Conference Technical Program

September 10, 2015 (Thursday)

08:00 – 09:15 Global Engineering Education I - Salon 5
Session Chair: Dr. Shahram Taj, Lawrence Technological University, Michigan, USA

8:00 – 8:25 am Thursday
Dr. Laura M. Stanley
Associate Professor, Mechanical & Industrial Engineering Department
Montana State University, Bozeman, MT, USA

“Addressing the Need for Effective Communications across the Engineering Curricula – A Case Study” [ID 103]

8:25 -8:50 am Thursday
Dr. Nadia Bhuiyan
Professor, Department of Mechanical and Industrial Engineering
Associate Director, Concordia Institute of Aerospace Design and Innovation (CIADI)
Concordia University, Montreal, Quebec, Canada

8:50 – 9:15 am Thursday
Dr. Shahram Taj
Professor and Chair, Department of Management and Marketing
College of Management, Lawrence Technological University, Michigan, USA

08:00 – 09:15 Thursday
Operations Research
SALON 6
Session Chair: Vyacheslav Kalashnikov, Tecnologico de Monterrey (ITESM), Monterrey, Nuevo Leon, Mexico

A Benders Based Rolling Horizon Algorithm for a Dynamic Facility Location Problem
Mohammad Marufuzzaman and Ridvan Gedik, Mississippi State University, Starkville, MS, United States

Application of Analytic Hierarchy Process Techniques in Multi-Criteria Decision Making Problems
Richard Hannis, Shahryar Sorooshian and Shariman Bin Mustafa, University of Malaysia Pahang, Kuantan, Pahang, Malaysia

Cold Chain: An interaction analysis of Performance Attributes using Graph Theory
Rohit Joshi, Indian Institute of Management, Shillong, Meghalaya, India
D. K. Banwet, Department of Management Studies, Indian Institute of Technology - Delhi, India

Efficient Metaheuristics for Multi-stage No-Wait Flexible Flowshop Scheduling Problem
Mageed Ghaleb and Ibrahim Alharkan, King Saud University, Riyadh, Saudi Arabia

An Efficient Technique of Computing Pressure on Blades of Hydraulic Machines
Vyacheslav Kalashnikov, Tecnologico de Monterrey (ITESM), Campus MontereyMonterrey, Nuevo Leon, Mexico
Nataliya Kalashnykova, Universidad Autonoma de Nuevo Leon San Nicolas de los Garza, Nuevo Leon, Mexico

08:00 – 09:15 Thursday
Undergraduate Student Paper Competition
SALON 7
Session Chair: Hayder Zghair, Lawrence Technological Univeristy and Kettering Univeristy, Michigan, USA

Application of the Restricted Boltzmann Machine for the planning of maintenance in databases
Eldon Caldwell Marin, Andrés Li Feng, Karen Molina Rivera and Maria Amalia Sequeira Morera, University of Costa Rica, San José, Costa Rica

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### Big Data Analysis and Storage
Khalid Adam Ismail Hammad, Mohammed Adam Ibrahim Fakharaldien, Jasni Mohamed Zain and Mazlina Abdul Majid, University Malaysia Pahang, Kuantan, Malaysia

### Some implications of the use of renewable energy in production scheduling
Eldon Caldwell Marin, Jimena Rojas F, Carolina Mora O, Melissa Merino C and Ana Laura Víquez Q., University of Costa Rica, San José, Costa Rica

### Increasing Customer Service Level in Distribution Operations
Ayde Yuriko Venegas, Universidad de Monterrey, San Pedro Garza García, N.L., Mexico

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#### 08:00 – 09:15 Thursday
**Operations Management**

**SALON 8**

Session Chair: Dr. Mohammad Marufuzzaman, Mississippi State University, United States

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<td>Syed Masood, International Islamic University, Islamabad, Pakistan</td>
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<td>Tawfik Elmhedwi, The Libyan Academy, Tripoli, Libya</td>
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<td>A Continuum Approximation Model for One-Way Electric Vehicle Sharing</td>
<td>Xiaopeng Li, Mississippi State University, Starkville, MS, United States</td>
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<td>Optimisation Techniques in Civil Works and Electrical Contracting</td>
<td>Basel Alsayed Ahmed, Amani Alkhodari, Khaled ElSayed and Mansoor Al Jabri, UAEU, Al Ain, United Arab Emirates</td>
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<td>Designing a Multimodal Transportation Network under Biomass Supply Uncertainty</td>
<td>Mohammad Marufuzzaman, Sushil Poudel, Linkan Bian and Hugh Medal, Mississippi State University, Starkville, MS, United States</td>
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#### 08:00 – 09:15 Thursday
**Lean and Six Sigma**

**SALON 9**

Session Chair: Amar Sahay, QMS Global LLC, Sandy, UT, United States

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<td>Ateekh Ur Rehman, King Saud University, Riyadh, Saudi Arabia</td>
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<td>Identification of Retention Time &amp; Information Delays Applying Value Stream Mapping Technique in Apparel Manufacturing Organization</td>
<td>Azim Mohammad, Advance Engineering Management (AEM), Bangladesh University of Engineering Technology (BUET) Shibbir Ahmad, Dhaka University of Engineering and Technology (DUET), Gazipur, Bangladesh Mohammad Iqbal, Shah Jalal University of Science and Technology (SUST), Sylhet, Bangladesh</td>
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<td>Hoshin Kanri: Harnessing the Collective Thinking of All Employees to Deploy Policies that Operationalize Strategic Goals</td>
<td>Dennis Gawlik, Pinchot University - Bainbridge Graduate Institute, Bainbridge Island, WA, United States Karyn Ross, Naperville, IL, United States</td>
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<td>Six Sigma Process Capability Analysis for Normal and Non- Normal: Methods, Measurements, Applications and Computer Analysis_ Case Studies</td>
<td>Amar Sahay, QMS Global LLC, Sandy, UT, United States</td>
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#### 08:00 – 09:15 Thursday
**Supply Chain Management**

**SALON 10**

Session Chair: Sara Elzarka, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

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<td>Allais Paradox: Outsourcing Decision Making</td>
<td>Samson Oludapo, University Malaysia Pahang, Gambang, Kuantan, Malaysia</td>
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Impact of Green Supply Chain Management Attributes on Supply Chain Performance: Measurement Instrument Validity and Reliability Verification
Hansa Lysander Manohar and Ganesh Kumar, College of Engineering Guindy, Anna University, Chennai, Tamil Nadu, India

Remanufacturing and Its Effect on Customer Satisfaction Level
Ahmed Gamal, Arab Academy for Science & Maritime Technology, Alexandria, Egypt

Hospital Logistics, a Tool for an Increased Productivity: Hospital Universitario Mayor (Mederi) Case
Valeria Mendoza Cortes, Santiago Moros Portilla, Eliana Acuña Cardenas, Victor Garcia Urdaneta and Juan Farfan, Universidad Del Rosario, Bogota, Colombia

