



**March 6-8, 2018 (Hilton Hotel, Bandung, Indonesia)**

## Undergraduate Student Paper Competition Awards Sponsored by SIEMENS

### 1<sup>st</sup> Place

Adrián Aguado, Sandra Garza and Johana González, Department of Industrial Engineering, Universidad de Monterrey, Mexico and Jenny Díaz-Ramírez, Department of Industrial Engineering, Universidad de Monterrey, Mexico  
"Increasing the productivity of health facilities in urban areas in México"

### 2<sup>nd</sup> Place

Alec Steven L. Ardan, Mariel Jorinda G. Garcia, Vanessa G. Tenio and Yoshiki B. Kurata  
Dept. of Industrial Engineering, Technological Institute of the Philippines  
"Usability Evaluation of an Educational Management System affecting the User – Satisfaction among Tertiary Students in an Undergraduate Engineering Program in the Philippines"

### 3<sup>rd</sup> Place

S. Kamalakkannan and Asela K. Kulatunga  
Department of Manufacturing & Industrial Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka  
"Life Cycle Assessment of Rice Processing"

## Graduate Student Paper Competition Awards sponsored by EATON Corporation

### 1<sup>st</sup> Place

Aisha A. Al-Hammadi, Amna A. Albaker, Jawaher A. Al-Fakhroo, Galal M. Abdella and Khalifa N. Al-Khalifa  
Mechanical and Industrial Engineering Department, Qatar University, Doha, Qatar  
"Optimizing National Resource Usage through the Integration of University Shuttle Service with the Public Rail: The Case Study in Qatar University"

### 2<sup>nd</sup> Place

Kenny Ganie and Muhammad A Manan  
Department of Petroleum Engineering, Universiti Teknologi Malaysia, UTM Skudai, Johor, Malaysia

Ahmad Kamal Idris

Department of Petroleum Engineering, Universiti Teknologi PETRONAS, Perak, Malaysia  
"Formulating Lignin Based Surfactant Using Extracted Lignin from Ultrasound-Assisted Technique for Surfactant Flooding"

### 3<sup>rd</sup> Place

Muhamad Fariz Failaka and Ali Elkamel  
Department of Chemical Engineering, University of Waterloo, Waterloo, Canada  
"Optimization of Urea Solution Tie-in System in the Urea Fertilizer Manufacturing"

## Senior Design Project Competition Awards

### 1<sup>st</sup> Place

Dana Abbas, Mariam Al-Ajmy, Marwa Ashknani, Fatema Bujaber, Maryam Khajah and Suat Kasap  
Industrial Engineering Department, American University of the Middle East- AUM, Egaila, Kuwait  
"Developing a Decision Support System for University/ College Selection Problem for Kuwait"

### 2<sup>nd</sup> Place

Jaber Al-Jabri, Mazen Al-Abri and Majid Al-oufi  
Sultan Qaboos University, Oman  
"Coffee Shop Engineering: An Industrial Engineering Perspective"

### 3<sup>rd</sup> Place

Aisha A. Al-Hammadi, Amna A. Al-Baker, Jawaher A. Al-Fakhroo, Galal M. Abdella and Khalifa N. Al-Khalifa  
Mechanical and Industrial Engineering Department, Qatar University, Doha, Qatar

**“Optimizing National Resource Usage through the Integration of University Shuttle Service with the Public Rail: The Case Study in Qatar University”**

## Doctoral Dissertation Awards

### 1<sup>st</sup> Place

Husham A. Elbaloula

Sudan University of Science and Technology, Khartoum, Sudan

**“The Effects of Steam Commingled Injection in Heavy Oil Production from FNE and Bamboo Sudanese Fields (Steam Adsorption and Distribution Challenges)”**

