Overall Conference Program

January 6, 2014 (Monday)
15:00 – 21:00 Registration

January 7, 2014 (Tuesday)
07:00 – 17:00 Registration
08:00 – 08:30 Welcome: Dr. Ir. Tri Yogi Yuwono, President, Institut Teknologi Sepuluh Nopember, Indonesia
08:30 – 09:30 Opening Keynote: Dr. Kenneth Musselman, Strategic Collaboration Director, Regenstrief Center for Healthcare Engineering at Purdue University, USA and Past IIE President.
09:30 – 09:45 Break
09:45 – 11:15 Parallel Sessions
11:15 – 11:30 Tea / Coffee Break
11:30 – 13:00 Parallel Sessions
13:00 – 14:00 Tuesday Lunch Keynote: Dr. Nyoman Pujawan, Professor, Department of Industrial Engineering, Sepuluh Nopember Institute of Technology (ITS), Surabaya, Indonesia.
14:00 – 15:30 Parallel Sessions
15:30 – 15:45 Tea / Coffee Break
15:45 – 17:15 Parallel Sessions
18:00 – 20:00 WELCOME RECEPTION

January 8, 2014 (Wednesday)
07:00 – 17:00 Registration
08:30 – 09:30 Wednesday Morning Keynote: Mr. Made Dana Tangkas, VP of Toyota Motor Asia Pacific Engineering and Manufacturing and Director of PT. Toyota Motor Manufacturing Indonesia
09:30 – 09:45 Break
09:45 – 11:15 Parallel Sessions
11:15 – 11:30 Tea / Coffee Break
11:30 – 13:00 Parallel Sessions
13:00 – 14:00 Wednesday Lunch Keynote: Dr. Robert de Souza, Executive Director, The Logistics Institute – Asia Pacific
14:00 – 15:30 Parallel Sessions
15:30 – 15:45 Tea / Coffee Break
15:45 – 17:15 Parallel Sessions
19:00 – 23:00 CONFERENCE AWARD DINNER, AND CULTURAL PROGRAMS

January 9, 2014 (Thursday)
07:00 – 15:00 Registration
08:30 – 09:15 Thursday Morning I Keynote: Dr. John Blakemore, CEO, Blakemore Consulting International, Australia and Former National President of the Manufacturing Society of Australia
09:15 – 10:00 Thursday Morning II Keynote: Dr. Petri Helo, Professor of Logistics, Department of Production, Faculty of Technology, University of Vaasa, Finland
10:00 – 10:15 Break
10:15 – 11:30 Parallel Sessions
11:30 – 13:00 Parallel Sessions
13:00 – 14:00 Lunch
14:00 – 15:30 Parallel Sessions
15:30 – 15:45 Tea / Coffee Break
15:45 – 17:15 Parallel Sessions
## Tuesday, January 7

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<tr>
<td>08:30</td>
<td>Opening Keynote: Dr. Kenneth Musselman, Purdue University, USA and Past IIE President</td>
<td>BALLROOM I</td>
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<tr>
<td>09:45</td>
<td>Global Engineering Education I</td>
<td>Operations Management I</td>
<td>Manufacturing and Design I</td>
<td>Artificial Intelligence I</td>
<td>Quality Control and Management I</td>
<td>Modeling and Simulation I</td>
<td>Case Studies I</td>
<td>Project Management I</td>
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<tr>
<td>11:15</td>
<td>Break</td>
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<td>11:30</td>
<td>Global Engineering Education II</td>
<td>Operations Management II</td>
<td>Manufacturing and Design II</td>
<td>Artificial Intelligence II</td>
<td>Quality Control and Management II</td>
<td>Modeling and Simulation II</td>
<td>Case Studies II</td>
<td>Project Management II</td>
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<td>13:00</td>
<td>Lunch Keynote: Dr. Nyoman Pujawan, Sepuluh Nopember Institute of Technology (ITS), Surabaya, Indonesia</td>
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<td>14:00</td>
<td>Global Engineering Education III</td>
<td>Operations Management III</td>
<td>Manufacturing and Design III</td>
<td>Facilities Planning</td>
<td>Quality Control and Management III</td>
<td>Modeling and Simulation III</td>
<td>Computer and Information Systems I</td>
<td>Project Management III</td>
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<td>Tea / Coffee Break</td>
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<td>15:45</td>
<td>Global Engineering Education IV</td>
<td>Operations Management IV</td>
<td>Manufacturing and Design IV</td>
<td>E-Business and Engineering Economy</td>
<td>Quality Control and Management IV</td>
<td>Modeling and Simulation IV</td>
<td>Computer and Information Systems II</td>
<td>Construction Management</td>
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<td>18:00</td>
<td>WELCOME RECEPTION - Pre-Functional Area</td>
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## Wednesday, January 8

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<tr>
<td>08:30</td>
<td>Keynote: Mr. Made Dana Tangkas, Toyota Motor Manufacturing Indonesia</td>
<td>BALLROOM I</td>
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<td>09:45</td>
<td>Global Engineering Education V</td>
<td>Operations Management V</td>
<td>Inventory Management I</td>
<td>Engineering Education I</td>
<td>Supply Chain Management I</td>
<td>Modeling and Simulation V</td>
<td>Engineering Management I</td>
<td>Reliability and Maintenance I</td>
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<tr>
<td>11:15</td>
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<td>11:30</td>
<td>Global Engineering Education VI</td>
<td>Operations Research I</td>
<td>Inventory Management II</td>
<td>Engineering Education II</td>
<td>Supply Chain Management II</td>
<td>Modeling and Simulation II</td>
<td>Engineering Management II</td>
<td>Reliability and Maintenance II</td>
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<td>13:00</td>
<td>Lunch Keynote: Dr. Robert de Souza, Executive Director, The Logistics Institute-Asia Pacific, Singapore</td>
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<td>15:45</td>
<td>Global Engineering Education VIII</td>
<td>Operations Research III</td>
<td>Inventory Management IV</td>
<td>Student Paper Competition</td>
<td>Supply Chain Management IV</td>
<td>Energy II</td>
<td>Engineering Management IV</td>
<td>Service Systems</td>
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<tr>
<td>18:00</td>
<td>Conference Award Dinner and Cultural Program</td>
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## Thursday, January 9

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<tr>
<td>08:30</td>
<td>Thursday Morning I Keynote: Dr. John Blakemore, CEO, Blakemore Consulting International, Sydney, Australia</td>
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<td>09:15</td>
<td>Thursday Morning II Keynote: Dr. Petri Helo, Professor of Logistics, University of Vaasa, Finland</td>
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<tr>
<td>11:30</td>
<td>Global Engineering Education X</td>
<td>Production Planning I</td>
<td>Lean and Six Sigma II</td>
<td>Human Factors II</td>
<td>Supply Chain Management VI</td>
<td>Sustainability and Green Systems II</td>
<td>Logistics Management II</td>
<td>Healthcare Systems II</td>
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<tr>
<td>13:00</td>
<td>Lunch: On Your Own</td>
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<tr>
<td>14:00</td>
<td>Global Engineering Education XI</td>
<td>Production Planning II</td>
<td>Lean and Six Sigma III</td>
<td>Human Factors III</td>
<td>Supply Chain Management VII</td>
<td>Sustainability and Green Systems III</td>
<td>Logistics Management III</td>
<td>Healthcare Systems III</td>
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<td>15:30</td>
<td>Tea / Coffee Break</td>
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<tr>
<td>15:45</td>
<td>Global Engineering Education XII</td>
<td>Production Planning III</td>
<td>Lean and Six Sigma IV</td>
<td>IE/OM in Asia</td>
<td>Supply Chain Management VIII</td>
<td>Sustainability and Green Systems IV</td>
<td>Technology Management</td>
<td>Systems Engineering</td>
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## Technical Program – IEOM 2014

**Grand Hyatt Bali, Indonesia**  
**January 7 – 9, 2014**

### Tuesday, January 7

**08:30**  
**Opening Keynote:** Dr. Kenneth Musselman, Strategic Collaboration Director for the Regenstrief Center for Healthcare Engineering, Purdue University, USA and Past IIE President – Ballroom I

### PARALLEL SESSION I – TUESDAY (TU), 09:45 – 11:15

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<tr>
<th>Time</th>
<th>Session Title</th>
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<td><strong>TU 09:45</strong></td>
<td><strong>GLOBAL ENGINEERING EDUCATION I</strong> Tabanan I</td>
<td><strong>Session Chair:</strong> Dr. Cecilia Nembou, Vice President Divine Word University, Port Moresby Campus, Papua New Guinea</td>
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<tr>
<td></td>
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<td>Dr. Ezendu Ariwa, Professor, Department of Computer Science and Technology University of Bedfordshire, UK, “Engineering Education in Great Britain: Engineering Education for Sustainability”</td>
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<td>Dr. Damodar Acharya, Professor, Indian Institute of Technology Kharagpur, India and Past Director (2007 - 2012) “Industrial Engineering Profession and Education in India”</td>
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<td>Dr. Khalid Hafeez, Professor, University of Sharjah, Sharjah, UAE, “The Theory of Core Competence: A Melting Pot for Management and Engineering Education”</td>
</tr>
<tr>
<td><strong>TU 09:45 – 11:15</strong></td>
<td><strong>Operations Management I</strong> Tabanan II</td>
<td><strong>Session Chair:</strong> Dr. Cucuk Nur Rosyidi, Sebelas Maret University, Indonesia</td>
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<td></td>
<td>ID 317: Preparing the Readiness of Tourism Activities for Destinations along the Mekong River to Become the ASEAN Community: A Case Study in Chiang Khan at Loei Province, Thailand</td>
<td>Patthira Phon-pongam, Loei Rajabhat University, Thailand</td>
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<td>ID 287: Profit Maximization by Integrating Production Planning, Maintenance Scheduling, Quality Aspects and Sales Decisions</td>
<td>Hossein Beheshiti Fakher, Laval University Quebec Canada Mustapha Nourfeth, Kuwait University, Safat, Kuwait Michel Gendreau, École Polytechnique of Montreal, Canada</td>
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<td>ID 455: An Optimization Model for Production Allocation in a Large Steel Manufacturing Company</td>
<td>Cucuk Nur Rosyidi, Anandhyta Yunan Perdana, and Yusuf Priyandari, Sebelas Maret University Indonesia</td>
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<tr>
<td><strong>TU 09:45 – 11:15</strong></td>
<td><strong>Manufacturing and Design I</strong> Tunjung</td>
<td><strong>Session Chair:</strong> Dr. Yuri M. Zagloel, University of Indonesia, Depok, Jawa Barat, Indonesia</td>
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<td>ID 085: Manufacturing and Fractional Cell Formation Using the New Binary Digit Grouping Algorithm</td>
<td>Mroue Hassan and Dao Thiên-My, École de Technologie Supérieure (University of Quebec), Montreal, Quebec Canada</td>
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<td>ID 472: Experimental Design of a Flexible Manufacturing System</td>
<td>Muflih Safitra, Ali Ahmad, and Abdulrahman M. Al-Ahmari, King Saud University, Saudi Arabia</td>
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<td>ID 475: Cost-Benefit Analysis of Flexible Manufacturing System (FMS)</td>
<td>Mohammed Al-Kahtani, Muflih Safitra, Ali Ahmad, and Abdulrahman Al Ahmari, King Saud University, Riyadh, Saudi Arabia</td>
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<td>ID 461: Performance Improvement of Flexible Manufacturing System (FMS) with a Proper Dispatching Rules Planning</td>
<td>T. Yuri M. Zagloel, Ferdinand Jahja, and Armand Omar Moeis, University of Indonesia, Depok, Jawa Barat, Indonesia</td>
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**IEOM 2014 Conference**  
**Final Program**  
**Jan 7 - 9, 2014**

**TU 09:45 – 11:15**  
**Artificial Intelligence I**  
**Jepun**  
**Session Chair:** Dr. Michael Mutingi, University of Botswana

ID 264: Implementation of Safety Instrumented Systems by Fuzzy Risk Graph  
Nouara Ouazraoui, Bilal Rabah, Rachid Nait-Said, and Mouloud Bourareche, Laboratory of Research in Industrial Prevention (LRIP), Health and Occupational Safety Institute, University of Batna, Algeria

ID 271: Cellular Manufacturing through Composite Part Formation: A Genetic Algorithm Approach  
Nirjhar Roy and V.R. Komma, Motilal Nehru National Institute of Technology, Allahabad (U.P.), India

ID 411: A Comparative Study of Improved Simulation Annealing on Multi-Depot Vehicle Routing Problem with Time Windows  
Subodha Dharmapriya, Asela Kulathunga, and Pradeep Jayathilake, University of Moratuwa, Sri Lanka

ID 500: Implementation of Safety Instrumented Systems Using Fuzzy Risk Graph Method  
Nouara Ouazraoui, Bilal Rabah, Rachid Nait Said, and Mouloud Bourarech, Institute of Health and Occupational Safety, University of Batna, Algeria

ID 068: Healthcare Staff Scheduling in a Fuzzy Environment: A Fuzzy Genetic Algorithm Approach  
Michael Mutingi, University of Botswana

**TU 09:45 – 11:15**  
**Quality Control and Management I**  
**Bangli I**  
**Session Chair:** Dr. Wonjoon Kim, Korea Advanced Institute of Science & Technology (KAIST), South Korea

ID 106: Optimal Sampling Strategy of Incoming Quality Control in In-Mold Decoration Manufacturing  
Katoaka Hirohiko and Kuo-Hao Chang, Department of Industrial Engineering and Engineering Management, National Tsing Hua University, Taiwan

ID 279: Designing a Variables Two-Plan Sampling System with Process Loss Consideration  
Nani Kurniati, and Ruey-Huei Yeh, National Taiwan University of Science and Technology, Taiwan  
Chien-Wei Wu, National Tsing Hua University, Taiwan

ID 462: Mitigation of WIP Inventory Related Problems at IC Production Line through a Suitable Inspection Sampling Plan  
A.N.M. Karim, and Mohamed Bin Abd. Rahman, International Islamic University Malaysia  
Nornilawati Yosop, Hi-essence Cable Sdn Bhd, Malaysia

ID 420: Integrating a Modified Desirability Function Approach and Ant Colony Strategy to Solve Two-stage Multiresponse Optimization Problem  
Sasadhar Bera, Indian Institute of Management Ranchi, India  
Indrajit Mukherjeeb, Indian Institute of Technology Bombay, India

ID 511: Technology Strategy under Technological Convergence Phenomenon: In the Case of Printed Electronics Industry  
Yongrae Cho, Euisseok Kim and Wonjoon Kim, Korea Advanced Institute of Science & Technology (KAIST), South Korea

**TU 09:45 – 11:15**  
**Modeling and Simulation I**  
**Bangli II**  
**Session Chair:** Dr. Abderrahmane Benbrik, University M'Hamed Bougara, Boumerdes, Algeria

ID 233: Response Surface Models for Optimization of Wheat Straw-Polypropylene Composite Formulations  
Rois Fatoni, Universitas Muhammadiyah Surakarta, Indonesia  
Ali ElKamel, and Leonardo Simon, University of Waterloo, Canada

ID 108: Quantile-Based Stochastic Optimization Using Modified Stochastic Nelder-Mead Simplex Method  
Hou-Kuen Lu and Kuo-Hao Chang, National Tsing Hua University, Taiwan

ID 111: The Effects of System Failures in a Robotic Assembly Line- Simulation Modeling and DOE Analysis  
Annamalai Pandian, University of Wisconsin - Stout, USA

