



IEOM Society International

Undergraduate Student Paper Competition Award Sponsored by SIEMENS

1st Place

ID 534 Study of Text Neck Syndrome among Smartphone Users via JACK Software

Khadeja Abdalaziz, Amira Khalaf, Bahie Elsamad, Dana Mohammad, Fajer Al-sanad, and Lawrence Al-fandi, American University of the Middle East, Kuwait

2nd Place

ID 678 Service Model Augmentations for Improving Company Management Systems of Corregidor Inn™

Maria Rebeka Isabel M. Carcellar, Jenalyn Shigella Yandug, John Brixter J. Aliado, Marjorie Joyce D. Ochoa, and Marquin Jose R. Pacana, Mapua University

3rd Place

ID 361 Correlating Brain Dominance and Hand Preference to Academic Tracks: A Case for Senior High School Students (SHS) in the Philippines

Ma. Monica L. Joven, Josephine D. German, Ma. Lourdes O. Buan, Alyana Bianca G. Carreon, and Marjorie Joyce D. Ochoa, Mapua University, Manila, Philippines

ID 440 Renewable Waste Water and Filtration System with Phytoremediation Used in Aquaculture of Freshwater Ornamental Fish

Glyda Aricon Marquez, Charlotte Palao, Kenneth Ibasco, Lady Claudette Ferrer, Patricia Sagge, and Maria Teresa B. Mendoza, Technological Institute of the Philippines

Graduate Student Paper Competition Award sponsored by EATON Corporation

1st Place

ID 280 Analyzing the Efficiency of the Top Non-Life Insurance Companies in the Philippines: Derivation of Common Weights in Data Envelopment Analysis (DEA) using Goal Programming Approach

Rex Aurelius C. Robielos, and Joshua James A. Bravante, Mapua University, Manila, Philippines

2nd Place

ID 853 Feasibility Study for Start-up a New Business of Plastic Recycling

Ahmed Almaamari, Talal Al-Hinai, Omar Al-Hashmi, and Khalid Alzebeid, Sultan Qaboos University

3rd Place

ID 615 Effective Implementation of Lean Techniques in a Textile Composite Mills

Karthick D, and Syath Abuthakeer S, PSG College of Technology, Tamil Nadu, India

ID 525 Integrated Sequential Contractor & PMC Selection Model

Khalid Al Khodhairi, and Hesham K. Alfares, Saudi Aramco, Riyadh, Central, Saudi Arabia

Senior Design Project Competition Award Sponsored by Tooling Tech Group

1st Place

ID 723 Improving Patient Discharge Process

Maha Al Dhaheri, Mariam Ramadan, Afra Almheiri, Khalifa University, Maryam Alshehhi, Mecit Can Emre Simsekler, and Saed Amer, Khalifa University, UAE

2nd Place

ID 546 Construction Site Layout Planning Kuwait International Airport Expansion- Terminal 2

Dr. Rifat Ozdemir, Marah AlRahhal, Jumannah AlQallaf, Rawan AlAbdullah, Haya AlAradah, Sarah AlMatar, Industrial Engineering Department, American University of the Middle East, Eqaila, Kuwait

Competitions and Best Track Papers Awards – 10th IEOM Annual Conference, Dubai

Doctoral Dissertation Award

ID 013 Leadership for Lean Six Sigma

Alessandro Laureani, University of Strathclyde, Leopardstown, Dublin, Ireland

Master Thesis Award

ID 720 Optimization Design and Comparative Study of np and EWMA Charts for Monitoring Fraction Nonconforming

Mezoon AlRemeithi, University of Sharjah, United Arab Emirates

Undergraduate STEM Research Competition Award

1st Place

ID 693 Managing Project Delays: Simulation-Based Methodology for Project Scheduling

Reem Shams AlDeen, Ruqayah AlSaad, Maha Alrasheedi, Omniah Ahmad, Anfal Malak, and Hadi Jaber, American University of the Middle East, Kuwait

Simulation Competition Award

1st Place

ID 798 A Simulation Study on Bed Capacity Management in a Public Hospital

Doha Makarem, Farah Sarraj, Fatemah AlKandarie, Shouq Thuwaini, Yara Tafesh, and Ufuk Kula, Industrial Engineering Department, American University of the Middle East, 250 St, Eqaila, Kuwait

2nd Place

ID 540 Simulation-Based Cycle Time Optimization in Make-to-Order Environment with Job Shop Production Type

Zakka Ugih Rizqi, Adinda Khairunisa, Universitas Islam Indonesia, Yogyakarta, Indonesia

