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3rd European – Pilsen, Czech Republic

July 23-25, 2019 (Park Hotel)

Undergraduate Student Paper Competition Award sponsored by SIEMENS

1st Place

ID 004 Improving Forecasting Accuracy to reduce Variability of Customer Service Level

Bernardo Villarreal, Mónica Balderas, Andrea Araiza and Mariana Pena, Universidad de Monterrey, San Pedro Garza García, México.

2nd Place

ID 007 Increase Plant Productivity Using an OEE Approach: An Application

Mariana Molina-Barrientos, Teresa Verduzco & Bernardo Villarreal, Departamento de Ingeniería Universidad de Monterrey, San Pedro Garza García, Nuevo León, México

Undergraduate Research Competition Award

1st Place

ID 508 Design, Fabrication and Testing of a 3D Printer

Mohamad Hasan Bin Tasneem and Gamal Talal, Mechanical and Industrial Engineering Department, College of Engineering, Sultan Qaboos University, Sultanate of Oman

2nd Place

ID 131 A Scalable Approach for Vehicle Routing Problem with Reinforcement Learning

C.Y. Lo and C.K. M. Lee, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University Hong Kong, China

3rd Place

ID 127 Assessment of Wind Farm Allocation Criteria

Mawadda M. Samkari and Abdulaziz T. Almaktoom, Department of Operations and Information Management, Effat University, Kingdom of Saudi Arabia

Graduate Student Paper Competition Award sponsored by EATON

1st Place

ID 531 Tools and Leadership Qualities for Change Implementation

Lukas Vaclavik, CPD & Strategic Management, College of Engineering and Technology, University of Derby, UK

2nd Place

ID 486 Enhance the Thermal Properties of Poly-Propylene Polymer

Nawaf Almohamdi, Department of Mechanical Engineering Yanbu, Industrial College, Yanbu, Zip 46429, KSA

Ashraf M. Alghanmi, Mechanical and Industrial Engineering Department, Yanbu Industrial College, Yanbu, Saudi Arabia

Master Thesis Competition Award

ID 303 A Study of Workforce Assignment Problem in Lean Factory on Machine Tool Industry

JrJung Lyu, Ching-Hsiang Tung and Chia-Wen Chen, Department of Industrial and Information Management, National Cheng Kung University, Tainan, Taiwan

Simulation Competition Award

ID 211 Making the Profitability Paradox of Bad Banks: A System Dynamics Approach

Mahdi Bastan, Sareh Akbarpour and Alimohammad Ahmadvand, Department of Industrial Engineering, University of Eyvanekey, Garmsar, Iran

Hamed Shakouri G., School of Industrial Engineering, College of Engineering, University of Tehran, Tehran, Iran

Undergraduate Poster Competition Award

1st place

ID 421 Compressed Air Driven Car

Mohammed Saleh Alrashedi, Mohammad Tarahib Alharbi and Fahad Alhujaili, Department of Mechanical Engineering Technology, Yanbu Industrial College, Yanbu Al-Sinaiyah, Saudi Arabia

2nd place

ID 508 Design, Fabrication and Testing of a 3D Printer

Mohamad Hasan Bin Tasneem and Gamal Talal, Mechanical and Industrial Engineering Department, College of Engineering, Sultan Qaboos University, Sultanate of Oman

3rd place

ID 155 Balancing the Workmanship of a Production Line in the Manufacturing Industry of a Personal Care Product

Jackson Generoso, Milton Alexandre Ziehlsdorff and Paulo Henrique Gamba, Department of Production and Systems Engineering, Federal University of Santa Catarina, Brazil

Graduate and Professional Poster Competition Award

1st Place

ID 231 A New Climate Indicator to Be Used In Prediction of Cooling Energy in Hot and Humid Regions

Mauricio Nath Lopes and Roberto Lamberts, Department of Refrigeration and Air Conditioning, Federal Institute of Santa Catarina (IFSC), São José, SC, Brazil

2nd Place

ID 230 Adoption of Product-Service System and the Potential as a Sustainable Solution: A Literature View in the Fashion Industry

Pedro Seolin dos Santos, Lucila M. S. Campos and Paulo Augusto Cauchick Miguel, Department of Production Engineering and Systems, Federal University of Santa Catarina – UFSC, Florianopolis – SC, Brazil

2nd Place

ID 120 A Review Paper on Algorithms Used For Simple Assembly Line Balancing Problems in the Automotive Industry

Salah Eddine Ayoub El Ahmadi, Laila El Abbadi and Moulay Taib Belghiti, National School of Applied Sciences, Ibn Tofail University, Kenitra, Morocco