Investigating the Impact of Suppliers Relationship Management on Firms’ Performance: A Multiple Case Study Approach on Manufacturing Companies in Egypt
Sara Elzarka, Lobna Hafez, Maram Roushdy, Sarah Hesham, and Merihan Mohamed, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

09:30 – 10:00 Welcome Address

10:00 – 11:00 Opening Keynote: Dr. Pamela McCauley, Professor, Department of Industrial Engineering and Management Systems and Director, Human Factors in Disaster Management Research Team, University of Central Florida, USA – Ballroom C

11:00 – 11:30 Networking Break

11:30 – 12:45 Global Engineering Education II (Thursday) – SALON 5
Session Chair: Dr. Kit Fai Pun, The University of the West Indies

11:30 – 11:55 am Thursday
Dr. Kit Fai Pun
Professor of Industrial Engineering
Campus Coordinator and Chair, Graduate Studies & Research, School for Graduate Studies & Research Department of Mechanical and Manufacturing Engineering, Faculty of Engineering
The University of the West Indies, St Augustine Campus, Trinidad and Tobago

“Exploring Industrial Engineering and Education: From Illustrated Cases to Best Practice of Graduate Research Supervision”

11:55 am – 12:20 pm Thursday
Dr. K.C. Vora, Vice President SAEINDIA
Member, SAE International Engineering Meetings Board
Sr. Dy. Director & Head, ARAI Academy
The Automotive Research Association of India
Research Institution of the Automotive Industry
Pune, India

“Excellence in Skill Development through Engineering Education”

12:20 – 12:45 pm Thursday
Rumi Tobita
Ashikaga Institute of Technology
Ashikaga, Tochigi, Japan

“Developing an Effective ESP Course for Engineering Students integrating Analysis with NIRS” [ID 203]
11:30 – 12:45 Industry Solutions I (Thursday) – SALON 6
Session Chair: Dr. Jeanann Boyce, Montgomery College, Maryland

Nikhil K. Joshi, CEO
SNic India
Vijayanagar, Bangalore, India

Saurabh Gupta
Head, Process Excellence
ILTD, ITC, India

“Successful Lean Six Sigma Deployment in Non-Traditional Setting of Agri-Business”

Dr. Jeanann Boyce
Professor, Business, Economics, Accounting
Computer Applications and Paralegal Studies (BEACAPS)
Montgomery College, Takoma Park / Silver Spring Campus, Takoma Park, MD

“Sustainable Technologies: The Impact Neuromorphic Chips on the Future”

11:30 – 12:45 Thursday
Undergraduate Student Paper Competition
Session Chair: Hayder Zghair, Lawrence Technological University and Kettering University, Michigan, USA

Traceable Petri Nets for the Supply of Multiple Production Lines with Variable Waste
Eldon Caldwell Marin, André Mora Barreira, Roberto Truque Salto, Andrés Mazón Arce and Luis Ricardo García Rodríguez, University of Costa Rica, San José, Costa Rica

Yazeli Cruz, Yaritza Santiago, Valerie Gonzalez, Clara Isaza and Mauricio Cabrera, Mayaguez, Puerto Rico, United States

Improving a Particle Swarm Optimization model to solve assignment problems in an industrial environment
Javier André, Nathan Suchar, Luis Jiménez, Karol Esquivel and Eldon Caldwell Marin, University of Costa Rica, San Jose, Costa Rica

An integrated model of cellular manufacturing and supplier selection considering product quality
Iraj Mahdavi and Habib Heydari, Mazandaran University of Science and Technology, Babol, Mazandaran Province, Iran
Mohammad Mahdi Paydar, Babol University of Technology, Babol, Mazandaran Province, Iran

11:30 – 12:45 Thursday
Engineering Education
Session Chair: Basel Alsayed Ahmad, UAEU, Al Ain, Abu Dhabi, United Arab Emirates

Important Soft Skills for Engineers to Succeed in a Working Environment
Dyah Hening and David Koonce, Ohio University, Athens, Ohio, United States

Impact of Learning by Objectives in Design & Manufacturing Courses
Basel Alsayed Ahmad, UAEU, Al Ain, Abu Dhabi, United Arab Emirates

Enhancing the Engineering Ethics Curriculum by Analyzing Students’ and Faculty’s Perceptions
Britney Jimerson, North Carolina A&T State University, USA
Eui Park, North Carolina A&T State University, USA
Capacity Building for Sustainable World: A Study on political practices and effect on world economy
M.A. Mannan, IIUC, Bangladesh

Implementation of OBE in a MoT Program: Lesson Learned
Alina Shamsuddin, Chee-Ming Chan and Azeanita Suratkon, Universiti Tun Hussein Onn Malaysia, Malaysia

11:30 – 12:45 Thursday
Lean and Six Sigma
Session Chair: Fogliatto, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil

Lean six sigma and innovation: A theoretical Framework
Adel A. Alharthi, Advanced Manufacturing and Enterprise Engineering, Brunel University, Uxbridge, Middlesex, UK
Tariq Aziz, Department of Industrial Engineering, King Saud University, Riyadh, KSA

Managing and Improving Quality- Quality Costs and Statistical Process Control
Amar Sahay, QMS Global LLC, Sandy, UT, United States

Impact of Stress on Employee Performance of It Projects In Pakistan
Maqadus Iqbal, Project Management, SZABIST, Islamabad, Pakistan

Gaps between psychophysical demands and perceived workload – a framework for lean production system
Carlos Ernani Fries, Guilherme Luz Tortorella, Marcelo Pereira da Silva, Fernando Gonçalves Amaral and Flávio Sanson Fogliatto, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil

11:30 – 12:45 Thursday
Supply Chain Management
Session Chair: Srikant Raghavan, Lawrence Technological University, Southfield, MI, United States

Multi-Objective Non-Permutation Flowshop with Dependent Setup times and Missing Jobs
Shaya Sheikh, Towson, Maryland, United States
Mohammad Komaki, Cleveland, Ohio, United States
Ehsan Teymourian, Babol, Mazandaran, Iran
Shaya Sheikh, Management Science Department, New York Institute of Technology, New York, NY
Mohammad Komaki, Electrical Engineering and Computer Science Department, Case Western Reserve University, Cleveland, USA
Ehsan Teymourian, Department of Industrial Engineering, Mazandaran University of Science and Technology, Babol, Iran
Behnam Malakooti, Electrical Engineering and Computer Science Department, Case Western Reserve University, Cleveland, USA

Investigating the Impact of Supply Chain Practices on the Financial Performance of the Most Active Listed Firms in Egypt
Islam El-Nakib and Amr Youssef, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt

Application of the Methodology Deflection in Humanitarian Logistics: A Supply approach from Agrifood Chains
Fernando Salazar, Universidad del Rosano, Bogotá D.C., Colombia
Jordi Poch, Universidad de Girona, Girona, Catalunya, Spain
Judith Cavazos, UPAEP, Puebla, Puebla, Mexico
Loecelia Ruvalcaba, Universidad Autónoma de Aguascalientes, Aguascalientes, Mexico

Harnessing the Technology of Cloud Computing with Supply Chain Management
Srikant Raghavan, Lawrence Technological University, Southfield, MI, United States
Galia Novakova, Sofia University, Sofia, Bulgaria
Shahram Taj, Lawrence Technological University, Southfield, MI, United States

13:00 – 14:00 Lunch Keynote: Thomas Seubert, North American Delivery Lead for Manufacturing Execution Systems (MES), Tata Technologies, Novi, Michigan, USA

14:00 – 14:30 Break

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14:30 – 15:45 Global Engineering Education III (Thursday) – SALON 5
Session Chair: Dr. Jose R. Deliz, Universidad Turabo, Puerto Rico

2:30 – 2:55 pm Thursday
Dr. Charles Mbohwa
Professor and Vice-Dean Postgraduate Studies, Research and Innovation
Faculty of Engineering and the Built Environment (FEBE)
University of Johannesburg’s (UJ), South Africa

2:55 – 3:20 pm
Dr. Shannon Flumerfelt
Associate Professor, Educational Leadership
Director of Lean Thinking for Schools, Pawley Learning Institute
Oakland University, Rochester, MI 48309, USA

3:20 – 3:45 pm
Dr. Jose R. Deliz
Associate Dean, School of Engineering
Professor and Director of Industrial and Management Engineering
Universidad Turabo, Puerto Rico

Jacqueline Mullen
Vice-chancellor Sponsored Research and Programs
Universidad del Turabo, Ana G. Mendez University System, Inc., Puerto Rico

“How to achieve academic excellence through assessment in IE Education” [ID 286]

14:30 – 15:45 Industry Solutions II (Thursday) – SALON 6
Session Chair: Dr. Sushil K. Shetty, Lean Specialist II, Temple, Texas, USA

2:30 – 2:55 pm
Charles Bradley
Director HFC Reliability Engineering and Sourcing Standardization
Charter Communications, Greenwood Village, Colorado, USA

2:55 – 3:20 pm
Dr. Sushil K. Shetty
Lean Specialist II, Temple, Texas, USA

“Listen to your Employees as much as you listen to your Customer”

3:20 – 3:45 pm
Dr. Joseph M. Ogundu, MBB
Principal – Emerald Global Consulting Inc.
West Bloomfield, Michigan, USA

14:30 – 15:45 Thursday
Undergraduate Research Competition
Session Chair: Hayder Zghair, Lawrence Technological University and Kettering University, Michigan, USA

Domestic Buildings Thermal Demand from Renewable Energy Sources-A Case Study of UK
Majid Baseer, Sarhad University of Science and Information Technology, Peshawar, Pakistan

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Ghulam Qadir, Loughborough University, United Kingdom
M. Arif, Sarhad University of Science and information Technology, Peshawar, Pakistan

**Design and fabrication of automated loading trolley for missile and canister**
Nazishuddin Quadri Syed College of Engineering Pune, Maharashtra, India
Mohan Khond, College of Engineering Pune, Maharashtra, India

**Improvement of Productivity Rate of Jit # 262, Creams, Liquids, Lotions Department of Avon Products Manufacturing Inc.**
Ezrha C. Godilano and Rachel C. Villanueva, Department of Industrial Engineering, Malayan Colleges Laguna, Cabuyao City, Laguna, Philippines

**One Right Way to Make Use of Energy In Accordance With the Second Law of Thermodynamics: The “Technical Polo” Of Engineering Faculty of Catania University.**
Francesco Patania, Department of Industrial Engineering of Catania University, Catania, Italy

### 14:30 – 15:45 Thursday
**Engineering Education**
Session Chair: Eui Park, North Carolina A&T State University, USA

**Roadmap for Stimulating the Innovative Use of Technology in Higher Education**
Nasser Alaeddine, Hamid Parsaei and Muhammad Ismail, Texas A&M University at Qatar, Qatar

**An Innovation Model with Representative Variables of Marketing and Trading**
Javier D. Fernández-Ledesma and Santiago Duque, Department of Industrial Engineering, University Pontificia Bolivariana Medellin, Antioquia, Colombia

**An Emerging STEM Era in the Middle East**
Hamid R. Parsaei, Nimir Elbashirb, and Nasser Alaeddinec, Texas A&M University at Qatar, Education City of Qatar Foundation, Doha, Qatar

**Human Factors System Approach to Identify Factors that Affect the Adoption of Ergonomic Technology in Healthcare**
Britney Jimerson, North Carolina A&T State University, USA
Eui Park, North Carolina A&T State University, USA
Steven Jiang, North Carolina A&T State University, USA

**Reviewing the Grades, Activities and Assessment in an Engineering Technology Course with relation to the Learning Styles**
Alina Shamsuddin, Chee-Ming Chan and Azeanita Suratkon, Universiti Tun Hussein Onn Malaysia, Johor, Malaysia

### 14:30 – 15:45 Thursday
**Quality and Reliability**
Session Chair: Shih-Wen Liu, National Taiwan University of Science and Technology, Taipei, Taiwan

**Insights of Quality Management Concepts in the Supply Chain**
Cassandra Elrod, Elizabeth Cudney and Cui Zou, Missouri University of Science and Technology, Rolla, MO United States

**A SVM-based Quality Assessment using Thermal Image DATA in Sealer Dispensing Process**
Moise Busogi, Namhun Kim and YeongGwang Oh, UNIST, Ulsan, Korea

**A Bayesian Approach to Early Reliability Predicting of Evolutionary Products**
Mahtab Jahanbani Fard and Sattar Ameri, Wayne State University, Detroit, Michigan, USA
Ali Zeinal Hamadani, Isfahan University of Technology, Isfahan, Iran

**Developing a new variables sampling plan for products with multiple quality characteristics based on process yield**
Shih-Wen Liu, National Taiwan University of Science and Technology, Taipei, Taiwan
Chien-Wei Wu, National Tsing Hua University, Hsinchu, Taiwan
14:30 – 15:45 Thursday
Supply Chain and Logistics
Session Chair: Hao Fu, UC Berkeley, CA, United States

The Impact of Managing Medicine Storage and Distribution Chain on Medicine Shortage: A Simulation Model for Managing Medicine Storage and Distribution in the Egyptian Market
Ahmed Kassem, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Louran, Egypt

The Investigation of Purchasing Process and Supplier Development Practices: Multiple Case Studies on Food Processing Sector in Alexandria, Egypt
Sara Elzarka and Lobna Hafez, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

A Risk Adverse Model for Hazardous Material Transportation
Jose Santivanez, Universidad del Turabo, Gurabo, Puerto Rico, United States