ID 218: Modeling of Radiative Heat Transfer of a real Gas in 2D Enclosure  
Mohammed Cherifli, Siham Laouar-Meltah, and Abderrahmane Benbrik, University M'Hamed Bougara, Boumerdes, Algeria
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<td>Case Studies I</td>
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<td>Dr. Zanele Mpanza, University of Johannesburg, South Africa</td>
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<td><strong>ID 144:</strong> The Application of Queuing Theory in Multi-Stage Production Line</td>
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<td>Muhammad Marsudi, King Abdulaziz University, Saudi Arabia</td>
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<td>Hani Shafeek, Suez Canal University, Egypt</td>
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<td><strong>ID 153:</strong> Case Study of Management System Improvement for Plant Construction - User Needs Identification through Field Observation</td>
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<td>Eizaburo Takegami and Takafumi Kawasaki, User Experience Research Department, Hitachi, Ltd., Tokyo, Japan</td>
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<td>Hisako Okada, Global Innovation Project Management Department, Hitachi, Ltd., Ibaraki, Japan</td>
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<td>Masatoshi Takada, Nuclear Plant Department, Hitachi Works, Hitachi-GE Nuclear Energy, Ltd., Ibaraki, Japan</td>
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<td>Kazuaki Yamagata, Power Plant Project Management Center, Hitachi ICC Co., Ibaraki, Japan</td>
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<td><strong>ID 240:</strong> Towards a Conceptual Model of Team-Based Innovation: Enablers and Obstacles of Innovation Productivity</td>
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<td>Theresa-M. Myskovszky von Myrow, Susanne Mütze-Niewöhner and Sönke Duckwitz, Institute of Industrial Engineering and Ergonomics, RWTH Aachen University</td>
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<td>Masatoshi Takada, Nuclear Plant Department, Hitachi Works, Hitachi-GE Nuclear Energy, Ltd., Ibaraki, Japan</td>
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<td><strong>ID 382:</strong> Religiosity and Customer Satisfaction in Public Sector Of Pakistan: An Empirical Study</td>
<td></td>
<td>Muhammad Muzamml Tanveer, National University of Sciences &amp; Technology, Islamabad, Pakistan</td>
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<td>Rida Khurshid, Fatima Jinnah Women University, Rawalpindi, Pakistan</td>
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<td><strong>ID 170:</strong> Improving Operating Methods in a South African Foundry Company: A Case Study</td>
<td></td>
<td>Zanele Mpanza and Didier Nyembwe, University of Johannesburg, South Africa</td>
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<tr>
<td>09:45 – 11:15</td>
<td>Project Management I</td>
<td>Rijasa II</td>
<td>Dr. Stefan Creemers, IESEG School of Management, Lille, France</td>
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<td><strong>ID 143:</strong> Proactive R&amp;D Project Scheduling with a Bi-Objective Genetic Algorithm</td>
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<td>Gündüz Ulusoy, and Canan Capa, Sabanci University, Turkey</td>
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<td>Hassan Hadipour, Azad University, Qazvin, Iran</td>
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<td><strong>ID 154:</strong> Application of ELECTRE Method for Sub-Contractor Selection using Interval-Valued Fuzzy Sets - Case Study</td>
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<td>Roozbeh Azizmohammadi and Abbas Mahmoudabadi, Payam-e-Noor University, Tehran, Iran</td>
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<td>Mohammad Khoshnoud, Farabi Institute of Higher Education, Karaj, Iran</td>
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<td>Rida Khurshid, Fatima Jinnah Women University, Rawalpindi, Pakistan</td>
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<td>Zanele Mpanza and Didier Nyembwe, University of Johannesburg, South Africa</td>
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<td>11:15 – 11:30</td>
<td>Coffee/Tea Break</td>
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<td>11:30 – 13:00</td>
<td><strong>PARALLEL SESSION II – TUESDAY (TU), 11:30 – 13:00</strong></td>
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<tr>
<td>11:30 – 13:00</td>
<td><strong>GLOBAL ENGINEERING EDUCATION II</strong></td>
<td>Tabanan I</td>
<td>Dr. Kripa Shanker, Professor, Industrial and Management Engineering Department, Indian Institute of Technology Kanpur, and Former Deputy Director, IIT Kanpur, India</td>
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<td></td>
<td><strong>ID 516:</strong> The Impact of Job Stress to Job Satisfaction among Engineers: A Literature Review</td>
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<td>Raja Zuraidah Raja Mohd Rasi, Universiti Tun Hussein Onn Malaysia</td>
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<tr>
<td>11:30 – 13:00</td>
<td><strong>Operations Management II</strong></td>
<td>Tabanan II</td>
<td>Dr. Jinwoo Park, Professor, Department of Industrial Engineering, Seoul National University, South Korea</td>
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<td><strong>ID 516:</strong> The Impact of Job Stress to Job Satisfaction among Engineers: A Literature Review</td>
<td></td>
<td>Raja Zuraidah Raja Mohd Rasi, Universiti Tun Hussein Onn Malaysia</td>
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ID 390: The Influence of OSH Management System on Firm Competitive Advantage  
Noorliza Karia, Universiti Sains Malaysia, Penang, Malaysia

ID 381: Investigation into Issues Related to the Productivity of Employees in an Oil and Gas Industry  
Khalida Al Hakmani, Oman Gas Company, Muscat, Oman  
Hamdi Bashir, University of Sharjah, United Arab Emirates

ID 353: An Alternative Heuristics for Bin Packing Problem  
Nurul Afza Hashim, Faridah Zulkipli, Siti Sarah Januri, and S. Sarifah Radiah Shariff, Universiti Teknologi MARA, Malaysia

**TU 11:30** Manufacturing and Design II Tunjung  
**Session Chair:** Dr. Javier Cruz-Salgado, Centro de Innovación Aplicada en Tecnologías Competitivas, Guanajuato, México

ID 408: Modeling and Optimization of WEDM Parameters for Surface Finish Using Design of Experiments  
I.K. Chopde, Visvesvaraya National Institute of Technology, India  
Chandrashekhar Gogte, Marathwada Institute of Technology, Aurangabad, India  
Dhobe Milind, P.E.S. College of Engineering, Aurangabad, India

ID 137: A Generic Model for Integrated Sales, Product, and Production Configuration  
Linda L. Zhang, IESEG School of Management, France

ID 310: Modeling an Ergonomic Driving for In-Car Interaction: A Propose Framework  
NurulHuda Ahmad, Seri Rahayu Kamat, Mohamad Minhat, and Ahmad Yusairi Bani Hashim dan Isa Halim, Universiti Teknikal Malaysia Melaka (UTE-M), Malaysia

ID 071: Kronecker Models Versus Scheffé’s Mixture Models  
Javier Cruz-Salgado, Sergio Alonso, and Roberto Zitzumbo, CIATEC, A.C., Guanajuato, México

**TU 11:30** Artificial Intelligence II Jepun  
**Session Chair:** Dr. Eldon Caldwell Marin, University of Costa Rica

ID 208: Practical ABC Intelligence Solution for Quadratic Assignment  
Golnar Behzadi and Balan Sundarakani, University of Wollongong in Dubai, United Arab Emirates

ID 484: Data Mining Based Strategic Decision Making Support Tool  
Kemal Kilic, Sabanci University, Turkey

ID 363: Bootstrap Approach for Constructing Interval Estimation of Capability Index under Non-Normal Distributions  
Hui-Chuan Chen and Yan-Hung Lee, National Taiwan University of Science and Technology, Taiwan  
Chien-Wei Wu, National Tsing Hua University, Taiwan

ID 378: An Intelligent Mathematical Model in the New Product Development Based on Random Fuzzy Variables  
Mohammad Molani Aghdam, Department of Engineering, Islamic Azad University, Ayatollah Amoli Branch, Amol, Iran

ID 513: Improving DFR Models for Information Retrieval in Cognitive Contexts by Adjusting the Documents Length Normalization  
Eldon Caldwell Marin, and Mauricio Zamora, University of Costa Rica  
Antonio Ferrández Rodríguez, University of Alicante, Spain

**TU 11:30** Quality Control & Management II Bangli I  
**Session Chair:** Sarina Abdul Halim Lim, University of Strathclyde, UK

ID 102: A New Variables Sampling System Based on Exact Sampling Distribution  
Jhih-Jia Lin and Shih-Wen Liu, National Taiwan University of Science and Technology, Taiwan  
Chien-Wei Wu, National Tsing Hua University, Taiwan

ID 247: Comparing the Median Run Length (MRL) Performances of the Max-EWMA and Max-DEWMA Control Charts for Skewed Distributions  
Teh Sin Yin, Michael Boon Chong Khoo, and Ker Hsin Ong, Universiti Sains Malaysia  
Wei Lin Teoh, Universiti Tunku Abdul Rahman, Perak, Malaysia

ID 457: A Mahalanobis Taguchi System-based Approach for Correlated Multiple Response Process Monitoring  
Sagar Sikder, Indian Statistical Institute, Mumbai, India
Indrajit Mukherjee, Indian Institute of Technology, Bombay, India
Subhash Chandra Panja, Jadavpur University, Kolkata, India
Sasadhar Bera, Indian Institute of Management, Ranchi, India

ID 434: Improving the Competitiveness of Organizations by Using a Link between Established Quality Management System and Balanced Scorecard
Štefan Kolumber and Petr Briš, Tomas Bata University in Zlin, Czech Republic

ID 379: Implementation of Statistical Process Control in the Food Industry: A Systematic Review
Sarina Abdul Halim Lim, and Jiju Antony, University of Strathclyde, UK

TU 11:30 Modelng and Simulation II Bangli II
Session Chair: Dr. Raj Kumar, Faculty of Management Studies, Banaras Hindu University, U.P., India

ID 180: Analysis of Delivery and Assembly Operations in a Furniture Company Using Discrete Event Simulation
Mehmet Savsar, Ameen Nadoom, Dalal Al-Muraished, Reem Ibrahim, and Meshari Al-Debsi, Kuwait University, Kuwait

ID 249: Simulation Modeling and Analysis for Stitching Line of Footwear Industry
James C. Chen, National Tsing Hua University, Taiwan
Aryka Pradhan Putra and Nikita Anggono, National Taiwan University of Science and Technology, Taiwan
Jeff. Chen, IET, Pou Chen International Group, Taoyuan, Taiwan
Yung-Sheng Su, National Tsing Hua University, Taiwan

ID 088: Optimization of Box Type Girder of Overhead Crane for Different Spans with Fixed Capacity
Muhammad Abid and Shahbaz M. Khan, GIK Institute of Engineering Sciences and Technology, Topi, Swabi, Pakistan

ID 443: The Design & Operating Characteristics of a Flexible Auction Logistics Center (FALC): The Simulation Study
Xiang TR. Kong, George Q. Huang, and H. Luo, Department of Industrial and Manufacturing Systems Engineering, The University of Hong Kong, Hong Kong, China

TU 11:30 Case Studies II Rijasa I
Session Chair: Sanda Geipele, Institute of Civil Engineering and Real Estate Economics, Riga Technical University, Latvia

ID 021: Structural Analysis: Challenges and Opportunities
Messaoud Saidani and Abdussalam Shibani, Coventry University, UK

ID 294: A Comparative Analysis of Methanol Production Routes: Synthesis Gas versus Co2 Hydrogenation
Camila Ribeiro, UFRJ - Federal University of Rio de Janeiro, Brazil

ID 538: The Study of Stability Control Systems for the Technological Processes
Gulnara Abitova, Mamyrbek Beisenbi and Janar Yermekbayeva, Eurasian National University, Astana, Kazakhstan

ID 504: Comprehension of Social Responsibility of Entrepreneurs, Media and Experts: Case Study in Latvia
Raja Kočanova, Sanda Geipele, and Ineta Geipele, Riga Technical University, Latvia

TU 11:30 Project Management II Rijasa II
Session Chair: Hye-Kyung Pang, Hallym University, South Korea

ID 070: Application of Delphi Method and Quality Function Deployment on Requirements for Website Development - A Survey of Website Developers in Taiwan
Gary Y. Chen, and Zhong-Han Yu, Chung Yuan Christian University, Industrial & Systems Engineering, Chung Li, Taiwan
Jamie Rogers, University of Texas – Arlington, Industrial & Mfg. Systems Engineering, Arlington, TX, USA

ID 095: Project Management Performance Measures on Construction Project in Libya
Nawal Gherbal, and Amrit Sagoo, Coventry University, UK

ID 551: When We Miss Disruptive Technologies
Hye-Kyung Pang, Hallym University, South Korea

13:00 – 14:00 Tuesday Lunch Keynote: Dr. Nyoman Pujawan, Professor, Department of Industrial Engineering, Sepuluh Nopember Institute of Technology, ITS Sukolillo, Surabaya, Indonesia., Ballroom I (Box Lunches Provided)
### PARALLEL SESSION III – TUESDAY (TU), 11:30 – 13:00

**Global Engineering Education III**

Session Chair: Dr. Irina Livshits, National Research University of Informational Technologies, Mechanics and optics, Russia

Dr. Erik Sundin, Linköping University, Sweden: "Industrial Engineering Education in Europe"

Dr. Eugene Rex L. Jalao, University of the Philippines Diliman: "Industrial Engineering Education in Philippines"

Dr. James C. Chen, National Tsing Hua University, Taiwan: "Industrial Engineering Education and Application in Taiwan"

**Operations Management III**

Session Chair: Dr. I. Livshits, Technology University of Informational Technologies, Mechanics and optics, Russia

Dr. Erik Sundin, Linköping University, Sweden: "Industrial Engineering Education in Europe"

Dr. Eugene Rex L. Jalao, University of the Philippines Diliman: "Industrial Engineering Education in Philippines"

Dr. James C. Chen, National Tsing Hua University, Taiwan: "Industrial Engineering Education and Application in Taiwan"

**Manufacturing and Design III**

Session Chair: Dr. A.F. Van der Merwe, University of Stellenbosch, South Africa

**Facilities Planning**

Session Chair: Andrew Kiekhaefer, John Deere, USA

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**ID 009: A Facility Layout Selection Model using MACBETH Method**

Prasad Karande, Government Polytechnic, Mumbai, India

**ID 300: The Development of Simulated Annealing Algorithm for Hybrid Flow Shop Scheduling Problem to Minimize Makespan and Total Tardiness**

Budi Santosa and Ainur Rofiq, Surabaya Institute of Technology, Indonesia

**ID 120: Assessment of Applying Chaos Theory for Daily Traffic Estimation**

Abbas Mahmoudabadi, Payam-e-Noor University, Tehran, Iran

Saeed Andalibi, High Institute of Education and Research in Planning and Management, Tehran, Iran

**ID 075: Intermittent Demand Forecast: Robustness Assessment for Group Method of Data Handling**

Preerna Mishra and Guangbin Huang, Nanyang Technological University, Singapore

Xue-Ming Yuan, and Truong Ton Hien Duc, Singapore Institute of Manufacturing Technology (SIMTech), Singapore

**ID 365: Location-Routing-Inventory Problem with Transshipment**

Haliza Ahmad, Pa’ezah Hamzah, Zaitul Anna Melisa Md Yasin and S. Sarifah Radiah Shariff, Centre for Statistical and Decision Science Studies, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia

**ID 404: Low-Cost USB-Based Data-Logger for LVDT Sensor**

Md. Saiful Islam, Md. Liakot Ali, Institute of Information and Communication Technology, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

Rifat Zaman, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

Zubaer Md Tanvir, Institute of Information and Communication Technology, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