3rd Place

ID 806 Increasing Oil/Petroleum Supply Chain Distribution Efficiency through using Autonomous Vehicle

Rizky Yonathan, Sabrina Putri Kinanti and Zahra, University of Indonesia

Supply Chain and Logistics Competition Award

1st Place

ID 812 Humanitarian aid for Wuhan with Crisis Logistics Management Approach

Yonglin Ren, Shiva Hajiebrahimi, Mehdi Azad, and Anjali Awasthi, Concordia Institute for Information Systems Engineering (CIISE), Concordia University Montreal, Quebec, Canada
Souraj Salah, Hamdan Bin Muhammad Smart University Abu Dhabi, UAE

2nd Place

ID 752 Shipment Retrieval Improvement in an Air Cargo

Abyar Mohammad, Badria Al-Ajmi, Laila Al-Mousa, Mariam Al-Haddad, Sarah Al-Jassim and Mustafa Sendil, Industrial Engineering Department, College of Engineering and Technology, American University of the Middle East, Kuwait

3rd Place

ID 355 Supply Contract Analysis for an Eco-friendly Textile Supply Chain

Arnab Adhikari, IIM Ranchi, Ranchi, Jharkhand, India

ID 576 Good Practices for the Green Supply Chain Modeling

Sana Elhidaoui, and K. Benhida, LAPSSII, Est of Safi, UCA, Morocco

Lean Six Sigma Competition Award Sponsored by Tooling Tech Group

1st Place

ID 799 Six Sigma Project to Improve a PVC Pipe Production

Anwar Al Merri, Dalal Al Attar, Kawthar Al Saegh, Loulwah Al Doukhi, Muneera Al Sabah, and Ufuk Kula, Industrial Engineering Department, American University of the Middle East, 250 St, Eqaila, Kuwait

2nd Place

ID 210 Lean in a High Mix, Low Volume Manufacturing Environment – Case study

Anees Hussain, Jose Eduardo Munive-Hernandez, and Felician Campean, University of Bradford, West Yorkshire, UK

3rd Place

ID 832 Using DMAIC methodology for the Conversion of Ready-Mix Concrete Plant Energy to Solar PV

Slim Saidi, Associate Professor of Industrial Engineering, Industrial Engineering Dept., Rochester Institute of Technology, Dubai, UAE
Zulfa A. Rasheed, Master of Engineering Management Student, Industrial Engineering Dept., Rochester Institute of Technology, Dubai, United Arab Emirates

Competitions and Best Track Papers Awards – 10th IEOM Annual Conference, Dubai

Supply Chain and Logistics Case Study Competition Coordinated by The Centre for Supply Chain Improvement, University of Derby, UK

Supply Chain and Logistics Case Study Phase I Competition Winners

- 1st place - Indra Tangkas Perkasa Sinaga, PPM School of Management, Indonesia
- 2nd place - Andrian W. Supriyanto, Angginta R. Ibrahim and Kartika Nurhayati, Delft University of Technology, Netherlands
- 3rd place - Md. Mamunur Rashid, Sourav Kumar Ghosh and Md. Sadman Sakib Tushan, Bangladesh University of Textiles, Bangladesh
- 4th place - Abdul Malik Bander Al-Harbi and Saleh Khaled Al-Hawwar, King Fahd University of Petroleum & Minerals, Saudi Arabia
- 5th place - Ali Subagyo, Dewi Madasari and Meliana Frantika Sutanto, Shipbuilding Institute of Polytechnic Surabaya, Indonesia
- 6th place - Nur Fitriana A Ratri P Avelia OS, Shipbuilding Institute of Polytechnic Surabaya, Indonesia
- 7th place - Md. Ziaur Rahman, Shahjalal University of Science & Engineering, Sylhet, Bangladesh
- 8th place - Justice Nyarko, Accra Technical University, Ghana
- 9th place - Alifa Prasetyani Fadila, Shipbuilding Institute of Polytechnic Surabaya, Indonesia

Supply Chain and Logistics Case Study Phase II Competition

- 1st
- 2nd
- 3rd

Lean Six Sigma Case Study Competition

- 1st Place – Mamun Rashid, Department of Industrial and Production Engineering, Bangladesh University of Textiles, Dhaka, Bangladesh
- 2nd Place - Ricardo Rabang, Racquel Tadina, and Maria Teresa Mendoza, Technological Institute of the Philippines

Simulation Case Study Competition

- 1st Place – Newspaper Industry SCOR Performance Simulation, Iqbal Wahyu Saputra – Universitas Sebelas Maret, Indonesia