Anticipatory Shipping: A Commercial Application of Pre-positioning with Stochastic Programming
Hao Fu, UC Berkeley, CA, United States

15:45 – 16:00 Break

16:00 – 17:15 Global Engineering Education IV (Thursday) – SALON 5
Session Chair: Dr. Hamid Parsaei, Texas A&M University (College Station)/ Qatar

4:00 – 4:30 pm
Dr. Hamid Parsaei
Professor of Industrial and Systems Engineering
Texas A&M University (College Station)
and
Professor of Mechanical Engineering and Director of Academic Outreach
Texas A&M University Qatar

4:30 – 5:00 pm
Dr. Christoph Wunck
Professor, Business Computing Systems, Industrial Engineering
College of Management, Information, Technology
Jade University, Wilhelmshaven, Germany

“Raising intercultural awareness of engineering students – Strategies, challenges and lessons learned from six years of German- American Engineering Summer Programs”

5:00 – 5:30 pm
Dr. Bidyut Kumar Bhattacharyya
Professor, Mechanical Engineering Department
Director, School of Safety & Occupational Health Engineering
Indian Institute of Engineering Science & Technology, Shibpur, West Bengal, India

“Globalizing Engineering and Management Education in India”
16:00 – 17:15 Industry Solutions III (Thursday) – SALON 6
Session Chair: Foad Hosseinkhanli, Amor Health Services, Inc., Brownsville, Texas, USA

4:00 – 4:30 pm
Gil Lugo, Certified RABQSA (Exemplar Global)
QMS Lead Auditor
Certified SCS FSC & PEFC CoC Lead Auditor
President, Green and Sustainable Solutions, Inc.
Fort Lauderdale Florida, USA

“Battle of the Improvement Methodologies”

4:30 – 5:00 pm
Foad Hosseinkhanli
Director of Quality Assurance
Performance and Business Improvement
Amor Health Services, Inc., Brownsville, Texas, USA

“Quality Assurance, Performance and Business Improvement: A Lean Six Sigma Approach”

5:00 – 5:30 pm
Ahmed Al-Jabr, CMBB
President, Saudi IEOM Society
Dhahran, Saudi Arabia

“Challenges and Opportunities of Lean and Six Sigma for Saudi Industries”

16:00 – 17:15 Thursday
Graduate Student Paper Competition – SALON 7
Session Chair: Hayder Zghair, Lawrence Technological Unviersty and Kettering Univeristy, Michigan, USA

Autonomous Vehicle Sensors and Systems
Jaycil Varghese, University of Michigan – Dearborn, Macomb, MI, United States

Centralized Carrier Collaboration and Multi-Hub Location Optimization Using a Genetic Algorithm
Jose Espiritu and Eduardo Castillo, The University of Texas at El Paso, Texas, United States

Employees’ Resistance to Change: Correspondence Tracking System Development
Mostafa Fawzy, Iowa State University, USA

Threshold Function for the Optimal Stopping of Arithmetic Ornstein-Uhlenbeck Process
Alon Dourban and Liron Yedidsion, Technion - Israel Institute of Technology, Haifa, Israel

16:00 – 19:00 Thursday
Workshop on Geometric Dimensioning and Tolerencing (GD&T) – SALON 8

Dr. Ahad Ali
Associate Professor
Director, Bachelor of Science in Industrial Engineering (BSIE)
Director, Master of Science in Industrial Engineering (MSIE)
Director, Smart Manufacturing and Lean Systems Research Group
A. Leon Linton Department of Mechanical Engineering
Lawrence Technological University
Southfield, Michigan 48075, USA

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16:00 – 17:15 Thursday

**Human Factors and Ergonomics**

Session Chair: Shih-Wen Liu, National Taiwan University of Science and Technology, Taipei, Taiwan

### Human Factors Analysis for Railway Coach and Bogie Maintenance Using AHP
Subhash Chandra Panja, Jadavpur University, Jadavpur, Kolkata, West Bengal, India
Sanghamitra Poddar, Institute of Engineering & Management, Kolkata, West Bengal, India
Malay Gangopadhyaya, Institute of Engineering & Management, Kolkata, West Bengal, India

### Usability assessment of a headrest accessory used for wheelchairs
Laura Stanley and Kaysha Young, Montana State University, Bozeman, Montana, United States

### Usability assessment of an adjustable wheel-locking system for a child’s wheelchair
Laura Stanley and Kaysha Young, Montana State University, Bozeman, Montana, United States

### Chatbots in Online Environments - A Linguistic Analysis
Netaya Lotze, Leibniz University of Hanover, Deutsches Seminar, Hanover, Niedersachsen, Germany

### Gaze-Based Metrics for Consumers’ Viewings of Printed Advertisements
Hirotaka Aoki, Tokyo Institute of Technology, Tokyo, Japan

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16:00 – 17:15 Thursday

**Operations Research**

Session Chair: Thien-My Dao, ETS/University of Quebec, Montreal, QC, Canada

### Managing Congestion in a Dynamic Multi-Modal Facility Location Problem
Mohammad Marufuzzaman, Mississippi State University, Starkville, MS, United States

### Evacuation of a Highly Congested Urban City: the Case of Beirut
John El Khoury, Department of Civil Engineering, Lebanese American University, Byblos, Lebanon
Jean-Paul M. Arnaout, Department of Business Administration, Gust University for Science and Technology (GUST), Kuwait
Caline El Khoury, Lebanese American University, Byblos, Lebanon

### Cuckoo Search Algorithm for Hybrid Flow Shop Scheduling Problem with Multi-layer Assembly Operations
Mohamed Komaki, Dept. of Electrical Engineering and Computer Science, Case Western Reserve University, Cleveland, USA
Shaya Sheikh, Management Science Department, New York Institute of Technology, New York, NY, USA
Ehsan Teymourian, Department of Industrial Engineering, Mazandaran University of Science and Technology, Babol, Iran
Behnam Malakooti, Dept. of Electrical Engineering and Computer Science, Case Western Reserve University, Cleveland, USA

### A new part routing-based decisional algorithm for urgent fabrication through a cost-time model in a flexible manufacturing system
Thien-My Dao, ETS/University of Quebec, Montreal, QC, Canada

### Open Configuration: Framework and Definition
Xiaoyu Chen, Nanterre, Paris, France
Linda Zhang, Puteaux, Paris, France

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Friday, September 11, 2015

08:00 – 09:30 Global Engineering Education V (Friday) – SALON 4
Session Chair: Jairo Alfonso Vargas, Fundación Universitaria Konrad Lorenz, Bogotá, Colombia

8:00 – 8:30 am, Friday
Jairo Alfonso Vargas, IE, BBSS
Department Head, Department of Industrial Engineering
Fundación Universitaria Konrad Lorenz, Bogotá Colombia
Regional VP of IIE, Central and South America

