



April 12, 2017 (Sofitel Hotel)

## Undergraduate Student Paper Competition Awards Sponsored by SIEMENS

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

#### **ID 126 A Continuous Improvement Project to Increase Fulfillment Level in a Wire Company**

Mitzary Elizabeth Chavero Hidalgo, Yaneth Alejandra Santos Muñiz, Alan Javier Corral De León, Fernando González Aleu, Jesus Vazquez, Teresa Verduzco-Garza and Jose A. Lozano, Department of Engineering, Universidad de Monterrey, Nuevo León, México

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

#### **ID 546 Developing a Mobile Health Application "I.Diabetic" for Type 1 Diabetic Kids**

Rawan Al-Shatti and Suat Kasap, Industrial Engineering Department, American University of the Middle East – AUM, Egaila, Kuwait

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

#### **ID 036 Improving On-Time Delivery Eliminating Routing Waste: A Case Study**

Ilse-Valeria Benavides-Peña, Valeria Garza-Amaya, Cecilia Garza-Madero and Bernardo Villarreal, Departamento de Ingeniería, Universidad de Monterrey, San Pedro Garza Garcia, NL 66238, Mexico

## Graduate Student Paper Competition Awards sponsored by EATON Corporation

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

#### **ID 013 Bibliometric Analysis of Research in Continuous Improvement Projects in Hospitals**

Fernando Gonzalez Aleu, Department of Engineering, Universidad de Monterrey, San Pedro Garza García, NL, 66238, Mexico  
Eileen M. Van Aken, Grado Department of Industrial and Systems Engineering, Virginia Tech, Blacksburg, VA, 24061, U.S.A.  
Heather Keathley-Herring, Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, USA

## Doctoral Dissertation Awards

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

#### **ID 311 A Strategic Approach to Effectively Manage Supplier Quality within the Construction Industry**

Rufaidah AlMaian, Kuwait University, Kuwait

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

#### **ID 055 An Empirical Investigation of Critical Success Factors for Continuous Improvement Projects in Hospitals**

Fernando Gonzalez Aleu, UNIVERSIDAD DE MONTERREY, Mexico

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

#### **ID 550 Topological Analysis of Project Risks Network: A Case of Rabat Tramway Project**

Younes Bourass, Mohammadia Engineering School, Morocco

## Undergraduate Research Presentation Competition Awards

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

#### **ID 379 Bone Phosphate Lime - Sampling Method**

Wiam Aissaoui, School of Science and Engineering, Al Akhawayn University of Ifrane, Ifrane, 48075, Morocco

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

#### **ID 580: Superiority of Sanskrit Language in Tele Communication & Computing**

Shashank Mani Tripathi, Institute of Engineering & Technology, Bundelkhand University Jhansi, Uttar Pradesh, India

# Competitions Winners and Best Track Papers – IEOM Rabat Conference

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## Senior Design Project Competition Awards

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

Aymane Eddahmani, Savonius Vertical Wind Turbine: Design and Simulation, Al Akhawayn University, Morocco  
Basma Belarhzal, Air Treatment Using Misting Technology, Al Akhawayn University, Morocco

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

Ayad Ibtihal, DMAIC Implementation for Logistics Process Reengineering in a Sorting Center, École Mohammadia d'ingénieurs (EMI), Mohammed V University, Rabat, Morocco  
Hoor Jalo, Depollution of Olive Mill Wastewater, Al Akhawayn University, Morocco

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

Ahmed M. El-Sherbeeney, Traffic Sign Evaluation and Redesign of Typeface in Saudi Arabia, King Saud University, Saudi Arabia  
Oumayma Grine, Vehicle Routing Problem with Time Window Constraints and Clustering, Al Akhawayn University, Morocco  
El Quissoumi Zaineb, Optimization with the time, Al Akhawayn University, Morocco

## High School/Middle School STEM Project Presentation Competition Awards

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

*Statistical JAVA Gaming Simulation*  
Timothy Liu, Lynbrook High School, San Jose, CA, USA  
Mason Chen, Milpitas Christian School, San Jose, CA, USA  
Joseph Jang, Monta Vista High School, San Jose, CA, USA