**ID 438: Engineering Education and Regional Economic Development**

Gerrit Jordaan, Central University of Technology, Free State, Bloemfontein, South Africa

**ID 053: Decision support system for Van-der-Waals forces actuated micro-material handling operations**

Stephen Matope, and A.F. Van der Merwe, University of Stellenbosch, South Africa

**ID 405: Layout Design of Multiple Blocks Class-Based Storage Strategy Warehouses**

Maram I. Shqair, University of Jordan, Amman, Jordan

Safwan A. Altarazi, German-Jordanian University, Amman, Jordan

**ID 204: Facility Location in a Three-Echelon Supply Chain with Stochastic Demand - A Discrete-Event Simulation Approach**

Hasan Hosseini Nasab and Morteza Elahi, Faculty of Industrial Engineering, Yazd University, Iran
**IEOM 2014 Conference**  
**Final Program**  
**Jan 7 - 9, 2014**

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<td>Dr. Hendry Raharjo</td>
<td>Quality Control &amp; Management III</td>
<td>Chalmers University of Technology, Gothenburg, Sweden</td>
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<td>TU 14:00</td>
<td>Erik S. Chang</td>
<td>Modeling and Simulation III</td>
<td>National Tsing Hua University, Taiwan</td>
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<td>TU 14:00</td>
<td>Dr. Olufolorunsho Oludayo Olugbara</td>
<td>Computer &amp; Information Systems I</td>
<td>Durban University of Technology, South Africa</td>
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**ID 492:** Evaluation of a Medical Center Lab Layout by Applying a Heuristic Algorithm with a Flexible-bay Structure  
Hamed Elahi, Faculty of Industrial Engineering, Sadjad Institute, Mashhad, Khorasan Razavi, Iran

**ID 182:** Factory Master Planning at John Deere  
Andrew Kiekhaefer, John Deere, USA

**ID 113:** Optimal Sampling Policy in Semiconductor Manufacturing  
Ci-An Rong and Kuo-Hao Chang, Department of Industrial Engineering and Engineering Management, National Tsing Hua University, Taiwan

**ID 161:** Variables Multiple Dependent State Sampling Plans Based on Process Performance Index  
Chien-Wei Wu, and Yen-Wen Chen, National Tsing Hua University, Taiwan

**ID 536:** The Concurrent Engineering Method: The Necessity for the Convergence of Research and Education  
Hye-Kyung Pang, Hallym University, South Korea

**ID 235:** What can we learn from Swedish Quality Award? An empirical investigation of the causal relationships  
Hendry Raharjo and Henrik Eriksson, Chalmers University of Technology, Gothenburg, Sweden

**ID 031:** Simulating King Khalid University Outpatient Hospital Pharmacy Queuing System  
Tariq Aziz, King Saud University, Saudi Arabia

**ID 026:** Optimization of Cutting Speed in Steel Turning  
Ramezan Ali Mahdavinejad, University of Tehran, Iran

**ID 272:** Understanding Dynamics of Green House Gases Impacts on Jakarta's Urban Development Using Model-Based Policy Simulator to Support Policy Making  
Akhmad Hidayatno, Irvanu Rahman, and Ricki Muljadi, University of Indonesia, Jakarta, Indonesia

**ID 039:** Recent Developments in the Field of Magnetic Refrigeration  
Bakhodirzhon Siddikov, Ferris State University, Michigan, USA

**ID 265:** Simulation Modeling and Analysis of Line Length and Batch Size in Footwear Factory  
James C. Chen, National Tsing Hua University, Taiwan

**ID 219:** Time Interval for Collaborating Multi-Organizational Workflows  
Bambang Jokonowo, and Riyanto Sarno, Institut Teknologi Sepuluh Nopember, Indonesia

**ID 371:** A Study on Under Graduate Students' Internet Usage and Habits  
Murat Durucu, Istanbul Technical University, Turkey

**ID 489:** Interpretive Structural Modeling of the inhibitors of Wireless Control System in Industry  
B. Jayalakshmi, and Pramod. V. R., N.S.S. College of Engineering, India

**ID 451:** A Comprehensive Evaluation of Direct and Indirect Network-on-Chip Topologies  
Mehdi Baboli, Nasir Shaikh Husin and Muhammad Nadzir Marsono, Universiti Teknologi Malaysia, Johor Bahru, Malaysia

**ID 532:** Mobile Phone APP Software Browsing Behavior using Clustering Analysis  
Chui-Yu Chiu, Ju-Min Liao and I-Ting Kuo, National Taipei University of Technology, Taipei, Taiwan
Po-Chou Shih, National Taipei University of Technology, Taipei, Taiwan

TU 14:00  Project Management III  Rijasa II
Session Chair: Dr. AHM Shamsuzzoha, University of Vaasa, Finland

ID 008: The Effects of the Project Management Office on Companies Performance – A Case Study on a Project-Oriented Company
Shakib Zohrevandi, Payam Noor University of Tehran, Iran

ID 202: Identification, Evaluation and Classification of Time Delay Risks of Construction Project in Iran
Amir Hossein Alavifar, BSTech Engineering Co. Yavari St., Resalat SQ, Tehran Iran
Shadab Motamedi, UPM University, Serdang, Malaysia

ID 205: An Approach for Project Scheduling Using PERT/CPM and Petri Nets (PNs) Tools
Amer Boushaala, Garyouins University, Libya

ID 029: Creating ‘Optimal Teams’ through ‘Transformational Leadership’!
S. Asiya Z. Kazmi, Josutakala, and Marja Naaranoja, University of Vaasa, Finland

15:30 Tea / Coffee Break

PARALLEL SESSION IV – TUESDAY (TU), 15:45 – 17:15

TU 15:45  GLOBAL ENGINEERING EDUCATION IV  Tabanan I
Session Chair: Dr. Chui-Yu Chiu, National Taipei University of Technology, Taipei, Taiwan

Plenary I: Dr. Andrew Gung, Managing Director, Leave a Nest Singapore Pte. Ltd., Singapore

Plenary II: Dr. Abdur Rahim, Professor, University of New Brunswick, Fredericton, Canada, and Visiting Faculty, Department of Systems Engineering, King Fahd University of Petroleum and Minerals, Saudi Arabia: “Industrial Engineering Education in Middle East”

TU 15:45  Operations Management IV  Tabanan II
Session Chair: Dr. Khalid Hafeez, University of Sharjah, Sharjah, UAE

ID 076: The Art of Managing Production Disruptions in Pump Industry through Visual Management
Johannes Mapokgole, University of Johannesburg, South Africa

ID 089: Customer Attrition in Retailing: An Application of Multivariate Adaptive Regression Splines
Vera Miguéis, Faculdade de Engenharia da Universidade do Porto, Portugal

ID 099: Why Shortage Cost is More Suitable for Computing “Pull” Systems While Backorder Cost is Preferred in “Push”
Alvin Ang, Systems and Engineering Management (SEM), Nanyang Technological University (NTU), Singapore

ID 047: Calculating the Amount of Annual Financial Saving for Steam Boilers based on its Most Effecting Factors: A Case Study
Rajab Abdullalah, Tripoli University, Libya
Nabil Muhaisen, High Institute for Training, Libya

ID 456: Model of Integrated Production and Delivery Batch Scheduling under JIT Environment to Minimize Inventory Cost
Endang Prasetyaningsih, Suprayogi, TMA Ari Samadhi, and Abdul Hakim Halim, Bandung Institute of Technology, Indonesia

TU 15:45  Manufacturing and Design IV  Tunjung
Session Chair: Dr. Sebastian Reuter, RWTH Aachen University, Dennewartstraße, Aachen, Germany

ID 447: Cell Loading and Scheduling in Synchronized Manufacturing Cells
Gürsel A Süer, Dyah Ariningtyas Hening and Fatih Yarimoglu, Ohio University, Athens, Ohio, USA
ID 281: Implementation of Process Conformance to COPC Standards in a Global BPO Company: A Case Study
Sunil Sharma and Anuradha R Chetiya, University of Delhi, India

ID 359: Process Performance Evaluation for Non-normal Distributions
Yan-Hung Lee, and Jhih-Jia Lin, National Taiwan University of Science and Technology, Taipei, Taiwan
Chien-Wei Wu, National Tsing Hua University, Hsinchu, Taiwan

ID 274: Facing Ramp-Up Challenges in the RoboCup Logistics League
Sebastian Reuter, Daniel Ewert, and Sabina Jeschke, RWTH Aachen University, Dennewartstraße, Aachen, Germany

TU 15:45 E-Business / Engineering Economy Jepun
Session Chair: S.M. Tofayel Ahmad, Bangladesh Bank, Dhaka, Bangladesh

ID 038: Impacts of E-learning systems vis-à-vis Online Education Systems are – Boon or Bane for the Learners?
Aftab Alam, and Meraj Salim, King Abdulaziz University, Saudi Arabia

ID 206: E-shopping Success Dimensions – An Empirical Study in Kuwait
Kamel Rouibah, College of Business Administration, Kuwait

ID 192: A Portfolio Comparison of a Kelly Criterion with Markowitz Model: A Case Study with KOSPI 200
Gyutai Kim and Suhee Jung, Chosun University, Kwangju, South Korea

TU 15:45 Quality Control & Management IV Bangli I
Session Chair: Dr. Omar K. Gnieber, University of Benghazi, Benghazi, Libya

ID 103: Constructing Variables Resubmitted Sampling Plan for Lot Sentencing Based on the Process Yield Index
S. M. Tofayel Ahmad, Mohammad Rahat Uddin, Munira Jahan, and Ayasha Noor, Bangladesh Bank, Dhaka, Bangladesh

ID 101: Robust Power Supply Model for Hybrid Renewable Energy System under Parameter Uncertainty
Yi-Ling Tsai and Kuo-Hao Chang, National Tsing Hua University, Taiwan

TU 15:45 Modeling & Simulation IV Bangli II
Session Chair: Dr. Mehmet Savsar, Kuwait University, Kuwait

ID 025: Optimization of ED Machining of SiC Parameters
Ramezan Ali Mahdavinejad, University of Tehran, Tehran, Iran

ID 248: Experimenting Maintenance Strategies using Discrete Event Simulation to Improve Customer Waiting Time at Vehicle Inspection Centre
Khitiyiah Ilyas, Azurah A.Samah, and Hairudin Abdul Majid, University Technology Malaysia, Johor, Malaysia

ID 507: Flood Disaster Planning and Management in Jeddah, Saudi Arabia: A Survey
Shougi Suliman Abosuliman, Arun Kumar and Firoz Alam, RMIT University, Melbourne, Australia
ID 427: Multi-Server System with Multi-Threshold Service Policy
Fu-Min Chang, Department of Finance, Chaoyang University of Technology, Taichung, Taiwan
Jau-Chuan Ke, Department of Applied Statistics, National Taichung University of Science and Technology, Taichung, Taiwan
Cheng-Huai Liou, National Taichung University of Science and Technology, Taichung, Taiwan

ID 229: Productivity Analysis of a Flexible Manufacturing Cell
Mehmet Savsar, and Majid Aldaihani, Kuwait University, Kuwait

TU 15:45 Computer & Information Systems II Rijasa I
Session Chair: William Eduardo Mosquera Laverde, Universidad Cooperativa De Colombia

ID 157: An Automated Workflow System Geared Towards Consumer Goods and Services Companies
Javier D. Fernandez, Department of Industrial Engineering, University Pontificia Bolivariana, Medellin, Antioquia, Colombia

ID 234: Advertisement about the Activities of Our Company
Azeez Adeniyi Olateju, Otaland Nig Ltd, Nigeria

ID 466: Results on the Relationship between the Decision Making the Media and the Management of ICT in Industrial Sector SMES
William Eduardo Mosquera Laverde, Universidad Cooperativa De Colombia

TU 15:45 Construction Management Rijasa II
Session Chair: M.N. Fars, Department of Industrial Engineering, University of Alexandria, Alexandria, Egypt

ID 547: A Qualitative Study of the Critical Success Factors of ERP System: A Case Study Approach
Aamir Ijaz, University of the Punjab, Lahore, Pakistan
R. K. Malik, Bahria University, Islamabad, Pakistan
Raj Nawaz Lodhi, COMSATS Institute of Information Technology, Sahiwal, Pakistan
Umie Habiba, National College of Business Administration and Economics, Lahore, Pakistan
Syed Muhammad Irfan, COMSATS Institute of Information Technology, Lahore, Pakistan

ID 563: MARKCLOUD: Software for Data Confidentiality and Security in Cloud Computing Environments
Rashidah. Olanrewaju, Saqib Hakak and Othman Khalifa, International Islamic University Malaysia, Kuala Lumpur, Malaysia

TU 15:45 Construction Management Rijasa II
Session Chair: M.N. Fars, Department of Industrial Engineering, University of Alexandria, Alexandria, Egypt

ID 196: Submerged Geotextile Breakwater Construction Modeling
Amarjit Singh and Jerre Hansbrough, Department of Civil and Environmental Engineering, University of Hawaii at Manoa, Honolulu, HI, USA

ID 214: Housing Demands & Spatial Preferences of Young Potential First Time Residential Property Buyer in Kuching
Doh Shu Ing, Faculty of Engineering and Green Technology, Universiti Tunku Abdul Rahman, Kampar, Malaysia

ID 266: The Performance of Eggshell as Filler in Concrete Mixtures
Doh Shu Ing, Faculty of Engineering and Green Technology, Universiti Tunku Abdul Rahman, Kampar, Malaysia

18:00 WELCOME RECEPTION - Pre-Functional Area
Wednesday, January 8

08:30 Keynote: Mr. Made Dana Tangkas, Vice President of Toyota Motor Asia Pacific Engineering and Manufacturing and Director of PT. Toyota Motor Manufacturing Indonesia, Ballroom I

PARALLEL SESSION V – WEDNESDAY (WD), 09:45 – 11:15

WD 09:45 GLOBAL ENGINEERING EDUCATION V Tabanan I
Session Chair: Dr. Grace Kanakana, Tshwane University of Technology, South Africa

Dr. Ilham Kissani, Engineering & Management Science, Al Akhawayn University, Morocco: "Industrial Engineering Education in North and Sub-Saharan Africa"

Dr. Jinwoo Park, Department of Industrial Engineering, Seoul National University, South Korea: "IE / Management Science in Korea"

Dr. Edward Chikuni, Cape Peninsular University of Technology, Cape Town, South Africa

WD 09:45 Operations Management V Tabanan II
Session Chair: Dr. Murphy Choy, School of Information System, Singapore Management University, Singapore

ID 028: Abrupt Organizational Transformational Process Hinders Collaborative Innovation Initiatives!
S. Asiya Z. Kazmi, and Marja Naaranoja, University of Vaasa, Finland

ID 301: The Development of Hybrid Cross Entropy-Genetic Algorithm for Multi-Product Inventory Ship Routing Problem with Heterogeneous Fleet
Budi Santosa and Rita Damayanti, Surabaya Institute of Technology, Indonesia

ID 433: An Identical Parallel Machine Problem with Maintenance Activity
Wen-Chiung Lee, Feng Chia University, Taichung, Taiwan
Jen-Ya Wang, Hungkuang University, Sha Lu, Taiwan

ID 391: Investigation of the Performance Characteristics of a Rotary Electronic Tablet Counter
Adekunle Jinadu, BCN PLC, Lagos, Nigeria

ID 416: Real Time Process Compliance Checking using Nomenclature Approach
Murphy Choy, Ma Nang Laik and Koo Ping Shung, Singapore Management University, Singapore