8:30 – 9:00 am, Friday
Vladimir Robles Bykbaev
Coordinator of the Research Group on Artificial Intelligence and Assistive Technologies
Universidad Politécnica Salesiana
Cuenca, Ecuador

9:00 – 9:30 am, Friday
Carlos Ernani Fries and Guilherme Luz Tortorella
Federal University of Santa Catarina, Florianópolis, SC, Brazil

“Application of Focus Groups and Learning Cycles on the A3 Thinking Methodology: The case of increasing machinery capacity at a steel plant” [ID 210]

08:00 – 09:15 Friday
Transportation
Session Chair: Peng Sun, Eindhoven, Netherlands

A Peer-to-Peer Public Health Intervention – A Case Study in Transportation Safety
Laura Stanley, Montana State University, Bozeman, Montana, United States

A Statistical Approach to Estimate the Correlation between Charging Stations Availability and Plug – In Electric Vehicles Sales in Canada
Yassir Alhazmi and Magdy Salama, University of Waterloo, Ontario, Canada

A Three-Stage Approach for Solving Location-Routing Problem in Hazardous Materials Transportation
Abbas Mahmoudabadi, Mehrastan University, Astaneh, Gilan, Iran
Reza Tavakkoli-Moghaddam and Azadeh Abolghasem, Tehran, Iran

Hybrid column generation and large neighborhood search for the time-dependent selective PDPTW
Peng Sun, Eindhoven University of Science and Technology, Eindhoven, Netherlands

Supply Chain Innovation - A Modern Application of Lean and Agile Methodologies
Samson Oludapo, University Malaysia Pahang, Gambang, Kuantan, Malaysia

08:00 – 09:15 Friday
Graduate Student Paper Competition
Session Chair: Hayder Zghair, Lawrence Technological University and Kettering University, Michigan, USA

Simulation Analysis for futuristic manufacturing: A green roadmap
Amandeep Singh, Deepu Philip, Janakranjan Ramkumar and Suman Samanta, Indian Institute of Technology Kanpur, India

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Multi-Objective Supply Chain Network Design under Demand Uncertainty Using Robust Goal Programming Approach
Raghda Taha, AASTMT, Cairo, Egypt
Yomna Sadek, Amin Elkharbotly and Nahid Afia, ASU, Cairo, Egypt
Khaled Abdallah, AASTMT, Cairo, Egypt

Biofuel Production: Potential Requirements Integration
Mostafa Fawzy, Iowa State University, USA
Paul Componation, The University of Texas at Arlington, USA

08:00 – 09:15 Friday
Entrepreneurship and Innovation
Session Chair: Nor Mahirah Mustapha, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia

Assessing Capabilities for Innovation - The Case of Iranian Kalleh Meat Product Company
Reza Farrokhian, Kaach of Solico Group, Amol, Mazandaran, Iran
Faezeh Soleimani, Amol, Mazandaran, Iran

A New Performance Measurement Framework for Small and Medium Enterprises
Syafiah Norsyahira Jubidin, Shahryar Sorooshian and Fatimah Mahmud, University Malaysia Pahang, Kuantan, Pahang, Malaysia

A Performance Measurement Systems: How is it differ for Malaysian SME Perspectives
Nor Mahirah Mustapha, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia

Analysis of Availability of Fire Fighting Equipment in Selected Knitting Garment Factories in Bangladesh
Shibbir Ahmad and Mohammad Kamruzzaman, Mechanical Engineering Department, Dhaka University of Engineering and Technology (DUET), Gazipur, Bangladesh

08:00 – 09:15 Friday
Healthcare Operations and Services
Session Chair: Hansa Lysander Manohar, Anna University, Chennai, Tamil Nadu, India

A System Approach Linking Quality Culture, Employee Health and Organizational Effectiveness – A Case Study
Rina Sadia, Shenkar College of Engineering and Design, Kfar Saba, Israel

eHealth: Hurdles and Progress in K.S.A
Abdul Rauf Malik, King Abdulaziz University, Jeddah, Makkah, Saudi Arabia

Predictive Model for Forecasting Clinical Outcomes of Rehabilitation Patients Using Advanced Technologies
Marvin Rothwell, Florence, Kentucky, United States

Impact of Magnesium Intake and Supplementation on Improving the Quality of Life in Type II Diabetes Mellitus Patient
Shamitha Manohar, Hansa Lysander Manohar, and Chelliah Manohar Ratnakumar, College of Engineering Guindy, Anna University, Chennai, Tamil Nadu, India

Implementing a Taxonomy for the Development of a Database for a Type 2 Diabetes Mellitus Preventative Care Personalized Learning System
Dorian Davis, Steven Jiang, and Tanisha Richards, North Carolina A&T State University, Greensboro, NC, USA

08:00 – 09:15 Friday
Manufacturing and Design
Session Chair: Rupy Sawhney, University of Tennessee-Knoxville, TN, United States

Planning and Executing Manufacturing Facilities for Global Supply Chains
Shahram Taj, Lawrence Technological University, Southfield, MI, United States
Optimal Hull and Mold Storage in a Lean Boat Manufacturing
Mostafa Ghafoorivarzaneh, Rupy Sawhney and Tron Dareing, University of Tennessee-Knoxville, TN, United States

Design of a small scale cereal packaging machine suitable for developing countries
Tawanda Mushiri and Charles Mbohwa, University of Johannesburg, Gauteng, South Africa

Impact of Cutting Forces on Machining Quality
Basel Alsayyed Ahmad, UAEU, Al Ain, Abu Dhabi, United Arab Emirates

Review of Image Processing Techniques for Detection of Age-related Macular Degeneration (ARMD) Literature Review
Samina Khalid, Mirpur University of Science and Technology, Mirpur, Azad Jammu Kashmir, Pakistan

10:00 – 11:00 Morning Keynote: Alastair Orchard, Director Digital Enterprise Projects, Siemens PLM Software, Genoa, Italy “The Role of Manufacturing Engineering in the Digital Enterprise”

11:00 – 11:30 Networking Break at Exhibition Hall

11:30 – 13:00 Global Engineering Education VI (Friday) – SALON 4

Outcome-Based Education (OBE) Workshop:
The Essence of OBE and Implementation Experiences in Malaysia

Dr. Chan Chee-Ming
Associate Professor and Deputy Dean (Academic and Research)
Centre for Graduate Studies
Universiti Tun Hussein Onn Malaysia
Batu Pahat, Johor, Malaysia

Dr. Alina Shamsudin
Associate Professor
Deputy Dean (Teaching, Learning and Academic Training)
Centre for Academic Development and Training
Universiti Tun Hussein Onn Malaysia
Johor, Malaysia

Dr. Azeanita Suratkon
Senior Lecturer at the Faculty of Civil & Environmental Engineering
Lead – Department of Building and Construction Engineering
Universiti Tun Hussein Onn Malaysia
Johor, Malaysia