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

*Use Robotics to Simulate Self-Driving Car on SUV Fields*  
Mason Chen, Milpitas Christian School and Morrill Learning Center, San Jose, CA, USA

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

*An Analysis of Powerball and Condition Leading to January Largest Powerball in History*  
Mason Chen, Milpitas Christian School, Morrill Learning Center, San Jose, CA, USA  
Zonghuan (Jason) Li, San Mateo High School, Morrill Learning Center, San Mateo, CA, USA

## High School/Middle School STEM Project Poster Competition Awards

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

**ID 152 Simulate Self-Driving Taxi in Route Tracking**  
Mason Chen, Milpitas Christian School, Morrill Learning Center, San Jose, CA, United States

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

**ID 151 Data Mining- Detect Cheating Pattern**  
Mason Chen, Milpitas Christian School, San Jose, CA, USA  
Timothy Liu, Lynbrook High School, San Jose, CA, USA

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

**ID 500 Predict 2017 NBA Team Winning Percent**  
Mason Chen, Milpitas Christian School, San Jose, CA, USA  
Maggie Lau, Challenger School, San Jose, CA, USA

## Simulation and PLM Competition Awards

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

**ID 551 Ergonomic Weightlifting” Competition by using JACK**  
Ali Al Ramadhan, Abdulrahman Ahmad, Saoud Alotaibi and Suat Kasap, Industrial Engineering Dept., American University of the Middle East, Kuwait

## Best Poster Awards

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

**ID 470 Improving the Passive Building Energy Efficiency – Case Study: Office Building in Tetuan City in Northern of Morocco**  
Abdelmajid El Bouardi, Faculty of Sciences, Abdelmalek Essaadi University, Tetuan, Morocco  
Friedrich Sick, University of Applied Sciences, Berlin, Germany  
Meriem Lebiéd, University of Applied Sciences, Berlin, Germany and Faculty of Sciences, Abdelmalek Essaadi University, Tetuan, Morocco

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

### **ID 160 The Innovation function within the company: Review of Literature and Attempt of Modeling of the Associated Process**

Rime Etabaa and Driss Bouami, Ecole Mohammedia d'ingénieurs, Rabat, Morocco  
Elfezazi Said ERGI Université cadi Ayyad, Marrakech, Morocco

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

### **ID 053 Intellectual Capital and its Measurement**

Brahmi Samira, Aitouche Samia and Mouss Mohamed Djamel  
Industrial Engineering Department  
Batna 2 University, Batna, Algeria

## Best Track Papers Awards

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### **Artificial Intelligence**

#### **Detection of Steel Surface Defect Based on Machine Learning Using Autoencoder Network (ID 57)**

Ehab A. Kholief  
Production Engineering Department  
Alexandria University  
Alexandria, 21614, Egypt

Samy H. Darwish  
Electrical Engineering Department  
Pharos University  
Alexandria, 21614, Egypt

M. Nashat Fors  
Production Engineering Department  
Alexandria University  
Alexandria, 21614, Egypt

### **Automation and Control**

#### **Design Concept of Day Minus 1 Production Model Using Systems Modeling Language: a Case Study of Hospital Beds Production (ID 94)**

Susanto Sudiro  
Magister Teknik Mesin, Universitas Pancasila Jakarta  
Indonesia

Sha'ri Mohd Yusof  
Razak School of Engineering and Advanced Technology, Universiti Teknologi Malaysia  
Kuala Lumpur, Malaysia

Revino, Post Graduate Program  
Institut Sains dan Teknologi Nasional Jakarta  
Indonesia

### **Case Studies**

#### **Optimizing Durability of the High Performance Nano-Concrete Applying Taguchi Method and Desirability Function (ID 312)**

Elahe Abbasi  
Office of Standards and Surveys Monitoring  
Statistical Centre of Iran  
Tehran, Iran

Hamid Reza Pasandideh  
Department of Industrial Engineering, Faculty of Engineering

Kharazmi University  
Tehran, Iran

Mostafa zandiyeh  
Department of Industrial Management, Accounting and Management Faculty  
Shahid Beheshti University  
Tehran, Iran