WD 09:45 Inventory Management I Tunjung
Session Chair: Dr. Denisa Ferenčíková, Tomas Bata University in Zlín, Czech Republic

ID 178: Optimal Lot Sizing and Setup Cost Reduction for Deteriorating Production System
Kuo-Lung Hou, Overseas Chinese University, Taichung, Taiwan
Li-Chiao Lin, National Chinyi University of Technology, Taichung, Taiwan

ID 185: Inventory Reduction by Applying Inventory Management Tools of a Selected Tannery Factory
Mohammad Iqbal and Shibbir Ahmad, Shah Jalal University of Science and Technology, Sylhet, Bangladesh.
AHM Shamsuzzoha, University of Vaasa, Finland
M. Roomi, Maxin Ercon Limited, Dhaka, Bangladesh

ID 242: Inventory Analysis for a Manufacturing/Remanufacturing System under Product Substitution
Fethullah Gocer, and S. Sebnem Ahiska, Galatasaray University, Ortakoy, Istanbul, Turkey

ID 166: Inventory Management in Small and Medium-Sized Manufacturing Companies and Its Main Dilemmas
Denisa Ferenčíková, Tomas Bata University in Zlín, Czech Republic

WD 09:45 Engineering Education I Jepun
Session Chair: Dr. Peter Toth, Obuda University, Budapest, Hungary

ID 388: Achievement of the Program Outcomes in Outcomes Based Education Implementation: A Meta-Analysis
Yuzainee Md Yusoff, Universiti Tenaga Nasional, Malaysia
Norain Farhana Ahmad Fuad, Ruhizan Bt. Mohammad Yasin and Norngainy Mohd Tawil, Universiti Kebangsaan Malaysia

ID 445: Missing Data Imputation Method Comparison in Ohio University Student Retention Database
Dyah Hening, and David A. Koonce, Ohio University, USA

ID 413: New Methods for Course Development and Management in Engineering Education
Peter Toth and Imre J. Rudas, Obuda University, Budapest, Hungary

ID 509: Reforms in Engineering Education for Sustainable development: A study on Engineering Education in Bangladesh
Mohammad Abdul Mannan and Md. Tanvir Alam, Dhaka University of Engineering & Technology (DUET), Bangladesh

WD 09:45 Supply Chain Management I

ID 285: Supply Chain Network Design with Preferential Tariff under Economic Partnership Agreement
Kenichi Funaki, and Junko Hosoda, Yokohama Research Laboratory, Hitachi Ltd., Yokohama, Kanagawa, Japan

ID 201: An Integrated Structural Model for Supply Chain Management Practices (SCMP), Supply Chain Performance Measurement (SCPM) and its impact on Supply Chain Profitability (SCP)
Shradha Gawankar, National Institute of Industrial Engineering (NITIE), India

ID 386: Strategic DSS using a Heuristic Algorithm for Practical Outlet Zones Allocation to Dealers in a Beer Supply Distribution Network
Michelle Cheong, Singapore Management University, Singapore

ID 064: Study of Performance Measurement Practices in Supply Chain Management
Hamid Kazemkhanlou, and Hamid Reza Ahadi, Iran University of Science & Technology, Tehran, Iran

ID 421: Comparative Analysis of Supply Chain Management for Universities through ITESCM Model
A.K. Mahbubul Hye, Bishwajit Banik Pathik, Mahmud Habib Zaman, and Md. Mamun Habib, American International University-Bangladesh (AIUB), Dhaka, Bangladesh

WD 09:45 Modeling & Simulation V

ID 431: A Standby Redundant System with F-Policy
Jau-Chuan Ke, and Chia-Jung Chang, National Taichung University of Science and Technology
Fu-Min Chang, Chaoyang University of Technology of Technology, Taiwan

ID 318: Prediction Model for Speedy Customer’s Category at Pt Telekomunikasi Indonesia, Tbk.
Judi Alhilman and Mochamad Rian M., Telkom University, Bandung, Indonesia

ID 368: Mathematical Programming based Synthesis of Rice Drying Processes
Wongphaka Wongrat, Kasetsart University, Kamphaeng Saen Campus, Thailand
A. Elkamel, P. L. Douglas, and A. Younes, University of Waterloo, Canada

ID 499: Optimization using Simulation of Traffic Light Signal Timings
Ahmed A. Ezzat, Hala A. Farouk, Khaled S. El-Kilany, and Ahmed F. Abdelmoniem, Arab Academy for Science, Technology, and Maritime Transport, Abu Kir Campus, Alexandria, Egypt

WD 09:45 Engineering Management I

ID 096: The Improvements of Positive Quality Planning and Application upon a Live Construction Project
Abdussalam Shibani, Coventry University, UK

ID 151: A Framework for the Development of Halal Food Products in Malaysia
Norizah Mohamad, Universiti Sains Malaysia
ID 174: The Using Of Elements of Lean Production to Increase Efficiency and Competitiveness of Organizations in the Engineering Industry
Jana Petru, Tomas Zlamal, Robert Cep, and Marek Pavlica, VSB-Technical University of Ostrava, Czech Republic

ID 361: Implementation Model and Roadmap of Manufacturing Process Standardization
Kwai Sang Chin, City University of Hong Kong

ID 079: The Wafer Breakages Reduction using Kaizen Approach
Abdul Talib Bon, Universiti Tun Hussein Onn Malaysia

WD 09:45 Reliability and Maintainability I Rijasa II
Session Chair: Dr. Shey-Huei Sheu, Providence University, National Taiwan University of Science and Technology, Taiwan

ID 069: System Reliability Optimization: A Fuzzy Genetic Algorithm Approach
Michael Mutingi, University of Botswana

Armin Darmawan, Hasanuddin University, Makassar, Indonesia
Farizal and Dendi Prajadhiana, University of Indonesia, Depok, Indonesia

ID 370: Contactless Smart Card Based Prepaid Gas Metering System
Md. Liakot Ali, Mohammad Imam Hasan Bin Asad, and Md. Saiful Islam, Institute of Information and Communication Technology (IICT), Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

ID 522: Reconstruction of free form Surfaces in Reverse Engineering Technology Applications
Tahseen Fadhil Abbas, and Ahmed Abdullah Ebraheem, University of Technology, Baghdad, Iraq
Norain Farhana Ahmad Fuaad, Universiti Kebangsaan Malaysia

ID 471: Extend Optimal Replacement Model for a Deteriorating Systems with Inspections
Shey-Huei Sheu, Providence University, National Taiwan University of Science and Technology, Taiwan
Hsin-Nan Tsai, and Fu-Kwun Wang, National Taiwan University of Science and Technology, Taiwan

11:15 – 11:30 Coffee/Tea Break

PARALLEL SESSION VI – WEDNESDAY (WD), 11:30 – 13:00

WD 11:30 GLOBAL ENGINEERING EDUCATION VI Tabanan I
Session Chair: Dr. Shahrin Mohamed, Universiti Teknologi Malaysia, Johor Baru, Malaysia

Dr. Hongyi Sun, Department of Systems Engineering and Engineering Management, City University of Hong Kong: “Culture and Innovation Education for Engineering Students: The PIPE Model at City University of Hong Kong”

Dr. Franz-Josef Kahlen, University of Cape Town, Upper Campus, Rondebosch, South Africa

Professor Donald Reimer, Director of Entrepreneurial Programs, Lawrence Technological University, Michigan, USA: “Entrepreneurship in Engineering Education”

WD 11:30 Operations Research I Tabanan II
Session Chair: Dr. Chaimongkol Limpianchob, Kasetsart University, Nakhonpathom, Thailand

ID 298: Hybrid Differential Evolution and Bottleneck Heuristic Algorithm to Solve Bi-Objective Hybrid Flow Shop Scheduling Unrelated Parallel Machines Problem
Riza Auliya Rahman, Budi Santosa, and Stefanus Eko Wiratno, Sepuluh Nopember Institute of Technology, Surabaya, Indonesia

ID 437: Formulation of Integer Programming Model for Balancing and Scheduling of Production Line Having Shared Resources
H. M. Emrul Kays, A.N.M. Karim, M. Abdesselam, Muataz H.F. Al Hazza, International Islamic University Malaysia
R.A. Sarker, University of New South Wales Canberra
### WD 11:30 Inventory Management II

**Session Chair:** Shao Hung Goh, SIM University, Singapore

**ID 237:** A Single Manufacturer - A Single Buyer Partnership with Vendor Managed Inventory and Consignment  
Docki Saraswati, Trisakti University, Indonesia  
Andi Cakravastia, Bermawi P. Iskandar, A. Hakim Hallim, Institut Teknologi Bandung, Indonesia

**ID 246:** A Technical Note on the Single-Vendor Multi-Buyer Integrated Inventory Supply Chain Problem  
Md Abdul Hoque, University Brunei Darussalam

**ID 527:** Analysis of WIP Inventory Control and Simulation of KANBAN System within Wiring Harness Company  
Ilham Kissani, Al Akhawayn University, Morocco

**ID 449:** System Dynamics Model for a Stackelberg Game in Multi-Echelon Inventory System under Demand and Supply Uncertainty  
Noviana Dwi Harsiwi, and Elisa Kusrini, Menghadiri Universitas Islam Indonesia, Central Java Province, Indonesia

**ID 194:** Centralizing Slow-Moving Items in a Retail Network – A Case Study  
Shao Hung Goh, and Boon Lian Lim, SIM University, Singapore

### WD 11:30 Engineering Education II

**Session Chair:** Dr. Markéta Gregušová, VŠB – Technical University of Ostrava, Czech Republic

**ID 316:** Integrating ICT for Improving Training Methodology of a Training Academy: Bangladesh Perspective  
S.M. Tofayel Ahmad, Bangladesh Bank, Dhaka, Bangladesh  
Md. Abdur Rashid and Md. Kamrul Hasan, National Academy for Planning and Development (NAPD), Dhaka, Bangladesh

**ID 042:** Systematic Development of a Multifunctional Passenger Safety Bar Based on a Reference Project Frame for Student Design Projects  
Karl Hain, Christoph Rappl, and Josef Sühl, DIT - Deggendorf Institute of Technology, Deggendorf, Bavaria, Germany  
Walter Steininger, Max Streicher GmbH & Co. KG, Deggendorf, Germany

**ID 544:** Teaching Process Safety - Development of a HAZOP Study Teaching Module  
Gordon McKay, John Barford, and David C.W. Hui, Hong Kong University of Science and Technology, China

**ID 191:** Expanding Knowledge of Students of Engineering Using E-Learning Support in Education  
Markéta Gregušová, Ivana Šajdlerová, Martin Zuskáč, Jan Kedoň, and Jana Petrů, VŠB – Technical University of Ostrava, Czech Republic

### WD 11:30 Supply Chain Management II

**Session Chair:** Dr. Suhaiza Zailani, Universiti Malaya, Kuala Lumpur, Malaysia

**ID 336:** A Mathematical Model for Waste Management in Reverse Supply Chain  
Zahra Hosseini and Iraj Mahdavi, Mazandaran University of Science and Technology, Babol, Iran  
Hamed Fazlollahtabar, Iran University of Science and Technology, Tehran, Iran, Niroogostar Energy Optimization Research Group, Tehran, Iran

**ID 341:** Managing Multiple Outsourcing: Service Quality and Volume Issues  
Samar Mukhopadhyay, Sungkyunkwan University-GSB, South Korea

**ID 534:** Worm Optimization: A Novel Optimization Algorithm Inspired by C. Elegans  
Jean-Paul Arnaout, Gulf University for Science & Technology, Kuwait
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<td>Joshua Chan Ren Jie, Shahrul Kamaruddin, and Ishak Abd Azid, Universiti Sains Malaysia, Malaysia</td>
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<td>ID 293: Development of Simulation Game for Teaching Strategic and Operational Aspect of Production System</td>
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<td>Li-Chih Wang 1,3, Yu-Jie Wong1, Tzu-Li Chen2, Shuo-Tsung Chen3, Cheng-Mei Li1</td>
<td>1Department of Industrial Engineering and Enterprise information, Tunghai University, Taichung, Taiwan</td>
<td>3Tunghai Green Energy Development and Management Institute (TGEI), Tunghai University, Taichung, Taiwan</td>
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<td>ID 503: DMFC Models and Applications: A Literature Survey, Part I</td>
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<td>S. Patrabansh, M. Y. El-Sharkh, and M. Alam, University of South Alabama, Mobile, USA</td>
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<td>ID 329: Project Timor: A study to the industrial development of East Timor</td>
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<td>Mário Cabral, Universidade Nacional de Timor Lorosa’e, Timor-Leste, East Timor</td>
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<td>Filipa Vieira, University of Minho/CGIT, Portugal</td>
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<td>Cristina S. Rodrigues, University of Minho/ Centre Algoritmi, Portugal</td>
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<td>ID 273: Assembly Line Balancing Problem of Sewing Lines in Garment Industry</td>
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<td>James C. Chen, National Tsing Hua University, Hsinchu, Taiwan</td>
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<td>ID 105: Potential Saving for Steam Boilers Based on the Impact of Most Affecting Factors: A Case Study</td>
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<td>Reza Mesgarian National Iranian Gas Company (NIGC), Tehran, Iran</td>
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<td>ID 167: Modular Design And Production: An Investigation on Practices in an Assembler and Two First-Tier Suppliers</td>
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<td>José Antonio Carnevali, Pontifical Catholic University of Campinas – PUC, Campinas, Brazil</td>
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<td>Paulo Augusto Cauchick Miguel, Federal University of Santa Catarina – UFSC, Brazil</td>
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<td>Ernnie Illyani Basri, Universiti Sains Malaysia</td>
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<td>Omar M Elmabrouk and Mariam Azraga, University of Benghazi, Faculty of Engg. Industrial and Manufacturing System Engineering Department, Benghazi Libya</td>
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<td>ID 128: Early Warning System in Preventive Maintenance as a Solution to Reduce Maintenance Cost</td>
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<td>Tiena Gustina Amran, and Leonardus Sujarto, Industrial Engineering Department, University of Trisakti, Jakarta, Indonesia</td>
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### Session Chair:

**WD 14:00**

**GLOBAL ENGINEERING EDUCATION VII**

**Tabanan I**

**Session Chair:** Dr. Tasho Angelov Tashev, Technical University of Sofia, Sofia, Bulgaria

**ID 041:** Determining the Slack Capacity of Testers thru Model Simulation


**ID 054:** A Product-Mix Optimization of Commercial Chicken Feeds in a Feed Milling Company Using Linear Programming (LP) Model

Ronald Mariano, Colegio De San Juan De Letran, Philippines

**ID 119:** Development and Evaluation of an Industrial Prototype for Supporting Real-Time Train Dispatching Decisions

D'Ariano Andrea, D'Ariano Paolo, Samà Marcella, and Pacciarelli Dario, Università degli Studi Roma Tre, Rome, Italy

**ID 139:** Reducibility of Some Multi-criteria Scheduling Problems to Bi-criteria Scheduling Problems

Saheed Akande, Department of Mechanical and Mechatronics Engineering, Afe Babalola University, Ado-Ekiti, Nigeria

Ayodeji, E. Oluwolere, Department of Industrial and Production Engineering University of Ibadan, Ibadan, Nigeria

E.O. Oyetunji, Department of Mechanical Engineering, Lagos State University, Lagos, Nigeria

**ID 367:** A Robust Constrained Markov Decision Process Model for Admission Control in a Single Server Queue

Erim Kardes, Department of Informational Statistics, Kyungsus University, Busan, South Korea