11:30 – 12:45 Friday
Sustainability
Session Chair: Elizabeth Ojo, University of Johannesburg, South Africa

Driving TQM/BE Model based Sustainable Excellence Enterprise Framework
Syed Masood, International Islamic University, Islamabad, Pakistan
Muhammad Tasleem, Asim Nisar and Nawar Khan, NUST, Islamabad, Pakistan

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Global Warming Potential and Cost Minimization for the Centralized Carrier Collaboration and Multi-Hub Location Problem
Jose Espiritu, Heidi Taboada, Juan Fernandez, Eduardo Castillo, Claudia Valles and Ileana Delgado, The University of Texas at El Paso, Texas, United States

Style & Sustainability using precast insulated concrete for educational buildings in hot climate: Case studies in UAE
Mohammed Sherzad, Ajman University of Science & Technology, Ajman, United Arab Emirates

Sustainability- Competitive edge?
Elizabeth Ojo, Charles Mbohwa and Esther Akinlabi, University of Johannesburg, South Africa

Performance Measurement and Process Improvement In Terms Of Overall Equipment Effectiveness in Specific Section of Specific RMG Sector
Shibbir Ahmad and Mohammad Kamruzzaman, Mechanical Engineering Department, Dhaka University of Engineering and Technology, Gazipur, Bangladesh

11:30 – 12:45 Friday
Automation and Control
Session Chair: Rina Sadia, Shenkar College of Engineering and Design, Kfar Saba, Israel

A case study job-shop project planning and scheduling problem
Milad Akrami, Alireza Ghasemi, Uday Venkatadri and Mahdi Tajbakhsh, Dalhousie University, Halifax, NS, Canada

Impact of SS on quality, productivity and organizational climate. Two Analysis Cases
Paloma Martinez, Bogota, Cundinamarca, Colombia

Process Improvement in Emergency Units. Two Analysis Cases
Paloma Martinez, Bogota, Cundinamarca, Colombia
Paloma Martinez Sánchez and Carolina Montoya Rodriguez, Engineering Faculty, Bosque University, Bogota, Colombia
Ursula Maruyama, Engineering and Business Department, CEFET-RJ, Maracana – Rio de Janeiro, Brazil
Fernando Salazar, School of Management, Rosario University, Bogota, Colombia

Inventory Assessment of the cleaning of Plant Off-gas in the recovery process of PGM at the Anglo American Platinum LTD, South Africa
Junior Mabiza and Charles Mbohwa, University of Johannesburg, South Africa

11:30 – 12:45 Friday
Energy
Session Chair: Bidyut Kr. Bhattacharyya, Indian Institute of Engineering Science and Technology, Shibpur, India

Renewable Sources and CCHP Techniques in “Technological Polo” (TP) of University of Catania (First step)
Francesco Patania, Antonio Gagliano, Francesco Nocera and Antonio Agrifoglio, Department of Industrial Engineering, Catania University, Italy

Effect of EGR on the Performance of Diesel Engine Fueled By Mauha Oil and its Blends
Rajendra Patil, TSSM's PVPIT Bavdhan, Pune, Maharashtra, India

Performance Evaluation of the Proposed and Existing Waste Management System: Economic Analysis
Swapan Das and Bidyut Kr. Bhattacharyya, Indian Institute of Engineering Science and Technology, Shibpur, Howrah, India

A Critical Evaluation of Climate-Related Risks Associated with Oil and Gas Industry in Libya
Tawfik Elmhedwi, The Libyan Academy, Tripoli, Libya
Saber Elmabrouk, University of Tripoli, Tripoli, Libya
Taher Elmhidwi Tripoli, Libya
11:30 – 12:45 Friday
Healthcare Operations and Services
Session Chair: Majid Baseer, Sarhad University of Science and Information Technology, Pakistan

A System Dynamics Model of Flow of Patients from the ICU through the Step-Down Units
Sankar Sengupta and Ozge Civit, Oakland University, Rochester, Michigan, United States

Impact of Knowledge and Attitude on Practices of Over the Counter Medications
Hasitha Diana Manohar and Hansa Lysander Manohar, India College of Engineering Guindy, Anna University, Chennai, Tamil Nadu, India

A Fuzzy AHP & Extent Analysis Based Approach for Commercial Software Evaluation.  
Majid Baseer, Sarhad University of Science and Information Technology, Peshawar, Pukhtunkhwa, Pakistan

X-ray Image Segmentation by using Fuzzy Index measure Combined with Principle Component Analysis
Mohamed Shajahan and Munir M Al Haddad, College of Engineering and Information Technology, Jeddah, Mecca, Saudi Arabia

11:30 – 12:45 Friday
Manufacturing and Design
Session Chair: Mohammad Eslamipour, MAPNA, Karaj, Alborz, Iran

Applications for Multi Criteria Decision Making in New Product Development
Brendan Sullivan, Las Cruces, New Mexico, United States

Product Life Cycle Key to Sustainable Innovation
Mohammad Eslamipour, MAPNA, Karaj, Alborz, Iran

Horizontal Directional Drilling Quality
Basel Alsayyed Ahmad, Amani Alkhodari, Khaled ElSayed, Mansoor Al Jabri and Shamsa Al Neyadi, UAEU, Al Ain, Abu Dhabi, United Arab Emirates

Vendor Managed Inventory: A Case Study on Faragalla Food Industries in Egypt
Sara Elzarka, Eman Elakkad, Abdallah Shaalan and Khaled Abbas, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

1:00 – 1:45  Lunch Keynote: Dr. Miguel Gastón Cedillo-Campos, Professor in Logistics Systems Dynamics, Senior Researcher, Mexican Institute of Transportation and Founding President, Mexican Logistics and Supply Chain Association (AML)

1:45 – 2:30 Friday Lunch Keynote: Uriel R. Cukierman, Professor, Facultad Regional Buenos Aires, Universidad Tecnológica Nacional, Buenos Aires, Argentina and President, International Federation of Engineering Education Societies (IFEES)

2:30 – 3:00 Competition Awards and Recognitions

3:00 – 3:30 Break
3:30 – 3:55 pm Friday
Dr. Srinivas R. Chakravarthy
Professor and Department Head, Industrial and Manufacturing Engineering
Kettering University, Flint, MI-48504, USA

“Modeling and Simulation in Undergraduate Education in Industrial Engineering Program: Opportunities and Challenges”

3:55 – 4:20 pm Friday
Dr. Sabah Abro
Professor and Program Director, Master of Science in Engineering Technology
Department of Engineering Technology
Lawrence Technological University, Southfield, Michigan, USA

“Multi-Approach Evaluation of Entrepreneurial Senior Project Course” [ID 104]

4:20 – 4:45 pm Friday
Dr.-Eng. Eldon Caldwell
Director, Industrial Engineering Department
Engineering School, University of Costa Rica