### 2<sup>nd</sup> Place

Bandar A. Alkhayyal

Department of Engineering Management, College of Engineering

Prince Sultan University, Riyadh, Saudi Arabia

**“Multi-Criteria Decision-Making Optimization for Reverse Supply Chains”**

### 3<sup>rd</sup> Place

Khristian Edi Nugroho Soebandrija

Industrial Engineering Department, Faculty of Engineering

Bina Nusantara University, Jakarta, Indonesia

**“Trilogy of Service Innovation’s Antecedents: Banking’s Financial and Non-Financial Performance”**

Lina Gozali

Tarumanagara University, Indonesia

**“Framework towards Successful Factors of Business Incubator for Indonesian Public Universities”**

## Master Thesis Competition Awards

### 1<sup>st</sup> Place

H. L. M. De Silva

Department of Operations Management, Faculty of Management

University of Peradeniya, Sri Lanka

**“The Impact of Supplier Development Practices of Retailers and Buyer Supplier Relationship on the Performance of Suppliers in the Clothing Industry in Sri Lanka”**

### 2<sup>nd</sup> Place

Muhammad Reza Do. Bagus

School of Information Management and Computer Tidore Mandiri, Indonesia

Muhammad Fikri Do. Bagus, Information Engineering Dept. Gunadarma, University, Indonesia

**“Analysis Heterogeneous Human Sensory Data from Product Exterior Design Using BRSM”**

## Best Poster Awards

### 1<sup>st</sup> Place

Rosnani Ginting and Juliza Hidayati, Department of Industrial Engineering, University of North Sumatra, Medan, Indonesia

**“The Integration of Kano’s Model and Quality Function Deployment: A Case Study for Design of An Alternative Energy Utilization”**

### 2<sup>nd</sup> Place

Ryan Christopher M. Malicdem, Diana M. Jumadiao, Jevi Jee S. Umbac, Angel Joy J. Quizon, Leonard Jessie P. Repollo, Yoshiki B. Kurata

Department of Industrial Engineering, Technological Institute of the Philippines

**“Awetism: A User Ergonomic Learning Management System Intended for Autism Diagnosed Students in the Philippines”**

### 3<sup>rd</sup> Place

Cátia Lobato Ferreira, Maria Henriqueta Almeida, António Grilo

Departamento de Engenharia Mecânica e Industrial and UNIDEMI, Faculdade de Ciências e Tecnologia, Universidade, Nova de Lisboa, Caparica, Portugal

**“Lean IT adoption: Success cases in Portuguese Banks”**

## Undergraduate Research Competition Awards

### 1<sup>st</sup> Place

Alaa Alshammari, Sahar Redha, Shahad Hussain, Tuleen Nazzal, Zahraa Kamal, and Walid Smew

Industrial Engineering Department, American University of the Middle East (AUM), Kuwait

**“Quality Improvement in Plastic Injection Molding Industry: Applying Lean Six Sigma to SME in Kuwait”**

## **2<sup>nd</sup> Place**

Angga Pratama Herman, Noor Ilyana Ismail, Muhammad Asnawi Vaea and Muhammad Luqman Hasan  
Petroleum Engineering Department, Universiti Teknologi PETRONAS, Malaysia  
“**The Impact of Sand Particle Size and Velocity on Sand Erosion of Stainless Steel Plate using Sand Blasting Technique**”

## **3<sup>rd</sup> Place**

Noor Ilyana Ismail, Aruvin Prakasan, Angga Pratama Herman, M Luqman Hasan, and Nasiman Sapari  
Universiti Teknologi PETRONAS, Bandar Seri Iskandar, Perak, Malaysia  
“**Characterization of Geotextile Material for Downhole Application**”

## **Simulation Competition Awards**

### **1<sup>st</sup> Place**

Afnan Hamadah, Lina Handa, Nourhan Hasan, Samar Qutom, Yasmeeen Sheebbeb and Ufuk Kula  
Industrial Engineering Department, American University of Middle East, Kuwait  
“**Simulation of Patient Flow and Healthcare Resources in a Hospital**”

