inspection Interval for Condition-Based Maintenance with Variable Failure Cost <i>Hamid Reza GOLMAKANI, Morteza POURESMAEELI</i>	1944

E-Business and E-Commerce

Cultural Adaptations of Macau's Casino Hotel Web Sites <i>Chang Boon LEE, Stella LEONG</i>	1949
A Study of Impulse Buying in Virtual Communities <i>Guohong WEI, Chun HU</i>	1954

Generic Modeling Propositions for Configuring, Sale, Product and Production <i>Linda ZHANG, Elise VAREILLES, Michel ALDANONDO, Petri HELO</i>	1959
Evaluations of A Core Broking Model from the Viewpoint of Online Group Trading <i>Pen-Choug SUN, Michael ODETAYO, Rahat IQBAL, Anne JAMES</i>	1964
The Effect of Online Group-buying on Off-line Buying Decisions <i>Junfeng LIAO, Xichen DONG, Xunqi LIU</i>	1969
Study on the Loss of Social Welfare Caused by Search in the Market Based on the Asymmetric Information <i>Qiong WANG, Shixiang HUANG</i>	1972

Project Management (2)

Entering the Nuclear Power Plant Supply Chain: the France Case Study <i>Giorgio LOCATELLI, Mauro MANCINI, Gianluca COCCO, Valentino RUZZON</i>	1976
Bidding Decision Making in Construction Industry: An Analysis Based on Procedural Rationality <i>Zhuo FENG, Shuibo ZHANG, Ying GAO, Fei KANG</i>	1981
Strategic Resource Planning Based on Staffing Profiles <i>Eduardo MIRANDA</i>	1986
Theory of the Triple Constraint - a Conceptual Review <i>C. Jurie VAN WYNGAARD, Jan-Harm PRETORIUS, Leon PRETORIUS</i>	1991
Accounting for Risk Interactions and Using Importance Measures for Risk Prioritization in Project Management <i>Chao FANG, Xun XIAO, Xiaoyan ZHU</i>	1998
Perceptual Differences Between Project Managers and Sponsors in the Initiation Phase of a Project <i>Stephen ONU</i>	2003
Risk Management for Construction Projects with Colored Petri Nets: an Agent-Based Modeling Framework <i>Yangbing ZHANG, Yongqiang CHEN, Xingyu ZHU</i>	2008
On Deployment of Empowered Team Concept into Matrix Organization <i>Hanwei XU, Bin LIN, Minmin SHEN</i>	2013
Robust Optimization of Project Portfolio Selection and Scheduling Problem with Stochastic Returns <i>Ying LI, Yongyi SHOU</i>	2018

Global Manufacturing and Management (1)

Strategy for Virtual Factory Information System Design <i>Yuqiuge HAO, Ahm SHAMSUZZOHA, Petri HELO</i>	2023
Virtual Enterprise Management: Perspective of Process-Based Business Collaboration <i>AHM SHAMSUZZOHA, Filipe FERREIRA, Jose FARIA, Americo AZEVEDO, Yuqiuge HAO, Petri HELO</i>	2028
The Relationship among Country of Origin Effects, Brand Image and Purchase Intentions in Taiwanese Apparel Market <i>Chu Erh HSIUNG, Cheng-Ter HO</i>	2033
Scientific Catch-up Process in Asian Countries: A Case Study of Solar Cell <i>Ichiro SAKATA, Hajime SASAKI, Hisato TASHIRO, Aya ISHIHARA, Keiko KAYUKAWA</i>	2038

Technology Gap, Market Experience and MNCs' Technology Licensing Strategies: Evidence from China 2043
Lei XIONG, Xiaobo WU, Rui GUO, Ruishe ZENG

Using System Thinking to Investigate Co-Opetition Analysis for Manufacturers in the Cloud Industry 2048
Chin-Yuan FAN, Sheau-Pyng JU, Ming-Fong LAI

Global Manufacturing and Management (2)

Global Product Development: the Experience in a Brazilian Manufacturing and Assembler Automotive Subsidiary 2053
Andre SEGISMUNDO, Paulo A. CAUCHICK MIGUEL