“Using Robotics as Educational Framework Strategy in Industrial Engineering: The Experience at University of Costa Rica”

3:30 – 4:45 Friday
Systems Engineering and Technology Management
Session Chair: Rekha Mishra, GGSIPU, New Delhi, India

Computation of Manufacturing Complexity in a Mixed Model Assembly
Moise Busogi, YeonGgwang Oh, Namhun Kim and Wooyeol Lee, UNIST, Ulsan, Korea

A Multi-Criteria Decision Making Tool to Prioritize Network Component for Recovery based on Importance Measures
Nazanin Morshedlou, Yasser Almoghathawi and Angela Oommen, University of Oklahoma, Norman, OK, United States

Best Performance Measurement System for Malaysian Small and Medium Enterprises
Nor Filianie, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia

Best Performance Measurement System for Malaysian Small and Medium Enterprises
Nor Filianie Aziz, Universiti Malaysia Pahang, Kuantan, Pahang, Malaysia

Business Intelligence and Analytics: Paving way for Operational Excellence, Quality and Sustainability in Indian Banks
Rekha Mishra and A. K. Saini, GGSIPU, New Delhi, India

3:30 – 4:45 Friday
e-Business and e-Services
Session Chair: Dr. Galia Novakova, Sofia University, Bulgaria

Linking e-fulfillment dimensions to shopping satisfaction and repurchase intention in e-tailing
Nikunj Kumar Jain, FORE School of Business, New Delhi, India
Preeti Jain, Nokia Networks Pvt. Ltd., Noida, Uttar Pradesh, India

Impact of Operational Drivers on Repurchase Intention in e-fulfillment
Nikunj Kumar Jain, FORE School of Business, New Delhi, India

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Comparative Study between “Neuro-Logit” and Logistic Regression Analysis in Corporate Financial Distress Forecasting
Waleed Almonayirie, Swiss Business School, Abu Dhabi, United Arab Emirates

3:30 – 4:45 Friday
Energy
Session Chair: Seyed Amirhossein Alavifar, Bstech, Moscow, Russia

Energy Optimization
Mohamed Ibrahim Ahmed Al-Hargeisa, Woqooyi Galbeed, Somalia

Economic Risk Management in Oil and Gas infrastructure; A Case study - Low Density Polyethylene (LDPE) production unit of Amir Kabir Petrochemical complex in Iran
Seyed Amirhossein Alavifar, Bstech, Moscow, Russian Federation

Developing a Polynomial-Fourier Series Model for Building’s Electricity Consumption Forecasting
Wei Tong Chen, Cho-Liang Tsai and Chin-Shiang Chang, National Yunlin University of Sci. & Tech. Touliu, Yunlin, Taiwan

Framework of Simulation Approach to Increase Energy Efficiency
Mostafa Ghafoorivarzaneh and Rupy Sawhney, University of Tennessee-Knoxville, TN, United States

3:30 – 4:45 Friday
Modeling and Simulation
Session Chair: Neda Javadieh, Melbourne, Victoria, Australia

Modeling Trading & Procurement Cycle based on Insourcing and Outsourcing strategy
Mohamed Laradi, Coventry University, Coventry, Midland, United Kingdom

Optimization of an Asynchronous Manufacturing Production System Incorporating Mixed Operational Cycle Time Variation
Saso Krstovski and Ahad Ali, Lawrence Technological Univeristy, Michigan, United States

Analysis of a gear train using finite element modelling
Tawanda Mushiri and Charles Mbohwa, University of Johannesburg, Gauteng, South Africa

Driving behaviour of elderly people: the Challenges and Opportunities
Neda Javadieh, Melbourne, Victoria, Australia

3:30 – 4:45 Friday
Manufacturing and Design
Session Chair: Jose Espiritu, The University of Texas at El Paso, United States

Variety Impact Sources on the Inducible Manufacturing Complexity of the Flexible Automated Lines
Hayder Zghair, University of Baghdad, Iraq and Lawrence Technological University, Southfield, MI, United States
Ahad Ali, Lawrence Technological University, Southfield, MI, United States

Optimal Scheduling of an Anaerobic Digester Considering Multiple Feedstocks Using Genetic Algorithms
Jose Espiritu and Ana Cram, The University of Texas at El Paso, United States

Environmental Impacts Assessment of the Cleaning of Plant Off-gas in the recovery process of PGM at the Anglo American Platinum LTD, South Africa
Junior Mabiza and Charles Mbohwa, University of Johannesburg, South Africa

Short Term Load Forecasting Using Optimized Neural Network with Harmony Search
Javad Olamaei and Ehsan Barzamini, Dept. of Electrical Engineering, Islamic Azad University, South Tehran Branch, Iran

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Applications of Petri nets Based Models in Manufacturing Systems: a review
Husam Kaid, Abdulaziz M. El-Tamimi, Emad Abouel Nasr and Abdulrahman Al-Ahmari, King Saud University, Riyadh, Saudi Arabia

Design of a crushing system that improves the crushing efficiency of gold ore at a local mine: case of Zimbabwe
Tawanda Mushiri and Charles, Mbohwa, University of Johannesburg, Johannesburg, Gauteng, South Africa

4:45 – 5:00 Break

5:00 – 5:25 pm Friday
Dr. Muhammad H. Zaman
Associate Professor and Associate Chair for Undergraduate Affairs
Department of Biomedical Engineering, Associate Director, Kilachand Honors College
Boston University, USA

“Engineering Education in Africa: Impact for Development and Sustainability”

5:25 – 5:50 pm Friday
Mrs. Ghamande Manasi Vyankatesh
Vishwakarma Institute of Technology
Bibwewadi, Pune, Maharashtra, India

“Challenges of Self-Financing Engineering Institutes for Better Survival in Future”

5:50 – 6:15 pm Friday
Dr. Hansa Lysander Manohar
Associate Professor, Department of Management Studies
Anna University, Chennai, India

“A Roadmap to Integrate Sustainability and Innovation in Engineering Education”

5:00 – 6:15 Friday
Product and Processes
Session Chair: Charles Mbohwa, University of Johannesburg, Gauteng, South Africa

Composites Product and Process Quality
Basel Alsayyed Ahmad, Naseefa Al Ameri, Ghubaisha Al Ameri, Abdul Rehman, Abeer Seraidy, Balqis Al Braiki and Fatmah Abdouli, UAEU, Al Ain, Abu Dhabi, United Arab Emirates

A Fuzzy Approach for Analyzing the Gap between the Desired and the Current Factors Pertaining to the Research and Development of the Iranian Nanotechnology
Shahla Yassaei and Farhad Ghassemi Tari, Sharif University of Technology, Tehran, Iran

Inspection and Analysis of an Electrical Heating Element Production Facility and Validation of a Proposed Strategy to Reduce Rejections in the Line
Muhammad Sami uz Zaman, Rawalpindi, Pakistan