Mohamad Hadi Behboodi  
Department of Civil Engineering  
Ghazali Higher Education Institute  
Qazvin, Iran

## Computers and Computing

### Getting Model of MVVM pattern from UML Models (ID 366)

Mouad El Omari  
MATSI Laboratory, Department of Computer Science,  
Mohammed First University  
Oujda, 60000, Morocco

Mohammed Erramdani  
MATSI Laboratory, Department of Computer Science,  
Mohammed First University  
Oujda, 60000, Morocco

Saida Filali  
MATSI Laboratory, Department of Management,  
Mohammed First University  
Oujda, 60000, Morocco

## Construction Management

### Assessment of Financial Condition: A Case Study of Saudi Construction Companies (ID 176)

Naif Turki Ibn-Homaid and Tijani Ibrahim A  
Construction Engineering & Management  
Civil Engineering Department  
King Saud University  
Riyadh, Saudi Arabia

## Decision Sciences

### In the framework of the Corporate Social Responsibility: Proposal of a methodology of selection of performance indicators (ID 377)

Samah Elrhanimi  
Systems Engineering Laboratory  
National School of Applied Sciences Kenitra, Ibn Tofail University  
Kenitra, Morocco

Laila El abbadi  
Systems Engineering Laboratory  
National School of Applied Sciences Kenitra, Ibn Tofail University  
Kenitra, Morocco

Abdellah Abouabdellah  
Systems Engineering Laboratory  
National School of Applied Sciences Kenitra, Ibn Tofail University  
Kenitra, Morocco

## Energy

### **Energy Efficiency Evaluation in Petrochemicals Industry (ID 332)**

Mohamed Salaheldin  
Industrial Engineering  
Faculty of Engineering, Alexandria University  
Alexandria, Egypt

Ahmed Farouk Abdul Moneim  
Industrial and Management Engineering  
Arab Academy of Science and Technology and Maritime Transport  
Alexandria, Egypt

M. Nashat Fors  
Industrial Engineering  
Faculty of Engineering, Alexandria University  
Alexandria, Egypt

### **Parallel active filter for harmonics reduction in a solar conversion chain connected to the electrical network with nonlinear loads (ID 409)**

CHTOUKI Ihssane  
PhD Student, Department of Electrical Engineering,  
MOHAMMED V UNIVERSITY IN RABAT,  
Morocco

ZAZI Malika  
Professor, Department of Electrical Engineering,  
MOHAMMED V UNIVERSITY IN RABAT, Morocco

## Engineering Education

### **Gamifying the Industrial Engineering Profession (ID 347)**

Hasan Darwish  
School of Industrial Engineering  
North West University  
Potchefstroom, North West Province, South Africa

### **Visuospatial Abilities Development of Secondary Vocational School Students (ID 40)**

Peter Toth  
Trefort Agoston Centre for Engineering Education  
Obuda University  
Nepszinhaz u. 8, H-1081 Budapest, Hungary

## Engineering Management

### **Evaluating the performance of a production line by the Overall Equipment Effectiveness: An approach based on Best Manufacturing Practices (ID 330)**

Jamal Fattah, Latifa Ezzine, Zineb Aman, Abdeslam Lachhab  
Research Team: Modeling, Control Systems and Telecommunications  
Faculty of Sciences, Moulay Ismail University  
P.O. Box 1120, Zitoune, Meknes 50000, Morocco

### **Awareness of industries toward implementing Concurrent Engineering (CE) culture. Case Study: Jordanian Industries (ID 345)**

Mohammad D. AL-Tahat  
Industrial Engineering Department  
Hijjawi Faculty for Engineering Technology  
Yarmouk University, Irbid 21163, Jordan

## Entrepreneurship and Innovation

### **A Framework for National Innovation Determinants (ID 362)**

Siham HAMIDI and Abdelaziz BERRADO  
Equipe AMIPS - Ecole Mohammadia d'Ingénieurs  
Mohamed V University  
Avenue Ibn Sina, BP765, Agdal, Rabat, Morocco