**ID 188:** Some Comments on Discrete Sequential Search with Group Activities

Kris Coolen, Fabrice Talla Nobibon, and Roel Leus, KU Leuven, Belgium

**ID 482:** An Optimal Inventory Policy of Tools with Maximum Allowable Lifespan

Bhaba R. Sarker, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA, USA

Cun Rong Li, School of Mechanical & Electronics Engineering, Wuhan University of Technology, Wuhan City, P. R. China

Hui Zhi Yi, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA, USA

**ID 383:** An Inventory Model with Demand Dependent Replenishment Rate for Damageable Items and Shortage

Mehdi Sajadifar and Ahmad Mavaji, University of Science and Culture, Poonak, Tehran, Iran

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**13:00 – 14:00 Wednesday Lunch Keynote:** Dr. Robert de Souza, Executive Director / Chief Executive, The Logistics Institute – Asia Pacific, Ballroom I (Box Lunches Provided)

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### PARALLEL SESSION VII – WEDNESDAY (WD), 14:00 – 15:30

**WD 14:00**

**Operations Research II**

**Tabanan II**

**Session Chair:** Dr. Roel Leus, KU Leuven, Belgium

**ID 119:** Development and Evaluation of an Industrial Prototype for Supporting Real-Time Train Dispatching Decisions

D'Ariano Andrea, D'Ariano Paolo, Samà Marcella, and Pacciarelli Dario, Università degli Studi Roma Tre, Rome, Italy

**ID 139:** Reducibility of Some Multi-criteria Scheduling Problems to Bi-criteria Scheduling Problems

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**ID 383:** An Inventory Model with Demand Dependent Replenishment Rate for Damageable Items and Shortage

Mehdi Sajadifar and Ahmad Mavaji, University of Science and Culture, Poonak, Tehran, Iran

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**WD 14:00**

**Inventory Management III**

**Tunjung**

**Session Chair:** Shintaro Urabe, Hitachi Solutions East Japan, Ltd., Japan

**ID 482:** An Optimal Inventory Policy of Tools with Maximum Allowable Lifespan

Bhaba R. Sarker, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA, USA

Cun Rong Li, School of Mechanical & Electronics Engineering, Wuhan University of Technology, Wuhan City, P. R. China

Hui Zhi Yi, Department of Mechanical & Industrial Engineering, Louisiana State University, Baton Rouge, LA, USA

**ID 383:** An Inventory Model with Demand Dependent Replenishment Rate for Damageable Items and Shortage

Mehdi Sajadifar and Ahmad Mavaji, University of Science and Culture, Poonak, Tehran, Iran
| ID 127: Designing a New Particle Swarm Optimization for Make-with-Buy Inventory Model | Saeed Poormoai, Georgia Institute of Technology, Atlanta, USA  
Mahsa Yavari, Ferdowsi University of Mashhad, Mashhad, Iran |
| ID 528: Optimizing Inventory and Pricing Decisions for a Periodic-Review System with Batch Ordering | Ying Wei, Jinan University, China |
| ID 369: Best Practice for Inventory Optimization based on a Restructuring of the Organization, its Functions, and its Information Systems | Shintaro Urabe and Masaru Tezuka, Hitachi Solutions East Japan, Ltd., Japan |

**WD 14:00  Engineering Education III**  
**Jepun**  

**Session Chair:** Rathindra Nath De, Bengal Engineering and Science University, West Bengal, India

| ID 446: Soft Skills through Engineering Cooperative Education Settings at Ohio University | Dyah Hening, and David A. Koonce, Ohio University, Athens, OH, USA |
| ID 468: Effect of Work Instruction Support Device on Equipment Maintenance and Inspection | Seiko Taki, Chiba Institute of Technology, Japan  
Yasuhiro Kajihara, Tokyo Metropolitan University, Hino, Tokyo, Japan |
| ID 483: Engineering Education in the 21st Century: Malaysian Perspectives | Shahrin Mohammad, University Technology Malaysia |
| ID 531: Implementing the Participant-Center Learning Program for the Engineering Classes in Taiwan – A Case Study | JrJung Lyu, Department of Industrial and Information Management, National Cheng Kung University, Taiwan |
| ID 549: Application of ISO –9001: 2008 Academic Institutions | Rathindra Nath De, Bengal Engineering and Science University, West Bengal, India |

**WD 14:00  Supply Chain Management III**  
**Bangli I**

**Session Chair:** Dr. Olufemi Adetunji, University of Pretoria, South Africa

| ID 091: Two Step Approach of Structural Equation Modeling in Supply Chain Practices (Case Study: Indonesian Small Medium Enterprises) | James C. Chen, National Tsing-Hua University, Taiwan  
Imam Baihaqi, Institute of Technology Sepuluh Nopember, Indonesia  
Nadia Aulia Arifiin, National Tsing-Hua University, Taiwan |
| ID 152: Market Adaptive Supply Chain Model of Global Automotive Players | Gwang Seok Kim, Dong Uk Jeon, Sun Hoon Kim, and Young Hoon Lee, Yonsei University, South Korea |
| ID 557: A Strategic Procurement Concept for Physical Asset Management Framework | Ananda S Jeeva, and Ahmed Mohsen Salem Baswaid, Curtin Business School, Curtin University, Perth, Australia |
| ID 049: Vulnerability as a Relevant Supply Chain Attribute for SCOR | Olufemi Adetunji, University of Pretoria, South Africa |

**WD 14:00  Energy I**  
**Bangli II**

**Session Chair:** Mohammadreza Joulai, National Iranian Oil Company, Iran

| ID 132: Energy Source from Hydrogen Production via Methane Dry Reforming | Anis H. Fakeeha, Ahmed A. Ibrahim, Muhammad Awais Naeem and Ahmed S. Al–Fatesh, King Saud University, Riyadh Saudi Arabia |
| ID 017: Priority of Reduction Ways for Heating Systems in Yazd greenhouse | Alimohammad Rezai, Yazd Gas Co, Iran  
Hasan Hkadi Zare, Mohammadhosien Abooei, and Ali Mostafaei pour, Yazd Universit, Iran  
Fatemah Hakimi, NIOPDC, Iran |
| ID 255: Electricity Generation under Multiple Pollutant Consideration | I. Alhajri, College of Technological Studies, Kuwait  
M. Elsholkami, S. Giovinazzo, R. D’Souza, E. Kim, and A. Elkamel, University of Waterloo, Canada |
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<td>Farizal and Wenty Eka Septia, University of Indonesia, Depok, West Java, Indonesia</td>
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<td>The Strategy Making Process in Petroleum Reservoir Management in Iranian National Oil Company (NIOC): The Case of Soroosh Field</td>
<td>Amirnaser Akhavan, Petroleum Dept, AmirKabir University of Technology, Iran Nooshin Jabbari, University of Malaya, Kuala Lumpur, Malaysia M. Hamdi, Advanced Manufacturing and Material Processing (AMMP) Centre, University of Malaya, and Department of Engineering Design &amp; Manufacture, Faculty of Engineering, University of Malaya</td>
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<td>Self-restrain or Discrimination: Participation of Women Engineers in India</td>
<td>Seema Singh, Department of Economics, Delhi Technological University, Delhi, India</td>
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<td>The Marketing Mix Strategy in Influence to the Competitive Advantage</td>
<td>Endang Chumaidiyah, Faculty of Industrial Engineering, Institut Teknologi Telkom, Bandung, Indonesia</td>
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<td>Stimulate Active Participation and Managing Change</td>
<td>Mohan Khond, College of Engineering, Pune, India</td>
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<td><strong>WD 14:00 Reliability and Maintenance III</strong></td>
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<td>Seismic Image Analysis and Pattern Recognition to Identify Fault Diagnosis for Roller Bearing</td>
<td>Madhavendra Saxena, Singhania University, Rajasthan, India R.P. Rajoria, and Manoj Gupta, Poornima University, India</td>
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<td>Byeong Min Mun, and Suk Joo Bae, Hanyang University, South Korea</td>
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<td>Risk-Averse Newsboy Problem with Incomplete Demand Information</td>
<td>Bibhas Giri, Department of Mathematics, Jadavpur University, Kolkata, India</td>
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<td>The Effects of Salvage Value on the Age-Replacement Policy under Renewing Warranty</td>
<td>Yu-Hung Chien, Department of Applied Statistics, National Taichung University of Science and Technology, Taichung, Taiwan Fu-Min Chang, Department of Finance, Chaoyang University of Technology, Taichung, Taiwan Tzu-Hsin Liu, Department of Statistics and Informatics Science, Providence University, Taichung, Taiwan</td>
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<td>Design of Operational Risk Measurement in Consumer Finance Companies with Risk Breakdown Structure (RBS) and Analytic Network Process (ANP) Methods</td>
<td>Armin Darmawan, Department of Industrial Engineering, Hasanuddin University, Makassar, Indonesia Farizal and Dendi Prajadhiana, Department of Industrial Engineering, University of Indonesia, Depok, Indonesia</td>
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**15:30 – 15:45 Coffee/Tea Break**

**PARALLEL SESSION VIII – WEDNESDAY (WD), 15:45 – 17:15**

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<td><strong>Plenary IV:</strong> Dr. Gisele Ragusa, University of Southern California, USA and Chair, USC STEM Consortium</td>
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ID 160: Application of Memetic Algorithm to Solve Truck and Trailer Routing Problems
Seyedmehdi Mirmohammadsadeghi and Shamsuddin Ahmed, University of Malaya, Kuala Lumpur, Malaysia

ID 107: Green Supply Chain Design with Multi-Objective Optimization
Kartina Puji Nurjanni, Postgraduate Program of Industrial Engineering, Universitas Gadjah Mada, Yogyakarta, Indonesia, Algorithmi Research Center, Department of Production and System, Universidade do Minho, Portugal
Maria S. Carvalho and Lino A.A.F da Costa, Department of Production and System, Universidade do Minho, Portugal

ID 258: An Efficient Heuristic Approach for Solving the Transportation Problem
Mohamed Silmi Juman Zeinul Abdeen, University Brunei Darussalam, Brunei

ID 403: Unrelated Parallel Machines Scheduling Problem with Sequence Dependent Setup Times
Vahid Kayvanfar, AmirKabir University of Technology, Iran

ID 356: Fuzzy Data Envelopment Analysis to Rank Engineering Design Requirements in QFD
Mohammad Molani Aghdam, Islamic Azad University, Ayatollah Amoli Branch, Amol, Iran

ID 136: Multi-Objective Path Search Problem Based on an Extended Network Model
Yoichi Shimakawa, Salesian Polytechnic, Japan

ID 055: Optimal Ordering Policies for Inventory Problems in Supermarkets under Stochastic Demand: A Case Study of Milk Powder Product
Kizito Mubiru, Makerere University, Uganda

ID 268: Excess and Obsolete Raw Materials Depletion through Reworks: A Case Study in Wastes Minimization
James C. Chen, National Tsing-Hua University, Taiwan
Ana M. Chiu, National Tsing-Hua University, Taiwan

ID 448: Comparative Analysis of AHP-TOPSIS and GA-TOPSIS Methods for Selection of Raw Materials in Textile Industries
D. K. Banwet and Abhijit Majumdar, Department of Management Studies, Indian Institute of Technology Delhi, India

ID 441: Optimal Economic Manufacturing Quantity and Process Target for Imperfect Systems
Salih Duffuua, King Fahd University of Petroleum and Minerals, Saudi Arabia

ID 552: Stock Dependent Inventory Models under Parameter Uncertainty
Sungmook Lim, Department of Business Administration, Korea University, Sejong, South Korea

ID 141: Experimental Analysis of the Applicability of a Multi-Item Constrained EOQ Calculation Algorithm
Salvatore Miranda, M. Fera, R. Iannone, and S. Riemma, University of Salerno, Fisciano, Italy

ID 179: Selecting a Material for an Electroplating Process Using AHP and VIKOR Multi Attribute Decision Making Method
Md. Masud Kaosor, Md. Mamunur Rashid and Sharif Ahmed, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

ID 245: Designing the Milk Collection Network using Integrated Location Routing Approach
Mohammad Mumtaz, Naiman Jalil and Kamran Ali Chatha, LUMS, Pakistan
Mohammad Kamran Mumtaz, Center for Entrepreneurial Development, Institute of Business Administration (IBA), Karachi, Pakistan
Suleman Dawood School of Business, Lahore University of Management Sciences (LUMS), DHA, Lahore, Pakistan
Muhammad Naiman Jalil and Kamran Ali Chatha, Suleman Dawood School of Business, Lahore University of Management Sciences (LUMS), DHA, Lahore, Pakistan

ID 555: Routing Lean and Green in UPS
Patricia Molina, Katia Nuñez, Lorena Cantú and Bernardo Villarreal, Universidad de Monterrey, San Pedro Garza García, México

ID 553: Increasing Customer Satisfaction through Lean Distribution
Etna Muraira, Lorena Garzafax and Bernardo Villarreal, Departamento de Ingeniería, Universidad de Monterrey, San Pedro Garza García, México

ID 155: An Adaptive Neuro-Fuzzy Inference System based Algorithm for Long Term Demand Forecasting of Natural Gas Consumption
Ferdous Sarwar, M. Mamunur Rashid, and Debasish Ghosh, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

WD 15:45 Supply Chain Management IV Bangli I
Session Chair: Dr. Mark Goh, The Logistics Institute – Asia Pacific, and Business School, National University of Singapore

ID 142: The Joint Contract to Coordinate Price Changing Apparel Supply Chain
Qi Xu and Wenjie Wang, Donghua University, China

ID 236: Managing Upstream Supply Chain Complexity based on Purchasing Competencies: A Framework
Alhasan Y. Hakami, School of Aerospace, Mechanical & Manufacturing Engineering, RMIT University, Melbourne, Australia
Linda L. Zhang, Department of Management, IESEG School Management, Lille, France
Arun Kumar, School of Aerospace, Mechanical & Manufacturing Engineering, RMIT University, Melbourne, Victoria, Australia

ID 450: Developing a New Model of Supplier Selection and Lot-Sizing for Disruptive Supply Chain Network under Uncertainty
Zahra Safaei Koletia, Kamran Jamali Firouzabadia, and Seyed Ahmad Sheibat Alhamdyia, Department of Industrial Management, Islamic Azad University Firoozkooh Branch, Iran
Navid Sahebjamnia, School of Industrial and Systems Engineering, College of Engineering, University of Tehran, Tehran, Iran

ID 146: A Methodology to Optimize Value in Discrete Event Simulation for Production Planning and Control Studies
NurAmalina Muhammad, and Chin JengFeng, University Sains Malaysia

ID 548: Mitigating Inefficiencies in Humanitarian Supply Chains
Colin Wee, Robert de Souza, and Jonas Stumpf, The Logistics Institute – Asia Pacific, National University of Singapore
Mark Goh, The Logistics Institute – Asia Pacific, and Business School, National University of Singapore

WD 15:45 Energy II Bangli II
Session Chair: Dr. Ali Jawad, University of Technology, Bagdad, Iraq

ID 395: Wind Energy Analysis for 3 Prospective Costal Sites of Bangladesh
Muhammad Mahbubul Alam, Bangladesh University of Engineering & Technology, Dhaka, Bangladesh
A. K. Azad, Sylhet Gas Field Limited, Sylhet, Bangladesh