3rd Place

ID 304 Process View on E-Health with Risk Analysis

Michal Švehla and Jiří Tupa, Department of Technologies and Measurement, Regional Innovation Centre for Electrical Engineering (RICE), Faculty of Electrical Engineering, University of West Bohemia

ID 359 Determination of Changes Between Lean Management and Lean 4.0

Andrea Benesova and Jiri Tupa, Department of Technologies and Measurement, Faculty of Electrical Engineering, University of West Bohemia, Univerzitní 2732/8, 301 00 Pilsen, Czech Republic

Best Track Papers Awards

Big Data

ID 329 Analysis of Accidental Deaths during Songkran Festival Using Data Mining

Pornpimol Chaiwuttisak, Statistics Department, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand

ID 332 Classifying Colon Cancer Tissues Using Probabilistic Principle Components Analysis with the Consistent Information Complexity (CICOMP) in Logistic Regression

Abdulaziz Saud Alkabaa, Department of Industrial Engineering, King Abdulaziz University, Jeddah, Saudi Arabia

Business Management

ID 334 A Method to Measure Logistic Interoperability using Structural Equation Modelling

Sandro Breval Santiago, Department of Administration and Management, Federal University of Amazonas, Manaus, Amazonas, Brazil

Fabiana Lucena de Oliveira, Department of Economics, State University of Amazonas, Manaus, Amazonas, Brazil

Carlos Manoel Taboada Rodriguez, Department of Production and Systems Engineering, Federal of University of Santa Catarina, Florianópolis, Santa Catarina, Brazil

Ileana G. Pérez Vergara, Group Director of New Technologies Research Labor and Management, Universidad San Buenaventura Cali, Cali, Colombia

Decision Science

ID 84 Modelling Interdependencies of Electrical Power Infrastructure by Using ISM-MICMAC Analysis

Hassan Al-Zarooni, and Hamdi Bashir, University of Sharjah, United Arab Emirates

ID 470 Comparison of Double Exponential Smoothing Holt and Fuzzy Time Series Methods in Forecasting Stock Prices (Case Study: PT Bank Central Asia Tbk)

Eman Lesmana, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Jl. Raya Bandung-Sumedang KM 21, Jatinangor 45363, Sumedang, West Java, Indonesia
Nursanti Anggriani, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Jl. Raya Bandung-Sumedang KM 21, Jatinangor 45363, Sumedang, West Java, Indonesia
Sukono, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, Jl. Raya Bandung-Sumedang KM 21, Jatinangor 45363, Sumedang, West Java, Indonesia
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Abdul Talib Bon, Department of Production and Operations, University Tun Hussein Onn Malaysia, Malaysia

Lean

ID 487 Assessing Critical Failure Factors for Implementing Lean Six Sigma Framework in Indian Manufacturing Organizations

Vikas Swarnakar, Department of Mechanical Engineering, National Institute of Technology, Raipur, Chhattisgarh, India
Shailesh Vaidya, Department of Mechanical Engineering, National Institute of Technology, Raipur, Chhattisgarh, India
Anil Kr. Tiwari, Department of Mechanical Engineering, National Institute of Technology, Raipur 492010, Chhattisgarh, India
A. R. Singh, Department of Mechanical Engineering, National Institute of Technology, Raipur 492010, Chhattisgarh, India

ID 459 Transport Operations Optimisation through Lean Implementation – A Case Study

Nicha Deesrisak, Warwick Manufacturing Group, University of Warwick, Coventry, U.K.
Jose Arturo Garza-Reyes, Centre for Supply Chain Improvement, University of Derby, Derby, U. K.
Simon Peter Nadeem, Centre for Supply Chain Improvement, University of Derby, Derby, U. K.
Anil Kumar, Centre for Supply Chain Improvement, University of Derby, Derby, U. K.
Vikas Kumar, Bristol Business School, University of the West of England, Bristol, U.K.
Fernando González-Aleu, Universidad De Monterrey, San Pedro Garza García, N.L. México
Bernardo Villarreal, Universidad De Monterrey, San Pedro Garza García, N.L. México

Operations Management

ID 501 The Impact of Learning Orientation on Innovation Performance: Mediating Role of Operations Strategy and Moderating Role of Environmental Uncertainty

Paria Jeihoony, Faculty of Economics and Management, University of Tabriz, Tabriz, Iran
Younis Jabarzadeh, Faculty of Economics and Management, University of Tabriz, Tabriz, Iran
Vikas Kumar, Faculty of Business and Law (FBL), University of the west of England Bristol, Bristol, UK
Jose Arturo Garza-Reyes, Derby Management School, University of DERBY, Derby, England