## **Best Track Papers Awards**

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### **Business Management**

#### **ID 320: Implications of Human Resource Management against Organizational Culture, Work Motivation, Job Satisfaction and Employee Performance at State Own Enterprise Hospitals in Indonesia (Empirical Study on the 5 Biggest Pertamina Hospitals in Indonesia)**

Uli Wildan Nuryanto Doctoral Student Postgraduate Program University Mercubuana Jakarta, Indonesia  
Asep Saefudin Doctoral Student Postgraduate Program University Mercubuana Jakarta, Indonesia  
Prof. Dr. S. Pantja Djati, M.Si, MA Chairman of Postgraduate Program Doctoral Management  
University Mercubuana, Jakarta, Indonesia

### **Case Studies**

#### **ID 564: Lean IT adoption: Success cases in Portuguese banks**

Cátia Lobato Ferreira  
Departamento de Engenharia Mecânica e Industrial  
Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa  
Caparica, Portugal

Maria Henriqueta Almeida and António Grilo  
Departamento de Engenharia Mecânica e Industrial and UNIDEMI  
Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa  
Caparica, Portugal

#### **ID 341: Calibration system for costs reduction: Case study in the maquiladora industry.**

Karina Cecilia Arredondo-Soto  
Universidad Autónoma de Baja California, Mexico

Maria del Socorro Cruz-Castillo  
Tijuana Institute of Technology, Mexico

Teresa Carrillo-Gutiérrez, Maria Marcela Solis-Quinteros and Luis Alfredo Avila Lopez  
Universidad Autónoma de Baja California, Mexico

### **Construction Management**

#### **ID 579: Data Acquisition Model for Analyzing Cost Overrun in Construction Projects using KDD**

Mai Monir Ghazal and Ahmed Mohamed Hammad  
Department of Industrial Engineering and Engineering Management  
University of Sharjah, Sharjah, U.A.E

## E-Business and E-Commerce

### **ID 520: Time Table Scheduling for Educational Sector on an EGovernance Platform: A Solution from an Analytics Company**

Vimal Kumar  
Department of Management Studies  
Maulana Azad National Institute of Technology (MANIT) Bhopal- 462003, India

Ankita Malviya  
Indian Space Research Organization (ISRO), India

Pratima Verma  
Department of Industrial & Management Engineering,  
Indian Institute of Technology Kanpur, Kanpur, India

Vignaesh Muthukumaar  
Consultant, EXL Services, Bengaluru, India

Sunil Kumar Jauhar  
Department of Mechanical Engineering  
Maulana Azad National Institute of Technology, MANIT-462003, Bhopal, India

Nagendra Kumar Sharma  
Department of Management Studies  
Maulana Azad National Institute of Technology (MANIT) Bhopal- 462003, India

## Energy

### **ID 462: The Influence of Nonlinear Loads on Optimal Operation Control of Electrical Distribution System**

Agus Ulinuha  
Department of Electrical Engineering  
Universitas Muhammadiyah Surakarta  
Surakarta, Central Java, Indonesia

### **ID 107: Life cycle impacts for electricity generation from wind source**

Md. Mizanur Rahman, Hasan Mohd Faizal, Aminuddin Saat and Mazlan Abdul Wahid  
Faculty of Mechanical Engineering  
Universiti Teknologi Malaysia

## Engineering Education

### **ID 108: Safe Human-Machine Centered Design of an Assembly Station in a Learning Factory Environment**

Rafael Rojas, Erwin Rauch, Patrick Dallasega and Dominik T. Matt  
Industrial Automation and Engineering (IEA)  
Faculty of Science and Technology  
Free University of Bolzano, Italy

Dominik T. Matt  
Fraunhofer Italia Research S.C.A.R.L.  
Innovation Engineering Center (IEC)  
Free University of Bolzano, Italy