ID 051: Policy implications on industrial energy consumption: a DEA Sensitivity approach
Oudolapo A. Olarenwaju, Department of Industrial Engineering, Tshwane University of Technology, Pretoria, South Africa
Adisa A. Jimoh, Department of Electrical Engineering Tshwane University of Technology, Pretoria, South Africa
Pulek A. Kholopane, Department of Industrial Engineering University of Johannesburg, South Africa

Michael Mutingi, University of Botswana, Botswana
Charles Mbohwa, University of Johannesburg, South Africa

ID 066: Alternative Fuels for Cement Industry: A Review
Rajendra Patil, Universal College of Engineering and Research Pune, India

ID 526: Investigation of Mixture formation and Flame Development in Emulsified Biodiesel Burner Combustion
Amir Khalid, Universiti Tun Hussein Onn Malaysia, Johor, Malaysia
ID 400: The Technical – Economic Investigation of LNG Projects and Natural Gas in the South Pars Gas Complex (Iran) Based On Cost – Benefit Model
Mohammadreza Joulaie, National Iranian Oil Company, Iran

WD 15:45 Engineering Management IV Rijasa I
Session Chair: Dr. Cristina S. Rodrigues, University of Minho/ Centre Algoritmi, Portugal

ID 376: Industrial Engineering and Operations Management Perspectives: A Research in Management on Leadership
Kristian Edi Nugroho Soebandrija, Bina Nusantara University, Indonesia

ID 355: ABM (Activity-Based Management) System Implementation in Islamic Azad University of I.R. Iran
Milad Ziaeian, Reza Kiani Mavi and Gohar Rahmani, Islamic Azad University, Qazvin Branch, Qazvi, Iran

ID 425: Documentary Analysis of Professionalization and Certification Processes - Case Study: Certification of Professional Engineering in Colombia
Oscar Vasquez Bernal, National Distance Open University (UNAD), Bogotá, Colombia

ID 401: How can We Develop a Risk Management Plan for Our Organization?
Rujee Charupash, Sirindhorn College of Public Health KhonKaen, Thailand

ID 330: Project Empreede TIMOR. How to promote entrepreneurship among students?
Tomas Xavier, National University of East Timor
Filipa Vieira, University of Minho/CGIT, Portugal
Cristina S. Rodrigues, University of Minho/ Centre Algoritmi, Portugal

WD 15:45 Service Systems Rijasa II
Session Chair: Dr. Elkanah Oyetunji, Department of Mechanical Engineering, Lagos State University, Nigeria

ID 486: On Servitization and Maintenance of Diamond Press Machines
Joe Amadi-Echendu, University of Pretoria, South Africa

ID 209: On the Airport Check-In Counter Allocation Problem – A Stochastic Dynamic Programing Approach Supported By Empirical Data
Mahmut Parlar, McMaster University, Canada
Brian Rodrigues, and Sharafali Moosa, Singapore Management University, Singapore

ID 459: Perspectives from Technology Acceptance Model on consumers' Adoption of IPTV Service: An Empirical Research in Taiwan
JrJung Lyu, Fan-Kuei Chiou, and Chia-Wen Chen, National Cheng Kung University, Tainan City, Taiwan

ID 169: Comparison of Service Quality of Two Commercial Banks in Upper East Region of Ghana
E. O. Oyetunji, Department of Mechanical Engineering, Lagos State University, Nigeria
B. B. Baguri and A. E. Otis, Department of Computer Science University for Development Studies, Ghana

18:00 – 21:00 Conference Award Dinner and Cultural Program
Thursday, January 9

08:30 – 09:15 Thursday Morning Keynote I: Dr. John Blakemore, CEO, Blakemore Consulting International, Australia and Former National President of the Manufacturing Society of Australia

09:15 – 10:00 Thursday Morning Keynote II: Dr. Petri Helo, Professor of Logistics, Department of Production, Faculty of Technology, University of Vaasa, Finland

10:00 – 10:15 Break

PARALLEL SESSION IX – THURSDAY (TH), 10:15 – 11:30

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Dr. Atanas I. Lazarov, Professor Emeritus, Technical University of Sofia, Bulgaria  
Dr. C. B. Gupta, Birla Institute of Technology & Science, Pilani, India |
| TH 10:15 | Operations Research IV Tabanan II | Session Chair: Rene Estember, Mapua Institute of Technology, Philippines |
| ID 498 | Optimization Model for the Dairy Sector | Javier D. Fernandez and Beatriz Angel, University Pontificia Bolivariana, Medellín, Antioquia, Colombia |
| ID 496 | A Genetic Algorithm Based Solution Approach for the Time Dependent Vehicle Routing Problem | M. Selçuk Korkmaz, Marmara University, Engineering Management Program, Istanbul, Turkey  
Serol Bulkan, Marmara University, Industrial Eng. Dept., Istanbul, Turkey  
Ekrem Duman, Ozyegin University, Industrial Eng. Dept., Istanbul, Turkey |
| ID 452 | Reliability-based Measures of a System with an Unreliable Repairman with Geometric Reneging Under Threshold-based Recovery Policy | Dong-Yuh Yang and Zong-Ru Wu, National Taipei College of Business, Taipei, Taiwan  
Cheng-Hwai Liou, National Taichung University of Science and Technology, Taichung, Taiwan |
| ID 221 | A Framework on the Administrative Decision Model for Resource Loading | Rene Estember, Mapua Institute of Technology, Philippines |
| TH 10:15 | Lean and Six Sigma I Tunjung | Session Chair: Dr. Nihal Erginel, Anadolu University, İkiEylül Campus, Eskisehir, Turkey |
| ID 004 | To What Degree Is Sustainability Practiced In South African Paper Manufacturing Companies? | Johannes Mapokgole, University of Johannesburg, South Africa |
| ID 158 | Silhouette Image-based Technique for Flexible Printed Circuit (FPC) Models for Automated Visual Inspection | Nurul Aida Harun, Universiti Sains Malaysia |
| ID 013 | A TOC-OEE Based Scheme to Improve Productivity | Bernardo Villarreal, and Nancy López, Universidad de Monterrey, Mexico |
| ID 543 | Why Lean Six Sigma Matters for Next-Gen ERP? | Anil Kumar Saini, University School of Management Studies, India  
Rashmi Jha, Gitarattan International Business School (GiBS), Affiliated to Guru Gobind Singh Indraprastha University, India  
Aman Jha, Kalinga Institute of Industrial technology, India |
<p>| ID 546 | Reduce the Failure Rate of the Screwing Process with Six Sigma Approach | Nihal Erginel and Aytaç Hasirci, Industrial engineering Department, Anadolu University, İkiEylül Campus, Eskisehir, Turkey |</p>
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<td>A Kinetikk Study: Understanding Hand and Finger Motion Whilst Squeezing Bottles</td>
<td>Seri Rahayu Kamat, Department of Manufacturing Management, University Technical Malaysia Malacca, Alaster Yoxall, Sheffield Hallam University, Sheffield, United Kingdom</td>
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<td>Psychological Service Quality Analysis: A Cross-Cultural Approach</td>
<td>Hye-Kyung Pang, Hallym University, South Korea</td>
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<td>The Prevalence of Work Related Musculoskeletal Disorders among Workers Performing Industrial Repetitive Tasks in the Automotive Manufacturing Companies</td>
<td>Nurhayati Mohd Nur, Siti Zawiah Md Dawal and Mahidzal Dahari, Department of Engineering Design and Manufacture, University of Malaya, Kuala Lumpur, Malaysia</td>
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<td>Understanding Physician's Decision Making in Trauma Centers</td>
<td>Policarpos deMattos, Eui Park, and Daniel Miller, North Carolina A&amp;T State University, USA</td>
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<td>Yong Yin, Yamagata University, Kojirakawa-machi, Yamagata-shi, Japan</td>
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<td>Benchmarking C2C Performance Approach for Supply Chains: A Colombian Case Study</td>
<td>Juan Pablo Escorcia, Department of Industrial Engineering, Universidad Autonoma Del Caribe, Barranquilla, Colombia, Rene A. Amaya, Department of Industrial Engineering, Universidad Del Norte, Barranquilla, Colombia</td>
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<td>Empty Containers Repositioning in South African Seaports</td>
<td>RD Al-Rikabi, Oluwemimo Adetunji and VSS Yadavalli, University of Pretoria, South Africa</td>
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<td>A Case Study about Retailing Market of Industrial Sector in Turkey</td>
<td>Ayşenur Erdil, University of Marmara, Faculty of Engineering, Department of the Industrial Engineering, University of Yalova, Faculty of Engineering, Department of the Industrial Engineering, Turkey, Mehtap Erdil, University of Marmara, Faculty of Engineering, Department of the Environment Engineering, Turkey, Hikmet Erbiyik, University of Yalova, Faculty of Engineering, Department of the Industrial Engineering, Turkey</td>
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<td>Study on Key Factors of Adopting Sustainable Supply Chain Management in Indonesia</td>
<td>Caroline Himadewi Santoso, Jinshyang Roan, and Jie-Zheng Wu, Soochow University, Taipei, Taiwan</td>
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<td>New Indicator System for Evaluation of Land Use Efficiency</td>
<td>Armands Auzīņš, Sandra Geipele, and Ineta Geipele, Riga Technical University, Riga, Latvia</td>
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<td>On Sustainability of IT Service Business in India: A Financial Operation Perspective</td>
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<td>Noble Evaporative Battery Thermal Management System for EVs/HEVs</td>
<td>Ataur Rahman, Helmi Ahmed and MNA Hawlader, International Islamic University Malaysia, Kuala Lumpur, Malaysia</td>
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<td>TH 10:15</td>
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<td>Logistics Management I</td>
<td>Dr. Jekka Subramanian Gnanasekaran, K.L.N. College of Information Technology, Tamil Nadu, India</td>
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ID 183: **Stochastic Optimization for Procurement of International Shipping Services**
Sang Hwa Song, Graduate School of Logistics, Incheon National University, South Korea
Taesu Cheong, Department of Industrial and Systems Engineering, National University of Singapore, Singapore
Byungjun Song, KTNET, South Korea

ID 387: **Determining Optimum Route and Load Transfers in a Multiple Route-based Flat Rate Transportation Problem**
Ketut Gita Ayu, Nike Septivani, and Verola Lollyta, Bina Nusantara University, Jakarta, Indonesia

ID 424: **TUT Student Bus Transport System: A Case Study**
Venessa Ranjit, Tshwane University of Technology, South Africa

ID 429: **Planning of Oil Distribution Network with Artificial Intelligence Techniques**
Malinga Borukgama, Subodha Dharmapiya, Asiri Senasinghe and Asela Kulathunga, Sri Lanka

**TH 10:15 Healthcare Systems I**
*Session Chair: Victoria Jordan, University of Texas MD Anderson Cancer Center, USA*

ID 193: **Developing a Total Quality Management Framework for the Healthcare Organizations**
Abdulsattar Al-Ali, Department of Management, The World Islamic University for Sciences & Education, Amman, Jordan

ID 165: **Benchmarking hospital services: an application of the Data Envelopment Analysis technique**
Ana S. Camanho, and Isabel M. Horta, Faculdade de Engenharia da Universidade do Porto, Portugal
Maria C. Portela, Universidade Católica Portuguesa, Porto, Portugal

ID 177: **Factors Influencing the Sustainability of Results Following Lean Projects in Healthcare Environments**
Stéphanie Desmeules and Denis Lagacé, Université du Québec à Trois-Rivières, Québec, Canada

ID 222: **Transforming Healthcare Using Systems Engineering in an Academic Health System**
Victoria Jordan, University of Texas MD Anderson Cancer Center, USA

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**PARALLEL SESSION X – THURSDAY (TH), 11:30 – 13:00**

**TH 11:30 GLOBAL ENGINEERING EDUCATION X**
*Session Chair: Dr. Budi Santosa, Surabaya Institute of Technology (ITS), Indonesia*

Dr. Abdurazzag Ali Aburas, International University of Sarajevo, Bosnia and Herzegovina

Dr. Muhammad H. Zaman, Associate Chair for Undergraduate Affairs, Department of Biomedical Engineering, Boston University, USA: "Engineering Education in Africa: Impact for Development and Sustainability"

Dr. Abdel Magid Hamouda, Professor and Chairman of Mechanical and Industrial Engineering Department, Qatar University, Qatar: "Innovation and Entrepreneurship in Higher Education: Status; Challenges and Future Trends"

**TH 11:30 Production Planning I**
*Session Chair: Dr. Saad Suliman, University of Bahrain*

ID 077: **Evaluating Performance of Production Scheduling from an Economic Perspective**
Johannes Mapokgole, University of Johannesburg, South Africa

ID 118: **A Reference Model for Development of Production Scheduling Systems**
Shigeru Fujimura, Graduate School of Information, Production and Systems, Waseda University, Fukuoka, Japan

ID 275: **Batch Scheduling for a Single Deteriorating Machine to Minimize Total Actual Flow Time**
Rinto Yusriski, Bandung Institute of Technology, Indonesia

ID 007: **An Algorithm for Solving Lot Sizing and Cutting Stock Problem within Aluminum Fabrication Industry**
Saad Suliman, University of Bahrain
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<td>Lean and Six Sigma II</td>
<td>A Conceptual Model for Full-Blown Implementation of Lean Manufacturing System in Malaysian Automotive Industry</td>
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<td>Dr. Asela Kulatunga, University of Peradeniya, Sri Lanka</td>
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<td>An Analysis of Predictor Variables for Operational Excellence through Six Sigma</td>
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<td>Anuradha R Chetiya, Sunil Sharma, University of Delhi, India</td>
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<td>Process Visualization of a Manufacturing Plant Based on Lean Concept</td>
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<td>H.M.M.M. Jayawickrama, S. Samarasena, A.K. Kulatunga, University of Peradeniya, Sri Lanka</td>
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<td>Application of Toyota’s Production System to Reduce Traffic Accidents in Abha’s Region (Case Study)</td>
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<td>Abdelhakim Abdelhadi, King Khalid University, Saudi Arabia</td>
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<td>Human Factors II</td>
<td>An Investigation of the Effects of Noise on Cognitive tasks</td>
<td>Jepun</td>
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<td>Development of a Graphical User Interface as Data Collection Tool for Cognitive Performance</td>
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<td>Development and Evaluation of a Collision Avoidance Display for Supporting Pilots’ Decision Making in a Free Flight Environment</td>
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<td>Yakubu Ibrahim, Peter Higgins and Peter Bruce, Swinburne University of Technology (SUT), Melbourne, Australia</td>
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<td>The Effects of Coping Mechanism, Gender and Shift to Stress Risk Level of Inbound Call Centers</td>
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<td>Quality of Work Life and Organizational Commitment</td>
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<td>Nushin Kamali Sajjad and Badri Abbasi, Islamic Azad University, Astara, Iran</td>
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<td>Dr. Safwan Altarazi, German Jordanian University, Jordan</td>
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<td>Dashboard User Interface for Measuring Performance Metrics: Concept from Virtual Factory Approach</td>
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<td>The impact of SCM on Business Performance: A Case Study in Tehran Stock Exchange Market</td>
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<td>Bull Whip and Reverse Bullwhip Effect in After Sales Service Supply Chains</td>
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<td>Ali Tajdin, Saba Shabaninikoo, raj Mahdavi, and Iliamed Fazlollahtabar, Mazandaran University of Science and Technology, Iran</td>
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<td>Sustainability and Green Systems II</td>
<td>Implementation of Sustainable and Green Logistics Initiative as Supply Chain Strategy in FMCG Industry</td>
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<td>Shaliha Anistia, University of Hawaii at Manoa, USA</td>
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<td>Environmental Sustainability Issues in Malaysian Metal and Fabrication SMEs: Comparative Analysis from a Case Study Perspectives</td>
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<td>Atiah Abdullah Sidek, International Islamic University Malaysia</td>
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ID 262: Genetic Algorithm Approach for Multi-objective Green Supply Chain Design
Li-Chin Wang1,2, Ming-Chung Tan1, I-Fan Chiang1, Yin-Yann Chen3, Sheng-Chieh Lin1, and Shuo-Tsung Chen1
1 Department of Industrial Engineering and Enterprise Information Tunghai University Taichung, Taiwan, ROC
2 Tunghai Green Energy development and management Institute (TGEI) Tunghai University Taichung, Taiwan, ROC
3 Department of Industrial Management National Formosa University Yunlin County, 632, Taiwan, ROC.