The Impact of Guanxi on Internationalization Entry Mode for Chinese Enterprises: A Multiple-Case Study 2058
Rongjun DU, Xiaobo WU, Xubo BAI

Latest Developments Aiming an Integrated Management System Tool Focusing Maturity Assessment 2063
Jose Pedro TEIXEIRA DOMINGUES, Paulo SAMPAIO, Pedro AREZES

Facilitating Customer Involvement Into the Decision-making Process of Concept Generation and Concept Evaluation for New Product Development 2068
Chih-Hsuan WANG

Information Interpretation-oriented Integration Interface for Manufacturing Enterprises 2073
Changyu CHEN, Gang ZHAO

Safety, Security and Risk Management (2)

Value Drivers in Supply Chain Security 2078
Lea HANNOLA, Ville OJANEN, Sirra TOIVONEN, Tuomo KASSI

Development of a Barrier Management System for Continuous Monitoring and Maintenance of Safety Barriers 2083
R.M. Chandima RATNAYAKE, Sukvir PANESAR SINGH, Jawad RAZA

How Can We Improve Healthcare Management for Patient Safety by Analyzing Large-Scale Incident Reports ? 2088
Masanori AKIYAMA, K FUJITA

Prediction of Soleplate Corrosion in Petroleum Storage Tank Based on Grey Model GM(1,1) 2093
Xiao-gang ZHAO, Yi ZHOU, Fei CHENG, Jian-cheng ZHU, Jie ZHENG, De-peng GAO

Modeling and Reliability Assessment of a 3-channel Safety-instrumented System 2098
Yiliu LIU, Marvin RAUSAND, Hui JIN

Dynamic Measurement and Evaluation on Foreign Exchange Risks of International Construction Projects 2103
Xiuqin WANG, Bin GAO

Resilience Measurement for A Class of Supply Chain Disruption 2108
Shu YI, Xinping WANG, Lindu ZHAO, Micheal HERTY

Estimating the Remaining Useful Life of Li-ion Batteries with a Bayesian Updating Model 2113
Yizhen HAI, Jie TANG, Kwok Leung TSUI

Poster Session 2

Reliable Joint Inventory Location Problem with Penalty Cost and Capacitated Facilities <i>Elham TAGHIZADEH, Mostafa ABEDZADEH, Mostafa SETAK</i>	2117
Impact of Customer Response to Retailer Stock-out on Supply Chain Performance <i>Xiaoling ZHANG, Qiang LU, Teresa WU</i>	2122
Pricing and service level strategies based on customers <i>Junxiu JIA, Z. YUAN</i>	2127
A Simulation Based Experimental Investigation of Demand and Supply Uncertainty <i>Carman Ka Man LEE, Rohan PASARI</i>	2131
Forecasting Product Returns Using Causal Analysis and Multiple Linear Regression <i>Shantanu CHAKRABORTY, Rajesh KUMAR, Prasanna AKELLA, Satyendra SINGH</i>	2136
Evaluating Retailer Consumer Return Policy under VMI Partnership <i>Shahrokh HEMATYAR, S. Kamal CHAHARSOOGHI</i>	2140
Decision Aided Tool for Recycled Spare Parts Management Under Uncertainties <i>Nouha GHORBEL, Sid-Ali ADDOUCHE, Abderrahman ELMHAMED, Younes BOUJELBENE</i>	2145
An Integrated Method of Hierarchical Planning and "Pull-way" Production Control for Lean Shipbuilding <i>Mingdi ZONG, Houfang SUN</i>	2150
Optimal Control of a SOM System with Demands for Product and PSS <i>Kangzhou WANG, Zhibin JIANG, Tongyi WANG, Guowei LI</i>	2155
A Due Date Assignment Method based on LOMC <i>Hao-yun YAN, Bin WU, Hong-yu LI</i>	2160
Analysis of the Life Cycle Trend of the Export Market of Taiwanese Bicycle Industry <i>Leichuan LIN, Shan-Yau WU</i>	2165
A Novel Formulation for Unit Commitment With Wind Power Considering Production Cost of Every Generator <i>Guowei HU, Zhaohong BIE, Bowen HUA</i>	2169
Orders Tracking and Production Visualization Oriented Lean Production <i>Jialin HAN, Yaoguang HU, Jingwen LI, Qiqi YIN</i>	2174
An Adaptive Approach to Failure Modes and Effects Analysis for Computer-aided Inspection Planning <i>Shirin MIRDAMADI, Ali SIADAT, Jean-Yves DANTAN, Lionel ROUCOULES</i>	2179
Problem Transformation Approach to Solve the Single-machine Scheduling Problem with Availability Constraints <i>Kenta TAKII, Shunji TANAKA</i>	2184
Practical Order Release Planning Linking Enterprise and Shop Floor Tracking Systems for High-Mix Low-Volume (HMLV) Manufacturing <i>Tay Jin CHUA, Tian Xiang CAI, Feng Yu WANG</i>	2189
A New Intuitionistic Fuzzy Cosine Similarity Measures and Its Application <i>Kuo-Chen HUNG, Kuo-Ping LIN</i>	2194
Performance and Efficiency Measurement for Canadian Bank Branches <i>Zijiang YANG, Yuanyuan LUO, Younes BENSLIMANE</i>	2199