## Facilities Planning and Management

### **Systematic Planning Layout and Line Balancing for Improvement in an Armoured Vehicle Manufacturing Plant (ID 415)**

Norzima Zulkifli, Ahmad Shah Hizam bin Md Yasir, Faieza Abd. Aziz  
Department of Mechanical & Manufacturing Engineering, Faculty of Engineering  
University Putra Malaysia  
43400 Serdang, Malaysia

## Healthcare Systems

### **Using Ontology as a Decision Support System for Manage Risks in Medicines Supply Chain: Case of Public Hospitals in Morocco (ID 90)**

Touria Benazzouz, Abdelwahed Echchtabi and Abdelkabir Charkaoui  
University Hassan 1st , Laboratory of Mechanics, Industrial Management and Innovation,  
FST Settat, Morocco

## Human Factors and Ergonomics

### **Employee's clustering based on the Big Five Model in a fitness franchising (ID 38)**

Anderson Bertarello Fernandes and Michel José Anzanello  
Department of Production Engineering and Transportation  
Federal University of Rio Grande do Sul  
Av. Osvaldo Aranha 99, Porto Alegre, RS 90035-190 Brazil

Guilherme Luz Tortorella and Carlos Ernani Fries,  
Department of Production and Systems Engineering  
Federal University of Santa Catarina  
Campus Trindade, C.P. 476, Florianópolis, SC 88040-900, Brazil

## Lean and Six Sigma

### **Effect of Manufacturing Activities on Lean - Green Management Integration (ID 131)**

Lamyaa Mohammed Dawood  
Production Engineering and Metallurgy  
Department/IE Division  
University of Technology / Baghdad

Zuher Hassan Abdullah  
Department/ Mechanical Technologies  
Technical Institute of Babylon

### **Lean deployment in SMEs, performance improvement and success factors: A case study (ID 308)**

Amine Belhadi  
Industrial Engineering Research Team,  
Higher School of Technology, Safi  
Cadi Ayyad University, Marrakech, Morocco

Fatima Ezzahra Touriki

Department of Industrial Engineering  
National School of Applied Sciences, Safi  
Cadi Ayyad University, Marrakech, Morocco

Said El fezazi  
Industrial Engineering Research Team,  
Higher School of Technology, Safi  
Cadi Ayyad University, Marrakech, Morocco

## Logistics Management

### Simulation Analyzes Material Handling Requirements for a Major Automotive Supplier (ID 162)

Gabriel Carreño, Dinesh Patlolla, and Edward J. Williams  
Department of Simulation Analysis  
PMC  
Dearborn, MI 48126, USA

## Manufacturing and Design

### Application of Product Modularity in Industry: a Case Study (ID 460)

Ahm Shamsuzzoha\*, Mahmood Al-Kindi, and Nasr Al-Hinai  
Department of Mechanical and Industrial Engineering  
Sultan Qaboos University, Muscat, Oman

## Modeling and Simulation

### Diagnosing Causes of Coal Power Plant Energy Losses Using Bayesian Belief Network (ID 486)

Muhamad Iqbal Felani and Ariyana Nugraha  
Research of Power Plant and Primary Energy  
PT PLN (Persero) Research Institute, Jakarta, Indonesia

### Risk Assessment in LPG Loading Operations by Simulation (ID 179)

Maryam Gallab and Mohamed Tkiouat  
LERMA, Engineers' Mohammadia School  
Mohammed V-Rabat University, Rabat, Morocco

Hafida Bouloiz  
Industrial Engineering Department, LG21  
National School of Applied Sciences, Ibn Zohr University,  
Agadir, Morocco

Emmanuel Garbolino  
Crisis and Risk research Centre (CRC)  
Mines Paris-Tech, PSL University  
Sophia Antipolis, France

## Operations Management

### Relating flexibility of information systems to different planning process styles, information systems architecture and strategy of the organization (ID 173)

Somen Dey  
Department of Industrial and Management Engineering  
Indian Institute of Technology Kanpur,  
Kanpur, India

R.R.K. Sharma  
Department of Industrial and Management Engineering  
Indian Institute of Technology Kanpur,  
Kanpur, India