ID 133: Auto Manufacturers and Applying Green Practices in the Presence of Rivals (The Case of End of Life Vehicles)
Samira Keivanpour, Universite Laval, Canada
Christian Mascl, École Polytechnique de Montréal, Canada
Daoud Ait Kadi, Université Laval, Canada

ID 440: Motivation to Pursue Green Supply Chain Management
Evelyne Vanpoucke, Maastricht University, Netherlands

ID 232: Planning of Oil Distribution Network with Artificial Intelligence Techniques
B.S.M Borukgama, U.S.S. Dharmapriya and A.P. Senasinghe, University of Moratuwa, Moratuwa, Sri Lanka
A.K. Kulathunga, Department of Production Engineering, University of Peradeniya, Sri Lanka

ID 226: Sustainable Food Supply Networks in the Chinese Supermarket Sector
Christopher Backhouse and Chong Xu, Loughborough University, UK
Norizah Mohamad, Universiti Sains Malaysia
Reshpal Plaha, Crystal Quality UK Ltd, UK

ID 559: Innovative Vehicle and Traffic Control in the Next Generation of Road Transportation [Invited Paper]
M.A.S. Kamal, Japan Science and Technology Agency (JST), Institute of Industrial Science, The University of Tokyo, Japan

ID 542: Studies on Manufacturing Logistics by Using Data Mining Approach
Jekka Subramanian Gnanasekaran, K.L.N. College of Information Technology, Tamil Nadu, India

ID 067: Home Healthcare Staff Scheduling: A Clustering Particle Swarm Optimization Approach
Michael Mutingi, University of Botswana

ID 197: Improve the Health Care Service and Patients Flow at Ophthalmology Clinic at Sultan Qaboos University Hospital using Six Sigma
Nasr Al Hinai, Mohammad Khadem, and Mahmoud Al Kindi, Sultan Qaboos University, Oman

ID 539: The Description of the Control Factors on the Complex Immune System
Janar Yermekbayeva, Tolkina Myrzakul, Onlaisyn Dauletbakova and Gulnara Abitova, L. N. Gumilev Eurasian National University, Kazakhstan

ID 037: Statistical Models for Hospital Readmission Prediction with Application to Chronic Obstructive Pulmonary Disease (COPD) Patients
Li Zeng, Smriti Neogi, and Jamie Rogers, The University of Texas at Arlington, Arlington, USA
Susan Seidensticker, Carlos Clark, Lindsey Sonstein, Rick Trevino, and Gulshan Sharma, Department of Internal Medicine, The University of Texas Medical Branch, Galveston, USA

13:00 – 14:00 Lunch: On Your Own
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<td>Dr. Bidyut Kumar Bhattacharyya,</td>
<td>Director, School of Safety &amp; Occupational Health Engineering, Bengal</td>
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<td>Engineering &amp; Science University, West Bengal, India</td>
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<td>Dr. Yun-Hae Kim, Professor, Korea</td>
<td>Maritime and Ocean University, Korea and Vice-President, Korean Society</td>
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<td>Nadjib Brahimi, University of Sharjah, United Arab Emirates</td>
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<td>Ahmed El-Bouri, Sultan Qaboos University, Oman</td>
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<td>Bernardo Villarreal, Javier Arriaga, Ciro Cardenas, Juan Pablo Rivera,</td>
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<td>Universidad de Monterrey, Mexico</td>
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<td>ID 351:</td>
<td>Implementation of Integrated System</td>
<td>Six Sigma and Importance Performance Analysis for Quality Improvement</td>
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<td>HSDPA Telecommunication Network and Customer Satisfaction</td>
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<td>Performance Analysis for Quality</td>
<td>Slamet Pranoto and Rahmat Nurcahyo, Department of Industrial Engineering,</td>
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<td>Improvement of HSDPA</td>
<td>University of Indonesia, Jakarta, Indonesia</td>
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<td>ID 270:</td>
<td>Case Study: Innovative Implementation</td>
<td>of Several Lean Principles in a Flat Steel Plant</td>
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<td>of Several Lean Principles in a Flat</td>
<td>Sameh M. Fahmi, Tamer M. Abdelwahab, Yaseen Amin, Mohamed S. Emam,</td>
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<td>Haytham Youssef and Ahmed Ragab, Al Ezz Dekheila Steel Co. (EZDK),</td>
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<td>Application of Lean Six Sigma in</td>
<td>Entertainment Industry by Integration of Risk management</td>
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<td>Tariq Aziz and Mohammed Sharaf Fathe, King Saud University, Saudi Arabia</td>
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<td>of Risk management</td>
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<td>ID 550:</td>
<td>Costs of Quality and Six Sigma</td>
<td>Rathindra Nath De, Bengal Engineering and Science University, Shibpur,</td>
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<td>West Bengal, India</td>
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<td>Session Chair: Dr. Sunil Sharma,</td>
<td>Faculty of Management Studies, University of Delhi, India</td>
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<td>Digital Human Modeling and Clothing</td>
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<td>Salami O. Ismaila, Department of Mechanical Engineering, Federal</td>
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<td>Kolawole T. Oriolowo, Department of Mechanical Engineering, The Polytechnic,</td>
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<td>Juhee Park, and Woojin Park, Department of Industrial Engineering, Seoul</td>
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<td>National University, Seoul, South Korea</td>
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<td>Understanding Safety Dimensions among Logistics Personnel in Malaysia: Approaches from Social Psychology</td>
<td>Huinee AuYong and Lilis Suriyent, School of Management, Universiti Sains Malaysia, Penang, Malaysia</td>
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<td>A Study on Push-Pull Analysis Associated with Awkward Posture among Workers in Aerospace Industry</td>
<td>Seri Rahayu K., Norhidayah Hashim and Shahrizan M.O., Faculty of Manufacturing Engineering, Universiti Teknikal Malaysia, Melaka, Malaysia</td>
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<td>Considering Holding Cost in Optimal Core Acquisition and Remanufacturing Policy under Deterministic Process Times</td>
<td>Mostafa Pazoki and Walid Abdul-Kader, University of Windsor, Canada</td>
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<td>Weighting Suppliers Using Fuzzy Inference System and Gradual Covering in a Supply Chain Network</td>
<td>Mohammad Asghari, Department of Industrial Engineering, Ferdowsi University of Mashhad, Azadi Sq., Mashhad, Iran</td>
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<td>Challenges and Uncertainties in Collaborative Forecasting</td>
<td>Madhavendra Saxena, Poornima University, India</td>
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<td>Sustainability Perspectives: A Research on Leadership, Innovation, Performance and Competitive Advantage</td>
<td>Christian Edi Nugroho Soebandrija, Bina Nusantara University, Indonesia</td>
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<td>European Directives Sustainability of Biofuels and Brazilian Market, Panorama Biodiesel</td>
<td>Mariana Bittar, Universidade Federal do Rio de Janeiro-PRH, Brazil</td>
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<td>Abandoned Development as a Brownfield Site: Case Study Kemayan City, Johor Bahru</td>
<td>Nurul Ali, Land Administration and Development, Malaysia</td>
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<td>Enhancing the Performance of Quota Managed Fisheries Using Seasonality Information: The Case of the Portuguese Artisanal Dredge Fleet</td>
<td>Ana S. Camanho, Faculdade de Engenharia da Universidade do Porto, Portugal</td>
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<td>An Exact Solution for a Class of Green Vehicle Routing Problem</td>
<td>Mandy Taha, M. Nashat Fors, and Amin Ahmed Shoukry, University of Alexandria, Egypt</td>
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<td>Investigating Supply Chain Risk Factors: An Empirical Assessment Approach</td>
<td>Lhoussaine Ouabouch, Ibnou Zohr University, Morocco</td>
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<td>Optimization of Multistage Logistic Network under Disruption Risk Considering Continuity Rate</td>
<td>Muhammad Rusman and Syamsul Bahri, Department of Industrial Engineering, Hasanuddin University, Makassar, Indonesia</td>
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Yoshiaki Shimizu, Department of Mechanical Engineering, Toyohashi University of Technology, Japan

ID 375: A Bargaining Framework Planning for Maintenance Service under Governmental Arms Offset Intervention
Jong-Jang Lin, Yi-Kuei Lin and Ruey-Huei Yeh, National Taiwan University of Science and Technology, Taipei, Taiwan

ID 405: Conceptual Modelling on Economic Sustainability of Computer Part Recovery Systems
Roesfiansjah Rasjidin¹,², Arun Kumar¹ and Firoz Alam¹
¹ School of Aerospace, Mechanical & Manufacturing Engineering, RMIT University, Melbourne, Australia
² Industrial Engineering Department, Faculty of Engineering, Esa Unggul University, Jakarta, Indonesia

TH 14:00

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Jong-Jang Lin, Yi-Kuei Lin and Ruey-Huei Yeh, National Taiwan University of Science and Technology, Taipei, Taiwan

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¹ School of Aerospace, Mechanical & Manufacturing Engineering, RMIT University, Melbourne, Australia
² Industrial Engineering Department, Faculty of Engineering, Esa Unggul University, Jakarta, Indonesia

15:30 – 15:45  Tea / Coffee Break

PARALLEL SESSION XII – THURSDAY (TH), 15:45 – 17:15

TH 15:45  Global Engineering Education

Session Chair: Dr. Bernardo Villarreal, Department of Industrial Engineering, Universidad de Monterrey, Mexico

Plenary V: Dr. Paulo Augusto Cauchick Miguel, Adjunct Professor, Dept. of Industrial and Systems Engineering Federal University of Santa Catarina – UFSC, Brazil: “IE Education in Brazil: Fast Growing and Future Perspectives”

Plenary VI: Ing. Oscar Gamboa C., Coordinator, Maestria en Sistemas Modernos de Manufactura, Instituto Tecnologico de Costa Rica: “Engineering Education in Latin America”

TH 15:45  Production Planning III

Session Chair: Dr. Ray Y. Zhong, The University of Hong Kong, Hong Kong, China

ID 050: A Real-time Planning and Scheduling Model in RFID-enabled Manufacturing
Ray Y. Zhong, and George. Q. Huang, The University of Hong Kong, Hong Kong, China
Q. Y. Dai, School of Information Engineering, Guangdong University of Technology, Guangzhou, China
T. Zhang, T.Y. Luo and D.P. Lin, Huaiji Dengyun Auto Parts (Holding) Co., Ltd. Zhaoqing, China

ID 231: Application of Simulated Annealing Algorithm in Advanced Planning and Scheduling System for TFT-LCD Color Filter Fab
James C. Chen, National Tsing-Hua University, Taiwan
Chih-Cheng Chen, Yu-Yao Wei, Chin-Ping Liu, Chungwha Picture Tubes Ltds, Taiwan
Jim Z. Lin, National Tsing-Hua University, Taiwan

ID 291: **A Heuristic Approach to Solve Production Planning Problem with Machine Failure in a Series Parallel Multi-State System**
Mustapha Nourelfath, Kuwait University, Safat, Kuwait
Yuvaraj Gajpal, University of Manitoba, Canada

**TH 15:45**  **Lean and Six Sigma IV**  **Tunjung**

**Session Chair:** Abdullah Dhafer, Aramco, Saudi Arabia

ID 458: **A Quality Model for a Multi-Layered Sourcing Supply Chain**
Jr.Jung Lyu and Chia-Wen Chen, Department of Industrial and Information Management, National Cheng Kung University, Tainan, Taiwan

ID 073: **Applying an Alternative Heuristic Algorithm to Gupta Method for Sequencing Lean Software Processes**
Eldon Caldwell, University of Costa Rica
Oscar Gamboa, Technological Institute of Costa Rica

ID 473: **Implementation of Lean Manufacturing through Supplier Kaizen Framework: A Case Study**
Mohd Hazri Mohd Rusli, Toyota Malaysia
Ahmed Jaffar, and Suzilawati Muhamad-Kayat, Universiti Teknologi Mara, Malaysia

ID 521: **Value Stream Mapping using Simulation at Metal Manufacturing Industry**
Raja Zuraidah Raja Mohd Rasi, Universiti Tun Hussein Onn, Johor, Malaysia
Rohana Abdullah, and Nooririnah Omar, Universiti Teknikal Malaysia Melaka

ID 320: **Aramco Riyadh Refinery Lean Six Sigma Projects, Case Study**
Abdullah Dhafer, Aramco, Saudi Arabia

**TH 15:45**  **IE/OM in Asia**  **Jepun**

**Session Chair:** Navid Mollaee, Rayan Marketing Co., Tehran, Iran

ID 125: **ASEAN Industrial Engineering and Work Measurement Practices Phenomenon**
Sze Yee Thong, Universiti Malaysia Perlis (UniMAP), Perlis, Malaysia

ID 540: **Women Engineers-their Life Values in Australia**
Susan Fenton, Fenton Partners Pty Ltd, Australia

ID 349: **Upscaling Efficiency of Extension for Development of Agri-horticulture and Livestock in Semi-arid Rajasthan**
Prakash Kalla, S K Rajasthan Agricultural University, India

ID 460: **Readiness of Indonesian Companies for ASEAN Economic Community (AEC): Preliminary Findings from Automotive and Garment Industries**
Mahendrawathi ER, Anisah Herdiyanti and Hanim Maria Astuti, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

ID 561: **Evaluating the Performance of State University, National Important Institute and Private Deemed Universities in Chennai (India) by using Data Envelopment Analysis**
A. John Rajan, Sathyabarna University, Rajeeve Gandhi Salai, Chennai, India

**TH 15:45**  **Supply Chain Management VIII**  **Bangli I**

**Session Chair:** Rahat Uddin, Bangladesh Bank, Dhaka, Bangladesh

ID 175: **A Study of Incentives and its Policies for Sustainability in Supply Chain**
James C. Chen, National Tsing Hua University, Taiwan
Tien-Chi Shen, Chia-Ping Fun and Jason Wen-Hsien Chang, Industrial Technology Research Institute, Taiwan
Tien-Yang Chang, Zih-Sian Lin and Yi-Jhen Lin, National Tsing Hua University, Taiwan

ID 328: **Logistics and Supply Chain Management Approach to SMEs in Noodle Factory Industry: Lean and Six Sigma Tool**
Parinya Pattanawasaporn, Kamphaeng Saen Kasetsart University Kamphaeng Saen Campus, Thailand

ID 335: **Data Mining on Return Items in a Reverse Supply Chain**
Lida Mohammadi, Iraj Mahdavi, and Ali Tajdin, Mazandaran University of Science and Technology, Babol, Iran
Hamed Fazlollahtabar, Iran University of Science and Technology, Tehran, Iran / Niroogostar Energy Optimization Research Group, Tehran, Iran

ID 432: Barriers in implementing Green Supply Chain Management in Construction industry
Elizabeth Ojo and Esther T. Akinlabi, and Charles Mbohwa, University of Johannesburg, South Africa