Best Track Papers Awards

Artificial Intelligence

ID 114 Prediction of Residential Building Energy Consumption Using Bayesian Regularized Artificial Neural Network Bangladesh

Ferdous Sarwar, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

S. M. Ahmed, T.K. Biswas, Department of Industrial & Production Engineering, Jashore University of Science and Technology, Jashore, Bangladesh

ID 603 Artificial Neural Networks for Fault Diagnosis of Milk Pasteurization Process - A Comparative Study

Chebira Samia, Bourmada Noureddine, and Boughaba Abdelali, Industrial Safety Department, Hygiene and Industrial Safety Institute, Mustafa Ben Boulaid BATNA 2 University, Batna, Algeria

Automation and Agility

ID 56 Exploring the Adoption of Digital Technology at the Different Phases of Construction Projects in South Africa

Matthew Ikuabe, Douglas Aghimien, Clinton Aigbavboa and Ayodeji Oke, University of Johannesburg, Guateng, South Africa

Automotive Manufacturing Systems

ID 453 Analysis of Redesign of the Connecting Rod and Influence on Engine Power

Jose Adrian Rodríguez Rodríguez, Lastre Aleaga Arlys Michel, and Pinargote Heredia Franklin Rodrigo, Orbea Hinojosa Luis Xavier Universidad UTE, Esmeraldas, Ecuador

Business Management

ID 205 Business Process Reengineering For Reducing Time of Procurement and Inventory Process in Telecommunication Tower Company

Rahmat Nurcahyo, Indramawan, Yadrifil, Muhammad Habiburrahman and Nurhadi Wibowo, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Depok, Indonesia

ID 541 Feasibility Study on Designing Innovative Raincoat Production Company – Market and Marketing Aspect (1)

Zakka Ugih Rizqi, and Adinda Khairunisa, Universitas Islam Indonesia, Yogyakarta, Indonesia

Case Studies

ID 482 Strategy Model to Build Employee Discipline

Arasy Alimudin, Agus Sukoco, Angga Adi Prebawa, Iswachyu Dhaniarti, Narotama University, Surabaya, Indonesia
Hartono, PGRI Adi Buana University, Surabaya, Indonesia

ID 558 The Role of Women in the Vegetable Market Traders Alok against Decision-Making Families with Income as a Moderating Variable

Muhammad Ikhsan Setiawan, Narotama University, Surabaya, East Java, Indonesia

E-Business/E-Service

ID 363 Assessment and Improvement of Facebook Business Platforms for SMEs in the Philippines

Jenalyn Shigella G. Yandug, Diana Marie B. De Francia, and Joymicah O. Paulo, Mapua University, Manila, Philippines

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Energy

ID 340 Long Term Energy Development Pathways for Nigeria: A Scenario Based Analysis

Najib Aminu Ismail, Md. Mizanur Rahman, Muhammad Ali Abuelnour, Ihab Jabbar, and Aminuddin Saat, UTM, Johor Bahru, Malaysia
Muhammad Usman Kaisan, Department of Mechanical Engineering, Ahmadu Bello University, Zaria, Kaduna, Nigeria

Engineering Economy

ID 251 Centralized Versus Decentralized Sewage Treatment Plant in a Metropolitan City

M. Affan Badar, Indiana State University, Terre Haute, IN, United States
Senthilkumar Venkatachalam, Department of Civil Engineering, Indian Institute of Technology - Palakkad, Kerala, India
Zahraa A. Yousif Sani, Department of Industrial Engineering and Engineering Management, University of Sharjah, UAE

Engineering Education

ID 35 To Investigate the Relationship between TQM Enablers Applicable In Indian Engineering Education Institutes

Ankesh Mittal, Pardeep Gupta, and Manjot Singh, Department of Mechanical Engineering, SLIET sunam Punjab India

Entrepreneurship

ID 566 The Relationship between Technological Variables and Absorptive Capacity and its effect on Organizational Performance Through Corporate Entrepreneurship Mediation (Case Study: Iranian Banking Industry)

Mahdi Joneidi Jafari, Graduate in Industrial Engineering Tarbiat Modares University (T.M.U.) and Ph.D. Candidates of IT Management - Allameh Tabataba'i University (ATU) -Tehran-Iran
Mohammad Aghdasi, Professor at the School of Industrial and Systems Engineering - Tarbiat Modares University (T.M.U.), Tehran, Iran
Ali Reza Jalali Farahani, Assistant Professor at Tarbiat Modares University (T.M.U.), Tehran, Iran