## Engineering Management

### **ID 364: Risk Analysis Related to Costing and Scheduling of Construction Projects**

Mohamed A. Aderbag  
Project Manager, Organization for Development of Administrative Centers (ODAC), Tripoli, Libya

Saber Kh. Elmabrouk

Faculty of Engineering, University of Tripoli, Libya

Mohamed A. Sherif  
School of Engineering and Applied Science, Engineering Project Management Department  
The Libyan Academy, Tripoli-Libya

## **ID 115: Empirical analysis of bankrupt companies using linear and nonlinear techniques in Japanese Stock Markets**

Masanobu Matsumaru  
Department of Industrial Engineering and Management of Faculty of Engineering  
Kanagawa University, Kanagawa, Japan

Takaaki Kawanaka  
Institute for Innovation in International Engineering Education, Graduate School of Engineering  
The University of Tokyo, Tokyo, Japan

Shoichi Kaneko  
Faculty of Management Information  
Yamanashi Gakuin University, Yamanashi, Japan

## **Entrepreneurship and Innovation**

### **ID 46: Innovation and Growth in Family-Owned Mexican SMEs**

Gonzalo Maldonado-Guzmán  
Centro de Ciencias Económicas y Administrativas  
Universidad Autónoma de Aguascalientes  
Aguascalientes, Ags., México C.P. 20131

Jose Arturo Garza-Reyes  
Centre for Supply Chain Improvement  
University of Derby, Derby, DE22 1GB, UK

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Juan Mejía-Trejo  
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Universidad de Guadalajara  
Zapopan, Jalisco, México C.P. 45100

Vikas Kumar  
Bristol Business School  
University of the West of England, Bristol, BS16 1QY, UK

Simon Peter Nadeem  
Centre for Supply Chain Improvement  
University of Derby, Derby, DE22 1GB, UK

## **Healthcare Systems**

### **ID 17: A system dynamic approach of patient satisfaction in India's leading healthcare**

Maria S. Sebastin, School of Business, Amrita Vishwa Vidyapeetham, Bengaluru, Karnataka, India  
Mridula Sahay, Amrita School of Business, Amrita Vishwa Vidyapeetham University, Coimbatore, Tamil Nadu, India

### **ID 615: Minimizing Response Time in Medical Emergency Service: A Literature Review**

Muhammad Isnaini Hadiyul Umam, Budi Santosa and Nurhadi Siswanto  
Industrial Engineering Department  
Institute Technology of Sepuluh Nopember, Surabaya, 60111, Indonesia

## Human Factors and Ergonomics

### **ID 587: Work-Related Musculoskeletal Risk Assessment among Structural Iron Workers in a Steel Company in the Philippines**

Pauline Irish D. Jalac, John Paul E. Sison, John Michael Y. Fedilo, Romalyn L. Galingan, Ma. Teodora E. Gutierrez, Yoshiki B. Kurata  
Department of Industrial Engineering  
Technological Institute of the Philippines, Quezon City, Philippines

## Information Technology and Information Systems

### **ID 608: Challenges of Digital Collaboration in the South African Construction Industry**

Oke Ayodeji Emmanuel, Aghimien Douglas Omoregie, Aigbavboa Clinton Ohis & Koloko Nteboheng  
Department of Construction Management & Quantity Surveying, University of Johannesburg, South Africa

## Inventory Management

### **Single Vendor-Buyer Integrated Inventory Model for Deteriorating Items Considering Carbon Emission**

Yosef Daryanto  
Department of Industrial & System Engineering,  
Chung Yuan Christian University, Chungli, Taiwan  
&  
Department of Industrial Engineering,  
Universitas Atma Jaya Yogyakarta, Yogyakarta, Indonesia

Hui-Ming Wee  
Department of Industrial & System Engineering,  
Chung Yuan Christian University, Chungli, Taiwan

## Lean and Six Sigma

### **ID 80: Implementation of Lean Manufacturing System To Eliminate Wastes on The Production Process of Line Assembling Electronic Car Components With WRM And VSM Method**