TH 15:45  
**Sustainability and Green Systems IV**  
Bangli II

**Session Chair:** Dr. Caroline Himadewi Santoso, Soochow University, Australia

ID 239: Recovery and Remanufacturing Targets versus Taxation/Subsidy Policies for Product Reuse
Sam Allaki and Shumail Mazahir, HEC Paris, France

ID 340: A Review on Criteria for Green Infrastructure to be adopted by Local Authorities
Kamalludin Bilal, Universiti Tun Hussein Onn Malaysia
Hishammudin Mohd Ali, and Ibrahim Atan Sipan, University Technology Malaysia
Nurlaila Ali, Land Administration and Development, Malaysia

ID 518: A Nondominated Sorting Genetic Algorithm for Sustainable Reverse Logistics Network Design
Mohammad Asghari, Ferdowsi University of Mashhad, Mashhad, Iran

ID 479: Study on Key Factors of Adopting Sustainable Supply Chain Management in Indonesia
Caroline Himadewi Santoso, Jinsyang Roan, and Jei-Zheng Wu, Soochow University, Taiwan

ID 545: The Influence of Innovation Performance towards Manufacturing Sustainability Performance
Mohd Razali Muhamad, and Zuhriah Ebrahim, Universiti Teknikal Malaysia Melaka, Malaysia

TH 15:45  
**Technology Management**  
Rijasa I

**Session Chair:** Dr. Prakash Naraian Kalla, S.K. Rajasthan Agricultural University, Bikaner, Rajasthan, India

ID 098: A new program for incorporative research between research centers and Oil and Gas industry in I.R. of IRAN, involving Scientific Centers of Excellence – Case study in NIGC
Ali Massaeli, National Iranian Gas Company, Iran

ID 377: Improving Technology through Tacit and Codified Knowledge for SMEs in Developing Economies (Empirical Study)
Fourry Handoko, National Institute of Technology, ITN Malang, East Java, Indonesia

ID 505: Technology Transfer Model through Industrial Collaboration for Product Development and Technopreneurship in Polytechnic Education
Mohammad Nurdin, Polytechnic for Manufacturing of Bandung (POLMAN Bandung), Indonesia

ID 439: Resolving Conflicting Requirements in the Management of Technology and Innovation - Insights from a Comparative Case Study of ADSL Technology
Annelies Geerts, Annelies Geerts, and Bart Van Looy, KU Leuven, Belgium
Klaasjan Visscher, and Petra de Weerd-Nederhof, University of Twente, Netherlands

ID 030: Challenges Associated with Cool Chain Management System!
S. Asiya Z. Kazmi, and Marja Naaranoja, University of Vaasa, Finland

TH 15:45  
**Systems Engineering**  
Rijasa II

**Session Chair:** Dr. Md. Liakot Ali, Institute of Information and Communication Technology (IICT), Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

ID 104: Integration of Multivariate Statistical Process Control and Engineering Process Control
Mohammed A. Rahim, University of New Brunswick, Fredericton, Canada
Yasir A. Siddiqui and Moustafa Elshafei, King Fahad University of Petroleum and Minerals, Dhahran, Saudi Arabia

ID 121: EFQM Constructive or Destructive the Business Excellent
Mohammad Eslamipour, Mapna Generator Co., Iran

ID 414: Die Preparation Time Reduction Optimization of Automotive Stamping Operations
Nirav Sheth, Abass Enzi, Parth Patel, Don Reimer and Ahad Ali, Lawrence Technological University, USA

ID 481: Investigation Novel Matched Valve-Actuator with Atomizer Insert Design For Two-Fluid With 50% Fill Ratio
Norzelawati Asmuin, Centre for Energy and Industrial Environment Studies (CEIES), Universiti Tun Hussein Onn Malaysia
ID 010: Practices and Problems: Fixing Loose Ends of Shared Services Governance
Simon Maabe, and Charles Mbohwa, University of Johannesburg, South Africa
Paulin Mbecke, Council for Scientific and Industrial Research, South Africa

ID 016: A Comparative Analysis between Small and Medium Scale Manufacturing Company through Total Quality Management Techniques
Mohammad Israr, Balaji Engineering College, Junagadh, Gujarat, India
Anshul Gangele, Institute of Technology & Management, Gwalior, India

ID 020: Use of Physical and Numerical Models in Engineering Design Education
Saidani, Messaoud and Abdussalam Shibani, Faculty of Engineering and Computing, Coventry University, UK

ID 032: Determination of Insulation Active Component of an Insulated Neutral Electrical Supply Network
Abderrezzak Hocine, Department of Electromechanical, Badji Mokhtar University, Annaba, Algeria

ID 044: Magnetic Field Assisted Machining
Farhad Najarian, M.Y. Noordin and D. Kurniawan, Universiti Teknologi Malaysia, Skudai, Malaysia

ID 059: The Survey of Role of Freight Forwarders in the Coordination Supply Chain
Ehsan Jamshidi Meyabadi and School of Business, Payam Noor University, Branch of Karaj, Iran
Razieh Maleki, School of Business, Islamic Azad University, Branch of Kermanshah, Iran

ID 081: A Modified Failure Mode and Effect Analysis
Shahryar Sorooshian, Ahmad Nazif Bin Noor Kamar, and Ali Asghar Jomah Adham, University Malaysia Pahang, Malaysia

ID 082: E-Development: Place of Citizen Rights
Md. Abdullah Al Noman, Dhaka University of Engineering & Technology (DUET), Gazipur, Bangladesh
Khan Manjur Morshed, Director, Bangladesh Power Development Board (BPDB), Khulna, Bangladesh

ID 110: A Bi-Objective Model for Locating and Sizing Emergency Medical Service Stations
Nasrin Ramshie and Elahe Amiri, Department of Industrial Engineering, Amirkabir University of Technology, Tehran, Iran

ID 116: Critical Quality Factors and Financial Performance of the Libyan Construction Firms
Naval Gharbal, Amrit S agaroo and Abdussalam Shibani, Coventry University, UK

ID 122: Material and Structural Investigation into a Novel Material
Messaoud Saidani, Faculty of Engineering and Computing, Coventry University, United Kingdom
Abdussalam Shibani, Department of Civil Engineering, Coventry University, United Kingdom
Sam George, Architecture and Building, Coventry University, United Kingdom

ID 124: Materialized Views Maintenance in the Mobile Environment
Sebaa Abderrazak, LIMED, Algeria
Tari A/Kamel, Algeria
ID 138: Step-Stress Accelerated Life Testing Plans against Model Misspecification for the Weibull Distribution
Cheng-Hung Hu, Department of Industrial Engineering and Management, Yuan Ze University, Chung-Li, Taiwan

ID 163: Spanning Tree of Residual Energy Based on Data Aggregation for Maximizing the Lifetime of Wireless Multimedia Sensor Networks
Pu-Tai Yang, Department of Business Administration, Tunghai University, Taichung, Taiwan
Seokcheon Lee, School of Industrial Engineering, Purdue University, West Lafayette, IN, USA

Ana Cristina Fernandes, Paulo Sampaio, Maria do Sameiro Carvalho, University of Minho, Braga, Portugal

ID 181: Industrial Maintenance Management – A Practical Approach
Hani Shafeek, Department of Industrial Engineering, King Abdulaziz University, Rabigh, Saudi Arabia

ID 241: Techno-Economic Study for Lignocellulosic Biomass Processing and Ethanol Fermentation Refinery Design
Rois Fatoni, Universitas Muhammadiyah Surakarta, Indonesia
A. Elkamel, G. DeSouza, M. Ortiz, H. Park, and D. Wang, University of Waterloo, Ontario, Canada

ID 243: Modeling Biomass Gasification in a Fluidized Bed Reactor
R. Fatoni, Universitas Muhammadiyah Surakarta, Indonesia
S. Gajjar, S. Gupta, S. Handa, and A. Elkamel, University of Waterloo, Ontario, Canada

ID 253: Optimization Model for the Integration of Biomass into a Conventional Oil Refinery
I. Alhajri, College of Technological Studies, Kuwait
E. Alper and G.Ils, Hacettepe University, Ankara, Turkey
J. Fung, J. Lo, K. Yanez, and Ali Elkamel, University of Waterloo, Canada

ID 254: Optimization Model for the Integration of Nuclear Energy in Oil Sand Operations
M. Elsholkami, A. Elkamel, I. Al-Syed, A. Jetly, and J. Tordiff, University of Waterloo, Canada
I. Alhajri, College of Technological Studies, Kuwait

ID 256: A Hybrid Heuristic for Inventory Routing Problem with Stochastic Demand
Anak Agung Ngurah Perwira Redi, Meilinda F.N. Maghfiroh and Vincent F. Yu, Department of Industrial Management, National Taiwan University of Science and Technology, Taipei, Taiwan

ID 257: Development of Steam Management Technologies for the Oil Sands Industry
M. Elsholkami, S. Shankar, M. Walawalkar, M. Mehta, A. Merchant, and A. Elkamel, University of Waterloo, Canada
I. Alhajri, College of Technological Studies, Kuwait

ID 260: Integrating a Cogeneration System in Food Process Manufacturing
Wongphaka Wongrat, Faculty of Engineering, Kasetsart University, Kamphaeng Saen Campus, Thailand
O. Yuksel Orhan and E. Alper, Hacettepe University, Ankara, Turkey
J. Massicotte, D. Meyer, Y. Sung, and A. Elkamel, University of Waterloo, West Waterloo, ON N2L 3G1, Canada

ID 261: Modeling Fouling Mitigation Options for Cellulosic Ethanol Distillation
Wongphaka Wongrat, Faculty of Engineering, Kasetsart University, Kamphaeng Saen Campus, Thailand
M. Northey, K. Ali, A. Garusinghe, and A. Elkamel, University of Waterloo, Ontario, Canada

ID 269: Benefits of using Unit Production System (UPS) Line over Conventional Line in the Sewing Section of a Garment Industry
Md. Atikul Islam, Khulna University of Engineering & Technology (KUET), Bangladesh

ID 286: Possibilities of using computer simulation in production process
Michal Pivnička and Denisa Ferenčíková, Tomas Bata University in Zlín, Zlín, Czech Republic

ID 297: Monopoly Sponsored Entry in the Face of Demand Uncertainty and Constrained Capacity
Farooq Sheikh, State University of New York (SUNY), Geneseo, USA

ID 309: Achieving Efficient Remanufacturing through Product-Service Systems
Erik Sundin, Linköping University, Sweden
ID 314: Gasification of Oil Refinery Waste for Power and Hydrogen Production  
O. Yuksel Orhan, and E. Alper, Hacettepe University, Ankara, Turkey  
K. McApline, S. Daly, M. Sycz, and A. Elkamel, University of Waterloo, Waterloo, Ontario, Canada

ID 315: Optimal Design of T2 Multivariate Statistical Chart for Process Monitoring  
M. A. Bin Shams, Department of Chemical Engineering, University of Bahrain, , Isa Town, Kingdom of Bahrain  
O. Yuksel Orhan and E. Alper, Chemical Engineering Department, Hacettepe University, Ankara, Turkey  
K. Moorthy, J. Rafinejad, A. Saxena, and A. Elkamel, University of Waterloo, Waterloo, Ontario, Canada

ID 322: Analysis characteristics of premix injector involve (diesel, water, and air) in burner system using ANSYS CFX  
M. Farid Sies, M. Faris Sies, Hanis Zakaria, Norrizal Mustaffa, B. Manshoor, and N. Asmuin, Centre for Energy and Industrial Environment Studies (CEIES), Universiti Tun Hussein Onn Malaysia, Johor, Malaysia

ID 327: Improving Productivity under Cost Constraints: A Discrete Simulation Case Study  
Raed EL-Khalil, School of Business, Lebanese American University, Beirut, Lebanon

ID 332: Novel Framework for Sustainability Based On Hybrid Architecture-Green Management  
Shahryar Sorooshian and Ahmad Nazif Noor Kamar, Faculty of Technology, University Malaysia Pahang, Malaysia  
Siavash Rashidi Sharif Abad, Department of Art and Architecture, Islamic Azad University, Rafsanjan, Iran

ID 344: Overall Improvement for the Design of Motorized Tricycles in the Philippines – An Ergonomic Study  
Ma. Janice J. Gumasing, Mapua Institute of Technology, Intramuros, Manila, Philippines

ID 345: Evaluating Supply Chain Performance and Risks through Data Mining  
Muhammad Rashid, CESET - Centre for Emerging Sciences, Engineering & Technology, Pakistan

ID 346: Determinants of Supplier Selection and Evaluation, their Impact on Business Key Performance Indication of Buying Companies: In the Context of Telecom Companies in Pakistan  
Muhammad Rashid, CESET - Centre for Emerging Sciences, Engineering & Technology, Pakistan

ID 352: Job Shop Lean Production Implementation Using Program Evaluation and Review Technique (Pert)  
Ramiz Assaf, Industrial Engineering Department, An-Najah National University, Nablus, Palestine

ID 358: Evaluation of Pliers in a Maximum Gripping Task  
Hyun-Sung Kang, Ji-Su Kim, Dae-Min Kim, and Yong-Ku Kong, Sungkyunkwan University, Suwon, South Korea  
Su Kim, and Yong-Ku Kong, Sungkyunkwan University, Suwon, South Korea

ID 364: Study for the Effect of Middle Finger Grip Span on Ring Finger Force in the Maximum Gripping Task  
Dae-Min Kim, Hyun-Sung Kang, Ji-Su Kim, and Yong-Ku Kong, Sungkyunkwan University, Suwon, South Korea

ID 373: Voltage Sag Assessment by Considering Financial Losses and Equipment Sensitivity  
Chang-Hyun Park, Pukyong National University, Busan, South Korea

ID 392: Framework to Implement Six Sigma Methodology to Oil and Gas Drilling Budget Estimation  
Mahmood Al Kindi and Mujtaba Al Lawati, Sultan Qaboos University, Muscat, Oman

ID 404: Effects of Toluene (C7H8) Addition on Microstructure and Superconducting Properties of Bulk C6H10O6Fe + SiC-Doped MgB2  
Syed Quddus and A. Bhagirov, The University of Ballarat, The University of Technology Papua New Guinea

ID 412: Tendencies in Education on Optical Design in Europe  
Irina Livshits, Marina Letunovskaya, Ilya Mimorov and Vladimir Vasilyev, National Research University of Informational Technologies, Mechanics and optics, Russia

ID 419: A Study of the Relationship among IFRSS, Institutional Environment and Cost of Debt Capital-Evidences from EU  
Cheng-Hwai Liou, National Taichung University of Science and Technology, Taiwan  
Chia-Hui Yeh, Moore Stephens Certified Public Accountants, Taichung, Taiwan

ID 436: Analysis of a Two-Echelon Inventory Model with Lost Sales and Stochastic Demand Using Continuous-Time Markov Chain
Iman Vasheghani Farahani, and Rasoul Haji, Sharif University of Technology, Iran

ID 470: The Relationship between Quality Approaches and Their Impact on Portuguese Companies’ Quality Performance
Síria Barros, and Paulo Sampaio, University of Minho, Portugal
Pedro Saraiva, Universidade de Coimbra, Portugal

ID 501: The Operating Decisions of Corporate Business Based on the Brusselator Model
Xiao Han and Dong Mu, School of Economics and Management, Beijing Jiaotong University, China

ID 514: Implementation of Reverse Logistic System as a Means of Environmental and Economical Issue
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