Environmental Engineering

ID 150 Impact of Environmental Law and Physical Planning Law to the Construction Projects in Sri Lanka

Akila Pramodh Rathnasinghe, Isuru Pramodh Rathnasinghe, and Mahesh Devinda Abeynayake, Department of Building Economics, University of Moratuwa, Moratuwa, Western Province, Sri Lanka

Facilities Planning and Layout

ID 705 Analysis and Improvement of Facility Layout in a Furniture Factory: A Case Application

Mehmet Savsar and Aminah Aldehaim, Industrial & Management Systems Engineering Department, Kuwait University, Kuwait

Human Factors and Ergonomics

ID 175 Aggressive Driving Behavior: Case Study of MUET, Jamshoro, Pakistan

Muhammad Ahmed Kalwar, Muhammad Ali Khan, Shakil Ahmed Shaikh, Abdul Salam Soomro, Muhammad Saad Memon and Sarmad Ali Khaskheli, Industrial Engineering & Management, Mehran UET, Jamshoro, Sindh, Pakistan

ID 240 The Effects of Energy Expenditure on the Mental Fatigue of Construction Workers Philippines

Janice Gumasing, Claire Marie A. Llamas, and Czarina Anne A. Martin, Mapua University, Manila, Philippines

Healthcare Operations and Services

ID 141 Survey Design to Evaluate Healthcare System Resilience at Barangay Level in the Philippines

Giselle Joy Esmeria, Mary Jean Azuela, Dennis Paul Orge, and Mary Grace Valdez, De La Salle University - Laguna Campus (Philippines), Sta. Rosa, Philippines

Information Systems and Management

ID 349 Trust in Smart Energy Meters: The Role of Perceived values

Ahmed Shuhaiber, Zayed University, Abu Dhabi city, United Arab Emirates

Innovation

ID 219 Productive Social Innovation in the Provinces of Imbabura and Carchi

Mayra Maya, Winston Oviedo, Jeanette Ureña and Javier Chiza, Facultad de Ingeniería en Ciencias Aplicadas, Universidad Técnica del Norte, Ibarra, Ecuador

Inventory Management

ID 366 E-Kanban Hybrid Model for Malaysian Automotive Component Suppliers with IoT Solution

M. R. Idris and P. Shiva Prakash, Department of Engineering Business Management, Universiti Kuala Lumpur Malaysia Italy Design Institute, Kuala Lumpur, Malaysia
A. Abdullah, Faculty of Accountancy, Universiti Teknologi MARA, Shah Alam, Malaysia
A. Talib Bon, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

Lean

ID 605 Lean Readiness Level of the Azerbaijan Construction Industry

Simon Peter Nadeem, Jose Arturo Garza-Reyes, and Anil Kumar, University of Derby, Derby, Derbyshire, United Kingdom
Hajibaba Aghayev, Warwick Manufacturing Group, The University of Warwick, UK
Vikas Kumar, Bristol Business School, University of the West of England, UK
Luis Rocha-Lona, and ESCA Santo Tomás, Instituto Politécnico Nacional, Mexico City, Mexico
Fernando González-Aleu, Departamento de Ingeniería, Universidad de Monterrey, San Pedro Garza García, N.L. México

Logistics

ID 98 Vehicle Routing Problem for Multi-Product Cross-Docking

Aldy Gunawan, Audrey T. Widjaja, and Benjamin Gan Kok Siew, Singapore Management University, Singapore
Vincent F. Yu, and Panca Jodiawan, Department of Industrial Management, National Taiwan University of Science and Technology, Taipei, Taiwan

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Maintenance Services

ID 194 Selecting a Condition Monitoring Technology to Monitor Automotive Lubrication System Using Fuzzy-TOPSIS

Ahmed Bingamil, Imad Alsyouf, Ali Cheaitou, Iyad Alwaysheh, University of Sharjah, Dubai, United Arab Emirates

Modeling and Simulation

ID 489 Simulation Driven Appointment System Model for a License Processing Office in the Philippines

Jenilyn Shigella G. Yandug, and Christine Anne S. Santos, School of Industrial Engineering and Engineering Management, Mapua University, Manila, Philippines

ID 680 Modeling and Simulation of Transmission Dynamics of Chronic Liver Cirrhosis

Mst. Shanta Khatun, and Md. Haider Ali Biswas, Khulna University, Bangladesh

Occupational Safety and Health (OSH)

ID 244 Risk and Safety Assessment on the Production of Firecrackers in Bulacan, Philippines