## Operations Research

### **A Stochastic AHP Method for Bid Evaluation Plans of Military Systems In-Service Support Contracts (ID 35)**

Ahmed Ghanmi  
Defence Research and Development Canada  
Centre for Operational Research and Analysis  
Ottawa, Ontario,  
Canada, K1A 0K2

### **New exact method to solve multi-capacitated location problem using set partitioning formulation (ID 466)**

Mohammed EL AMRANI  
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Montréal QC H3C 3J7 CANADA

## Production Planning and Management

### **Managing Changeover Waste in Manufacturing Plants When Using Single Minute Exchange of Dies (ID 59)**

Rushil Madhav, Annlize Marnewick and Hannelie Nel  
Postgraduate School of Engineering Management  
University of Johannesburg  
Johannesburg, South Africa

## Project Management

### **Towards an Effective Project Portfolio Selection Process (ID 508)**

Ghizlane ELBOK  
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Ecole Mohammadia d'Ingénieurs  
Mohammed V University of Rabat, Morocco

Abdelaziz BERRADO  
Research team AMIPS  
Ecole Mohammadia d'Ingénieurs  
Mohammed V University of Rabat, Morocco

## Quality Control and Management

### **Experimental Analysis of Surface Roughness in CNC Taper Turning of Aluminum 6061 Using Taguchi Technique (ID 46)**

Sanchay Gupta, Vimanyu Chadha, Vishal Sardana, Viplav Setia, Ranganath M Singari  
Department of Mechanical, Production and Industrial Engineering  
Delhi Technological University  
New Delhi, 110058, India

### **The Role of Strategic Quality Planning in Continuous Improvement Efforts (CI) – Case of a Short-Term Insurance Company in South Africa (ID 457)**



Sambil Charles Mukwakungu  
Department of Quality and Operations Management  
University of Johannesburg,  
South Africa

Charles Mbohwa  
Department of Quality and Operations Management  
University of Johannesburg,  
South Africa

## Reliability and Maintenance

### Using FMEA Analysis for Assessing Air Conditioners Remanufacturing Processes (ID 536)

Bashir Salah  
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King Saud University, KSU, Industrial Engineering Department, College of Engineering, P.O. Box 800, Riyadh,  
11421, Kingdom of Saudi Arabia

Aiman Ziout  
Department of Mechanical Engineering, College of Engineering, UAE University, Al-Ain,  
United Arab Emirates

## Supply Chain Management

### Proposed Performance Evaluation Framework for Assessing and providing Approximate Dimensioning of Supply Chains: Case Study of Public Pharmaceutical Products Supply Chains (ID 507)

Zoubida Chorfi1, Loubna Benabbou2, Abdelaziz Berrado1,  
1Equipe AMIPS, 2Equipe MOAD-SCM, Ecole Mohammadia d'Ingénieurs,  
Mohammed V University of Rabat, Morocco

## Sustainability and Green Systems

### Sustainable Distribution Networks Adoption in Moroccan industry: barriers and instigators (ID 136)

Hajar Deqqaq and Abdellah Abouabdellah  
Laboratory Systems Engineering, Research team ' Modelling and Optimization of the Industrial and logistic Systems '  
MOSIL, National School of Applied sciences, Ibn Tofail university, Kenitra Morocco

## Sustainable Manufacturing

### An Environmental Friendly Optimizer for Landscape Design (Envo- Land) (87)

Ossama Hosny  
The American University in Cairo (AUC), Egypt

## Transportation and Traffic

### Improving Distribution Efficiency to Increase Agility: An Application to a Mexican Company (ID 302)

Bernardo Villarreal, Ilse-Valeria Benavides-Peña, Valeria Garza-Amaya & Cecilia Garza-Madero  
Universidad de Monterrey  
San Pedro Garza García, N.L., México 66238

### Usage of Non-Linear Regression for Modeling the Behavior of Motor Vehicle Crash Fatality (MVF) Rate (ID 438)

Galal M. Abdella

## Competitions Winners and Best Track Papers – IEOM Rabat Conference

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Qatar Transportation and Traffic Safety Center (QTTSC)  
Qatar University, Doha – Qatar

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