**[Case Study In Production Process of Daihatsu SIGRA Type 1.5 L 3NR-Ve, DOHC Dual VVT-i]**

Muhammad and Yadrifil  
Department of Industrial Engineering (IE UI)  
Faculty of Engineering, Industrial Engineering Department

## Logistics Management

### **ID 315: Criteria Affecting the Selection of Logistics Service Provider for Retail Small and Medium Enterprise in Thailand**

Chawanluck Suriyajaroen  
Graduate Program in Logistics Engineering and Supply chain Management  
Department of Industrial Engineering  
Chiang Mai University  
Chiang Mai, Thailand

Apichat Sopadang  
Department of Industrial Engineering  
Excellence Center in Logistics and Supply Chain Management  
Chiang Mai University  
Chiang Mai, Thailand

### **ID 174: Impact of Order Picking Regions on the Performance of Routing Picking Policies**

**Hala Ahmed, Raafat Elshaer†, and Mahassen Khater**

Industrial Engineering Department  
Faculty of Engineering, Zagazig University  
Zagazig, Egypt

## Manufacturing and Design

### **ID 302: Scaling up Model for Developing Second-Generation (2G) Bioethanol by using Palm Empty Fruit Bunches Feedstock**

Sawarni Hasibuan  
Industrial Engineering Department  
Universitas Mercu Buana, Jakarta, Indonesia

Hermawan Thaheer  
Computer Science Department  
Universitas Pakuan, Bogor, Indonesia

Rosalendro Eddy Nugroho  
Master of Management, Universitas Mercu Buana, Jakarta, Indonesia

## Modeling and Simulation

### **ID 402: Modeling and Simulation of Queuing Systems Using Stochastic Petri net and Arena Software: A Case Study**

Husam Kaid and Abdulmajeed Dabwan  
College of Engineering, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

Abdulrahman Al-Ahmari  
FARCAMT Chair, Advanced Manufacturing Institute, King Saud University, Riyadh, Saudi Arabia

### **ID 422: Simulation Analysis of Segmented CONWIP: Application to Reentrant Flow Lines**

Yassin M. Shaalan, Ingy A. El-Khouly, and Khaled S. El-Kilany  
Department of Industrial and Management Engineering  
Arab Academy for Science, Technology, and Maritime Transport  
Alexandria, Egypt.

## Operations Management

### **ID 295: The effect of Third Parties Fund, Non-Performing Loan, Capital Adequacy Ratio, Loan to Deposit Ratio, Return on Assets, Net Interest Margin and Operating Expenses Operating Income on Lending (Study in Regional Development Banks in Indonesia)**

Sugeng Riadi  
Program Doktor Manajemen, Pascasarjana Universitas Mercubuana  
Universitas Mercubuana, Jakarta, Indonesia

## Operations Research

### **ID 221: A Mathematical Model for Outbound Truck Scheduling with Multiple Trips in Multi-Door Cross Docking System**

Nattapong Kamsura and Warisa Wisittipanich  
Department of Industrial Engineering  
Faculty of Engineering, Chiang Mai University  
Chiang Mai 50200, Thailand

## Production Planning and Management

### **ID 87: Influence of Inventory and Work in Process Adjustment Time on Production Target Achievement of D Minus 1 Production Scenario: A Case Study of Hospital Bed Production**

Susanto Sudiro  
Magister Teknik Mesin, Universitas Pancasila Jakarta  
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Sha'ri Mohd Yusof  
Razak School of Engineering and Advanced Technology  
Universiti Teknologi Malaysia Kuala Lumpur



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Post Graduate Program, Institut Sains dan Teknologi Nasional Jakarta  
Jalan Duren Tiga Pasarminggu, Jakarta Selatan 12760, Indonesia

## Project Management

### **ID 147: Evaluating Maintenance Policy and Implementation Strategies to improve Building Functional Performance in Government Building: A Case Study in Jakarta, Indonesia**