Fuzzy Random Possibilistic Programming Model for Multi-objective Problem <i>Arbaiy NUREIZE, Junzo WATADA</i>	2204
Effect of Market Orientation on Performance: An Empirical Study <i>Hung-Tso LIN, Yin-Chi HUANG, Chia-Hua LEE</i>	2209
A Game Theoretic Model for Analysis of Material Reuse Modularity <i>Yangjian JI, Roger JIAO, Liang CHEN, Chunlong WU, Hao LI</i>	2214
The Impacts of Product Delay Cost on Rush Order Decision for Job Shop Production Systems <i>Min WANG, Cheng-Yu HUANG, Chun-Yuan CHENG</i>	2219
Application of Undesirable Input-Output Two-Phase DEA Model in Environmental Performance Audit <i>Rongbing HUANG</i>	2224
The Experiment and Numerical Simulation for Hydro-mechanical Deep Drawing Process <i>Fan XU, Shengdun ZHAO, Jun LIN</i>	2229
Experimental Investigation of the Influence of the Different Loading Conditions on the New Type Precision Bar Blanking System <i>Bin ZHONG, Shengdun ZHAO, Renfeng ZHAO, Fan XU</i>	2235
RCPSP with Partially Renewable Resources and Resource Consumption during Setup Operations <i>Hironori OKUBO, Toshiyuki MIYAMOTO, Kazuyuki MORI, Shoichi KITAMURA, Yoshio IZUI</i>	2240
Design and Actualization of IoT-based Intelligent Logistics System <i>Zhiqiang XU, Jialiang HE, Zhiyong CHEN</i>	2245
Keshtel Algorithm (KA); A New Optimization Algorithm Inspired by Keshtels' Feeding <i>Mostafa HAJIAGHAEI-KESHTELI, Majid AMINNAYERI</i>	2249
Robust Remaining Useful Life Prediction for Li-ion Batteries with a Naive Bayesian Classifier <i>Selina NG, Kwok Leung TSUI</i>	2254
An Integrated Study in Determining the Optimal Policy for Warranty, Pricing and Production of Repairable Products under FRW <i>Chun-Wu YEH, Tean-Quay LEE, Chih-Chiang FANG</i>	2259
Servicing Strategy and Preventive Maintenance for Products Sold with One-Dimensional Warranties <i>Mustafa MAKMOEN, Andi CAKRAVASTIA, Bermawi ISKANDAR, Dradjad IRIANTO</i>	2264
An Acceleration Method for the Permutation Flow Shop Problem Minimizing Total Flow Time <i>Xingye DONG, Ping CHEN, Houkuan HUANG, Maciek NOWAK</i>	2268
Quay Crane Sequencing Considering Productivity, Interference and Yard Congestion Constraints <i>Effrosyni THEODOROU, Ali DIABAT, Davor SVETINOVIC</i>	2272
A Multi-Objective Model in the Green Supply Chain Network Design <i>Farzad NIAKAN, Armand BABOLI, Reza TAVAKKOLI-MOGHADDAM, Valerie BOTTA-GENOULAZ, Jean-Pierre CAMPAGNE</i>	2277
Development of an EOQ Model for Single Source & Destination, Deteriorating Products Incorporating Price & Freight Discount under Fuzzy Environment <i>Kanika GANDHI, P.C. JHA, Yogender SINGH</i>	2282
Optimal Duration and Control of Promotional Campaign for Durable Technology Product <i>Sugandha AGGARWAL, Anshu GUPTA, Yogender SINGH, P.C. JHA</i>	2287
An Integrated Model for Quay Crane Assignment and Quay Crane Scheduling Problems <i>Yi-Min FU, Ali DIABAT, I-Tsung TSAI</i>	2292