Marvin I. Noroña, and Cherry Jean D. Bondal, Mapua University, Manila, Philippines

Operations Management

ID 336 Study of Key Enablers of Industry 4.0 Practices Implementation Using ISM-Fuzzy MICMAC Approach

Sunil Luthra Government Polytechnic Jhajjar, Jhajjar, India, Gunjan Yadav, Production Engineering Dept., Veermata Jijabai Technological Institute, Mumbai, India

Anil Kumar, Anthony Anosike, Centre for Supply Chain Improvement, The University of Derby, Derby, United Kingdom

Sachin Kumar Mangla, Knowledge Management and Decisions, Plymouth Business School, University of Plymouth, United Kingdom

Dixit Garg, Department of Mechanical Engineering, National Institute of Technology, Kurukshetra, India

Operations Research

ID 279 Optimization of Digital Advertising Portfolio using Analytical Hierarchy Process (AHP)- Based Goal Programming (GP) Model

Rex Aurelius C. Robielos, and Neil T. Awit, Mapua University, Manila, Philippines

ID 538 Crop Planning Problem using Rectangular Management Zones and Different Irrigation Systems

Omar Salama, Hala A. Farouk, and Noha M. Galal, Arab Academy for Science and Technology and Maritime Transport, Alexandria, Egypt

Optimization

ID 391 Solving Hard NP- combinatorial Problems Using A Hyper-Cube Framework ACO Meta-heuristic

Ali Ahmid, and Thien-My Dao, Van Le, École de Technologie Supérieure, Montreal, Canada

Production Planning and Management

ID 283 A Single-Level Forecasting Inventory Simulation Model Integrating Downstream Forecast Information

Rene D. Estember, Antonio Luis B. Juarez, Jonathan N. Concepcion, and Raymond Junrong S. Zhuang, School of Industrial Engineering and Engineering Management, Mapua University, Manila Metro, Manila, Philippines

Tsai-Chi Kuo, Department of Industry Management, National Taiwan University of Science and Technology, Taipei 10607, Taiwan and Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taoyuan City, Taiwan 32023, R. O. C.

ID 300 Integrated Production and Maintenance Planning: A Comparison between Block Policies

Ahmed Al Shehni, Ali Cheaitou and Imad Alsyouf, Department of Industrial Engineering and Engineering Management, University of Sharjah, UAE

Sadeque Hamdan, Laboratoire Génie Industriel, Centrale Supélec, Université Paris-Saclay, 91192 Gif-sur-Yvette, France

Rim Larbi, Institut d'Innovation en Logistique du Québec, Canada & University of Carthage, National Engineering School of Carthage, UR-OASIS-ENIT, Tunis, Tunisia

Project Management

ID 125 Modeling a Bi-Objective Multi-Skill Resource-Constrained Project Scheduling Problem to Minimize Project Makespan and Skill Divergence Span

Dheeraj Joshi, Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur, India

M.L. Mittal, Manish Kumar, Professor, Department of Mechanical Engineering, Malaviya National Institute of Technology, Jaipur, India

Product Design and Development

ID 327 A Decision-based Design Framework for a Commercial Product

Tanvir Ibna Kaiser, and AKM Kais Bin Zaman, Department of Industrial and Production Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

Reliability

ID 136 Integrated optimization problem of Maintenance and Lot-Sizing with Risk assessment

Kammoun Mohamed Ali, Zied Hajej, and Nidhal Rezz, Laboratoire de Génie Informatique, de Production et de Maintenance, Metz, France

Supply chain

ID 815 System Dynamics Simulation based on SCOR Performance at Table Tennis Table Manufacturer in Indonesia

Yuniaristanto, Iqbal Wahyu Saputra, Muhammad Hisjam, and Roni Zakaria, Department of Industrial Engineering, Universitas Sebelas Maret, Surakarta, Indonesia

ID 464 A Multi-Objective Linear Optimization Model for Designing Sustainable Closed-Loop Agricultural Supply Chain

Hossein Reyhani, Faculty of Economics and Management, University of Tabriz, Tabriz, Iran

Younis Jabarzadeh, Faculty of Economics and Management, University of Tabriz, Tabriz, Iran

Nader Ghaffarinasab, Department of Industrial Engineering, University of Tabriz, Tabriz, Iran

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

Jose Arturo Garza-Reyes, Derby Management School, University of Derby, Derby, England

Waste Management

ID 320 Synthesis and Interaction with Waste in Trico Factory Layout and Cycle time analysis

Ahmad Yame, Lawrence Technological University, Dearborn, MI, United States