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Finite element analysis of a car rocker arm
Tawanda Mushiri and Charles Mbohwa, University of Johannesburg, Gauteng, South Africa

Use of Augmented Reality in Technical Documentation
Catherine Badras, Martin Schuler and Alexander Baechli, Winterthur, Zurich, Switzerland

5:00 – 6:15 Friday
Project Management
Session Chair: Wei Tong Chen, Taiwan National Yunlin University of Sci. & Tech., Touliu, Yunlin, Taiwan

Building Management Performance Assessment Using Data Envelopment Analysis
Wei Tong Chen, Jian Jien-Bin and Chen Hong Long, Taiwan National Yunlin University of Sci. & Tech., Touliu, Yunlin, Taiwan

Project Planning and Activity Alternative Selection Considering Stochastic Reliability
Devdatta Deo and Michael Kuhl, Rochester Institute of Technology, Rochester, New York, United States

General Satisfaction Index (GSI) Applied to Organizational Climate Researches: a new approach focused on banking
Carlos Ernani Fries and Guilherme Luz Tortorella, Federal University of Santa Catarina, Florianopolis, SC, Brazil

Reasons for adopting an ERP system in a public University in Southern Brazil
Carlos Ernani Fries and Guilherme Luz Tortorella, Federal University of Santa Catarina, Florianopolis, SC, Brazil

5:00 – 6:15 Friday
Construction Management
Session Chair: Shahryar Sorooshian, University of Malaysia Pahang, Kuantan, Pahang, Malaysia

An Environmental Impact Framework for Improving the Performance of Projects
Richard Hannis, Shahryar Sorooshian and Shariman Bin Mustafa, University of Malaysia Pahang, Kuantan, Pahang, Malaysia

Lean Construction Techniques: A Framework towards Elimination of Waste in Construction Industry
Richard Hannis, Shahryar Sorooshian and Shariman Bin Mustafa, University of Malaysia Pahang, Kuantan, Pahang, Malaysia

Evaluating Projects Delay Sources through ‘4 Ps’ Framework Analysis
Richard Hannis, Shahryar Sorooshian and Shariman Bin Mustafa, University of Malaysia Pahang, Kuantan, Pahang, Malaysia

Greening the construction industry
Elizabeth Ojo, Charles Mbohwa and Esther Akinlabi, University of Johannesburg, South Africa

Sustainable project selection: A novel MCDA method
Anissa Frini, Université du Québec à Rimouski, Lévis, QC, Canada
Sarah BenAmor, Telfer School of Management, Ottawa, ON, Canada

5:00 – 6:15 Friday
Modeling and Simulation
Session Chair: Khalaf Sultan, King Saud University, Riyadh, Saudi Arabia

Modeling and Simulation of Berthing Processes for a Panamanian Container Terminal using BPMN and Discrete Event Simulation
Rebeca Caceres, UMIP, Ancon, Panama
Luis Rabelo, UCF, Orlando, Florida, United States
Hector Mendoza Mendoza, Panama
Guimara Tuñon, Panama
John Pastrana, UCF, Orlando, Florida, United States

Statistical Analysis of Sliding Resistance of Braided Glass Fiber Reinforced Composite Orthodontic Brackets and Archwires
Sarder Sadique, Marshall University, Huntington, WV, United States

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Robust Regression Analysis Using Redescending M and MM Estimators Based on Modified Cauchy Function
Khalaf Sultan, King Saud University, Riyadh, Saudi Arabia

Improving PID Integrated Active Suspension System by using TLBO optimized parameters
Yash Gandhi, Pandit Dendayal Petroleum University, Bhielai, Chhattisgarh, India
Mayuri Patel, Pandit Dendayal Petroleum University, Mehsana Gujarat, India
Vedant Mehta, Pandit Dendayal Petroleum University, Baroda, Gujaratu, India
Bhargav Gadvi, Pandit Deendayal Petroleum University, Mehsana, Gujarat, India
Markana Anil Kumar, Pandit Deendayal Petroleum University, Gandhinagar, India

Operational Improvement of Warehouse Operations
Gomanth Duvvuru, Ahad Ali and Don Reimer, LTU, United States

5:00 – 6:15 Friday

Case Studies
Session Chair: Abdel Magid Hamouda, Qatar University, Doha, Qatar

Improving Obstacle Detection of Automated Guided Vehicles via Analysis of Sonar and Infrared Sensors Output
Ademola Abodunrin, Morgan State University, Baltimore, MD, United States

Quantitative risk analysis in Oil and Gas Project using Monte Carlo Simulation
Mohammad M. Khadem and Mahmud Al Kindi, Department of Mechanical and Industrial Engineering, Sultan Qaboos University Al-Khod, Muscat, Sultanate of Oman

Francesco Patania, Department of Industrial Engineering of Catania University, Catania, Italy

Technology Transfer conceptual model in Oil and Gas Industry in developing countries
Abdel Magid Hamouda, Nagi Elmagrabi and Khalifa Al-Khalifa, Qatar University, Doha, Qatar

Designing a Reliable Bio-fuel Supply Chain Network considering Link Failure Probabilities
Mohammad Marufuzzaman, Sushil Poudel and Linkan Bian, Mississippi State University Starkville MS, United States

Poster Session

Improving the quality of engineering education: using a Pitot tube system at fluid mechanics laboratories
Pedro Ferreira, Iara Lima, Tulio Vivaldini, Alexandre Frugoli and Pedro Frugoli, Universidade Paulista (UNIP), São Paulo, SP, Brazil
Thais Santos, Universidade Paulista (UNIP)/Universidade São Judas Tadeu (USJT), São Paulo, SP, Brazil

A case study on the use of practical problem-solving activities to quantitatively improve physics learning in engineering education
Thais Santos, Universidade Paulista (UNIP)/Universidade São Judas Tadeu (USJT), Brazil
Lilian Pereira, Universidade Paulista (UNIP), Brazil
Pedro Ferreira, Universidade Paulista (UNIP), Brazil
Iara Lima, Universidade Paulista (UNIP), Brazil
Tulio Vivaldini, Universidade Paulista (UNIP), Brazil
Alexandre Frugoli, Universidade Paulista (UNIP), Brazil
Pedro Frugoli, Universidade Paulista (UNIP), Brazil

Theoretical and Practical Integrated: Engaging Engineering Students in Fluid Mechanics Class
Iara Lima, Universidade Paulista (UNIP), Brazil
Pedro Ferreira, Universidade Paulista (UNIP), Brazil
Tulio Vivaldini, Universidade Paulista (UNIP), Brazil
Alexandre Frugoli, Universidade Paulista (UNIP), Brazil
Pedro Frugoli, Universidade Paulista (UNIP), Brazil
Thais Santos, Universidade Paulista (UNIP)/Universidade São Judas Tadeu (USJT), Brazil