Optimization of the Billet Cutting Operation in the Aluminum Industry: a Case Study <i>Nadjib BRAHIMI, Abrar KHALAF, Hebah AL-HAMMADI</i>	2297
Multi-stage Parallel-machine Job Shop Scheduling with Due Windows <i>Rong-Hwa HUANG, Chang-Lin YANG</i>	2302
A Revised Model for the Static Berth Allocation Problem with Berth Restrictions on Vessel Assignment <i>Ahmed SIMRIN, Shaikha AL ZAABI, Ali DIABAT</i>	2307
Evaluation of C4ISR System Effectiveness based on Markov Logic Networks <i>Ruotong LIAO, Yanjun LIU, Zhong LIU, Qian MENG, Xunhui LUO</i>	2312
Evaluation of Project's Alternatives Based on a Multi Criteria Decision Approach <i>Mohammadhosein MOKHTARANI, Hamed SHAKOURI G, H SOLEIMANI</i>	2317
Aircraft Trip DOC Parameters: A Function of Stage Length, Seat Capacity and Design Range <i>Yu WANG, Hong SUN, Peiwen ZHANG</i>	2322
Stock Characteristics and Transaction Cost in Japanese Stock Market <i>Junji MAWARIBUCHI, Koichi MIYAZAKI</i>	2326
A Bibliometric Description and Content Analysis of Mega-project Characteristics <i>Xiaofeng PENG, Wen CHE, Yongyi SHOU</i>	2331
Empirical Study on the Relationships Between Leadership and Technology Entrepreneurial Performance <i>Cuixia WANG, Jianmei MIAO, Weiwei YE, Xu YI</i>	2337
Study and Application on Aided Innovation Design Method Based on Semantic Analysis and TRIZ theory <i>Zixu CHEN, Lin GONG, Yan SONG, Guoxin WANG</i>	2341
The Exploration of Transform Leadership and Organizational Performance --- Two Mediators' Model <i>Chi-Chuan WU, Fang Chia HSIEH, Chien-Wei HO</i>	2346
Corporate Citizenship Taking on Social Welfare: Concept Area and Competitive Advantage <i>Xueying TIAN</i>	2351
The Establishment of Model for Measuring Interpretation Satisfaction: The Role of Service Quality and Perceived Interpretation Value <i>Li-Hui CHANG, Cheng-Shih LIN, Tsen-I KUO</i>	2356
Socially Responsible Service Operations Management - Trends and Challenges <i>Hosang JUNG, Seungbae SIM</i>	2360
A Rapid Optical System for Surface Roughness Measurement of Hard Films <i>Chil-Chyuan KUO, Y.T SIAO</i>	2365
Simulation Study on Quality Risk of Quality Organizational Structure Based on Agent-based Model <i>Chunhui YANG, Tao HU, Zhaohui LUO, Lei YANG</i>	2370
Quality Monitor in Multi-operation Machining Processes based on Wavelet Filtering <i>Bing CHEN, Pei WANG, Dinghua ZHANG, Kai LIU</i>	2375
The Joint Impact of Process Ownership and Continuous Process Improvement on Financial Performance and Customer Satisfaction <i>Doris WEITLANER, Markus KOHLBACHER, Andreas KAMAGAEW</i>	2380
Author Index	2385