Product Design

ID 247 A Portable Workstation: Implementing Techniques of Product Design Process

Nadia Tanzeem, Nafisa Ali Anika, Zareen Tasnim Safa, Ibrahim Hossain and Maliha Huq
Dept. of Industrial and Production Engineering, Military Institute of Science and Technology, Mirpur Cantonment, Dhaka-1216, Bangladesh

Project Management

ID 204 A Fuzzy-Network Analysis Approach for Modeling and Analyzing the Critical Success Factors for the ERP Implementation Projects

Shaikha Binkhatim, Sustainable Engineering Asset Management (SEAM) Research Group, University of Sharjah, UAE
Hamdi Bashir, Sustainable Engineering Asset Management (SEAM) Research Group, University of Sharjah, Sharjah, UAE

Production Planning

ID 217 An Approach of Designing Robust Plant Layout Using Genetic Algorithm

Rahul Sakharwade, Department of Mechanical Engineering, National Institute of Technology, Raipur, Chhattisgarh, India
Udit Narayan Sahu, Department of Mechanical Engineering, National Institute of Technology, Raipur, Chhattisgarh, India
Harendra Kumar Narang, Dept. of Mechanical Engineering, National Institute of Technology, Raipur, Chhattisgarh, India
Mridul Singh Rajput, Department of Mechanical Engineering, National Institute of Technology, Raipur, Chhattisgarh, India

ID 328 Optimizing Production Overtime Period and Backorder Quantity in Joint Production and Maintenance Scheduling

Chelliah Aruun Vijayanathan, Dept. of Mechanical and Industrial Engineering, Louisiana State University, Baton Rouge, LA, USA
Bhaba R Sarker, Department of Mechanical and Industrial Engineering, Louisiana State University, Baton Rouge, LA, USA
Md. Shahriar J. Hossain, Department of Engineering Technology, Northwestern State University, Natchitoches, LA, USA

Energy and Resource Efficiency

ID 68 Application of Multilayer Perceptron Neural Network Model for Predicting Industrial Sector's Energy Consumption

Oludolapo Olanrewaju, Durban University of Technology, Durban NA, South Africa.

ID 456 Greenhouse Gas (GHG) Emissions from Land Transports in Malaysia: Modelling and Policy Analysis

Shibli Azlan, Department of Thermo Fluids, School of Mechanical Engineering, Universiti Teknologi Malaysia
Md. Mizanur Rahman, Department of Thermo Fluids, School of Mechanical Engineering, Universiti Teknologi Malaysia
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Aminuddin Saat, Department of Thermo Fluids, School of Mechanical Engineering, Universiti Teknologi Malaysia
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Engineering Education

ID 343 Development of Industry 4.0 Virtual Lab for Manufacturing Engineering Education

Kapil Gupta, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa
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Madindwa Mashinini, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa
Arno Louw, Centre for Academic Technologies, University of Johannesburg, Johannesburg, South Africa

ID 455 Efficiency analysis of public primary schools: the case of a medium-sized Brazilian city

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

ID 472 Modelling And Mapping University Business Process

Bachtiar H. Simamora, Leader Performance Excellence Research Group, Bina Nusantara University
Natalia Sonata, Bina Nusantara University

Information Technologies

ID 239 Augmented Reality in Industrial Applications: Technologies and Challenges

Adriana Carvalho, C-MAST – Center for Mechanical and Aerospace Science and Technologies, University of Beira Interior, UBI, Covilhã, Portugal
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Tânia M. Lima, C-MAST – Center for Mechanical and Aerospace Science and Technologies, University of Beira Interior, UBI, Covilhã, Portugal

Inventory Technology

ID 345 The Inventory Control Analysis of Head Truck Spare Parts with Continuous Review Policy in Container Terminal Company

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Knowledge Management

ID 125 Testing the Effect of Knowledge Management Capabilities on Service Quality

Ahmed M. Attia, OPIM Department, Effat University, Jeddah, KSA
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ID 235 Digitalization in Industry 4.0, Knowledge Management

Jiří Mouček, Department of Technologies and Measurement, Faculty of Electrical Engineering, University of West Bohemia, Univerzitní 26, 306 14 Pilsen, Czech Republic

Logistics Transportation

ID 416 A Clustering Algorithm for Location Routing Problem with Outsourced Delivery

Junko Hosoda, Faculty of Science and Technology, Sophia University, Tokyo, Japan, Center for Technology Innovation – Production Engineering, Hitachi Ltd., Kanagawa, Japan
Takashi Irohara, Faculty of Science and Technology, Sophia University, Tokyo, Japan

ID 164 Multi-item, Multi-location Transshipment Model for Cross Filling

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Manufacturing

ID 101 Parametric Optimization of WEDM for Inconel 800 using Artificial Neural Network