Fahry Adam and Yusuf Latief  
Department of Civil Engineering  
Universitas Indonesia

### **ID 141: Early Project-Management Performance and Project Outcomes Correlate**

Hong Long Chen, Department of Business and Management, National University of Tainan, Taiwan

## Quality Control and Management

### **ID 604: Defect Control via Forecasting of Processes' Deviation as JIDOKA Methodology**

Dr: Ahmed M. Abed (1) and Dr: Adel Abd Elmo'z Ibrahim  
Department of Industrial Engineering, Zagazig University, Egypt

## Reliability and Maintenance

### **ID 313: Overall Equipment Effectiveness (OEE) at the Laboratory of Structure Testing**

Rahmat Nurcahyo, Faisal, Muhammad Dachyar and Muhammad Habiburrahman  
Department of Industrial Engineering,  
Faculty of Engineering, University of Indonesia,  
New Campus UI, Depok, 16424, Indonesia

## Statistics and Optimization

### **ID 648: Branch and Bound Algorithm for Finding the Maximum Clique Problem**

Mochamad Suyudi, Sukono  
Department of Mathematics, Faculty of Mathematics and Natural Sciences  
Universitas Padjadjaran, Indonesia

Mustafa Mamat

Faculty of Informatics and Computing, Universiti Sultan Zainal Abidin  
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Abdul Talib Bon

Department of Production and Operations, University Tun Hussein Onn Malaysia, Johor, Malaysia

## Supply Chain Management

### **ID 144: Supply Chain Coordination with Contracts under Bilateral Asymmetric Information**

Yang Liu and Yang Zhang  
Department of Industrial Engineering  
Tsinghua University, Beijing, USA

### **ID 479: Supplier selection through Attractive criteria: a Fuzzy Kano based integrated MCDM approach**

Naveen Jain  
Department of Mechanical Engineering  
Shri Shankaracharya Institute of Professional Management and Technology, Raipur, India

Vinay Surendra Yadav; H.K. Narang and A. R. Singh  
Department of Mechanical Engineering  
National Institute of Technology Raipur, Chhattisgarh, India



## Sustainability and Green Systems

### **ID 661: A GIS-Based Decision Making Approach on the Evaluation of Sustainable Business Location for Purpose-Built Offices in Malaysia**

Edie Ezwan Mohd Safian, Heng Jia Yun, Burhaida Burhan, Mohd Lizam Mohd Diah and Mat Tawi Yaacob  
Department of Real Estate Management  
Faculty of Technology Management and Business  
Universiti Tun Hussein Onn Malaysia

Abdul Hadi Nawawi  
Department of Estate Management  
Faculty of Architecture, Planning and Surveying  
Universiti Teknologi MARA, Malaysia

## Sustainability in SC

### **ID 133: Sustainable City Logistics through Shared Resource Concepts**

Patrick Dallasega, Thomas Stecher, Erwin Rauch and Dominik T. Matt  
Industrial Automation and Engineering (IEA)  
Faculty of Science and Technology  
Free University of Bolzano  
39100 Bolzano, Italy

Dominik T. Matt  
Fraunhofer Italia Research s.c.a.r.l.  
Innovation Engineering Center (IEC)  
Free University of Bolzano  
39100 Bolzano, Italy

## Sustainable Manufacturing

### **Using the Delphi method to verify a framework to implement sustainability initiatives**

Bruno Gallotta, Jose Arturo Garza-Reyes and Anthony Anosike  
Centre for Supply Chain Improvement  
University of Derby  
Derby, UK, DE22 1GB

## Transportation and Traffic

### **ID 22: Use of improvement heuristics for solving a Vehicle Routing Problem: The case of a Moroccan company**

Imane MOUFAD  
Laboratory of Energy & Sustainable Development (LPE2D)  
Sidi Mohamed Ben Abdellah University - EST,  
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Fouad JAWAB  
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