Prasenjit Dutta, NIT Agartala, Jirania, Tripura, India
Subhash Chandra Panja, Jadavpur University, Kolkata, India
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Debashis Sarkar, Principal Asansol Engineering College, Asansol, India

ID 221 Taguchi integrated Grey Relation based Multi-Performance Optimization for Productivity and Surface Quality in Dry Machining of SS304

Neeraj Sharma, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa
Kapil Gupta, Department of Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa

Modeling and simulation

ID 425 Statistical and Kinetic Modeling for Investigating Acetyl Salicylic Acid Stability

Najwa Alwazni, Chemical Engineering Department, University of Waterloo, Waterloo, Ontario, Canada
Chandra Mouli R Madhuranthakam, Chemical Engineering Department, Abu Dhabi University, Abu Dhabi, UAE
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Mohamed Binshams, Bahrain University, Bahrain
Ali Elkamel, Chemical Engineering Department, University of Waterloo, Waterloo, Ontario, Canada, Chemical Engineering Department, Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates

Operations Research

ID 427 Optimizing a Solid Waste Management Model using Particle Swarm Optimization

Ferdous Sarwar, Farzana Islam, Md Sadman Sakib and Sampa Halder
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Quality control

ID 92 Exponentially Weighted Moving Average Chart Employing Curtailed Inspection for Monitoring Attributes

Salah Haridy, University of Sharjah, United Arab Emirates, Benha Faculty of Engineering, Benha University, Benha, Egypt
Mohammad Shamsuzzaman, University of Sharjah, United Arab Emirates
Imad Alsyouf, University of Sharjah, United Arab Emirates
Ahmed Maged, Benha Faculty of Engineering, Benha University, Benha, Egypt

Reliability

ID 180 A Framework to Prolong Interval of Turnaround Maintenance (TAM) of Processing Plants: Pressure Drums Case Study

Abdelnaser Elwerfalli, College of Mechanical Engineering Technology Benghazi – Libya

Sustainable Operations and Supply Chain Management

ID 228 Integrating Production Assessment with PPAP – A QFD Approach

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Sustainable Manufacturing

ID 124 Production of Tailored Reinforcement of Rattan Fiber Composite

Flora Elvistia Firdaus, Dept. of Chemical Engineering, Jayabaya University, Indonesia
M. Dachyar, Dept. of Industrial Engineering, Universitas Indonesia, Indonesia

System Dynamics

ID 123 The Impact of Payment delays on The Financial resilience of a Multi-echelon Supply Chain: a System Dynamics simulation Approach

Mohamed Hicham Salah Eddine, Research team AMIPS, Mohammed V University of Rabat, Morocco
Tarik Saikouk, International logistics and supply chain department, International University of Rabat
Abdelaziz Berradou, Research team AMIPS, Mohammed V University of Rabat, Morocco

ID 388 Usefulness of System Dynamics Models in Systems Engineering: the Systems-Thinking Educational Perspective

Vladimír Bureš, Faculty of Informatics and Management, University of Hradec Kralove, Hradec Kralove, Czech Republic
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System Engineering

ID 279 Mobile Robotic Platform for Simultaneous Localization and Mapping (SLAM) Experiments Based on Range Sensors

Jeanette del Pilar Ureña-Aguirre, Carrera de Ingeniería Industrial, Facultad de Ingeniería en Ciencias Aplicadas, Universidad Técnica del Norte
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Technology Management

ID 140 The Triple-Helix sub-revolution and the hype of Industry 4.0

Rigard Johan Steenkamp, Department of Operations Management, University of South Africa, Pretoria, RSA

Tools for Sustainable Manufacturing

ID 225 Industrial IoT integrated with Simulation – A Digital Twin approach to support real-time decision making

Romão Santos, Centre for Enterprise Systems Engineering, INESC TEC, Porto, Portugal
João Basto, Centre for Enterprise Systems Engineering, INESC TEC, Porto, Portugal
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Enzo Frazzon, Industrial and Systems Engineering Department, Federal University of Santa Catarina, Florianópolis, Brazil
Américo Azevedo, Department of Industrial Engineering and Management, Faculty of Engineering of the University of Porto, Porto, Portugal

Waste management

ID 6 Resource Recovery from Paper Mill Sludge through Vermicomposting

Mercy Manyuchi, University of Johannesburg, Johannesburg, South Africa.

ID 511 Ranking of Technologies for Energy Recovery from Municipal Solid Waste in Bangladesh Using the Analytic Hierarchical Process (AHP): A Case Study

Syeda Marzia, Department of Civil Engineering, Bangladesh University of Engineering & Technology Dhaka, Bangladesh
Md Sadman Sakib, Department of Industrial & Production Engineering, Bangladesh University of Engineering & Technology Dhaka, Bangladesh