



IEOM Society

"Achieving and Sustaining Operational Excellence"

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2025 IEOM Annual Awards – Industrial Engineering and Operations Management International Conference

Singapore, February 18-20, 2025

Venue: Singapore University of Social Science (SUSS), Singapore

Awards Presented at Holiday Inn Singapore Atrium, 317 Outram Road, Singapore

Award Buffet Dinner Time: 7:00 - 10:00 pm on February 20, 2025

IEOM Fellow, 2025

Dr. Felix Kin Peng Hui, Associate Professor, Program Director and Academic Coordinator, Master of Engineering Management Program, Leader of the Sustainable Production Systems and Systems Engineering Group, Department of Infrastructure Engineering, University of Melbourne, Melbourne, Australia

Dr. Hiroyuki Goto, Full Professor in the Faculty of Industrial and Systems Engineering at Hosei University, Japan

Dr. Ibrahim Garbie, Professor of Industrial Engineering at Helwan University Cairo, Egypt

Dr. Khumbulani Mpofu, Vice Chancellor, Solusi University, Zimbabwe and Professor, Department of Industrial Engineering, Tshwane University of Technology, Pretoria, Gauteng, South Africa

Dr. Luis Rabelo, Professor, Department of Industrial Engineering & Management Systems, University of Central Florida, Orlando, FL, USA

Dr. Mohamed Ismail, Senior IT Consultant, Texas A&M University at Qatar

Dr. Mohammad Anwar Rahman, Associate Professor of Manufacturing Management and Program Director, Supply Chain and Logistics Management Programs at the Central Connecticut State University, USA

Dr. Mohammad Khasawneh, SUNY Distinguished Professor and Chair of Systems Science and Industrial Engineering, Binghamton University, New York, USA

Dr. Neil Murray, Senior Technical Specialist at ZF Group, Farmington Hills, Michigan, USA

Distinguished Industry Leadership Award

Dave Goh
Vice President & Head, Logistics & Supply Chain Management (LSCM) Division
Singapore Economic Development Board (EDB)

Law Chung Ming
CEO
Singapore Logistics Association

Distinguished Supply Chain Leadership Award

Dr Robert de Souza
Executive Director and CEO
The Logistics Institute – Asia Pacific
Senior Fellow, National University of Singapore

Woman in Industry and Academia Award

Sue Breniman
VP APAC & Executive Partner
Gartner
Singapore

Entrepreneurship and Innovation Award

Marc Dragon, CPIM
Managing Director
Reefknot Investments
Singapore

Distinguished Leadership Award in Project Management

Lee R. Lambert
CEO
Lambert Consulting Group
A Founder of the PMP
Powell, Ohio, USA

Industry Best Practice Award in Logistics

Dr Archer Fu
Vice President, Head of Business Development Asia Pacific
DHL Global Forwarding
Singapore

Innovation Award

Leo Chu
COO
Farmio
Singapore

Distinguished Professor Award

Dr. Thong Ngee Goh
Professor Emeritus, National University of Singapore (NUS)
Founding President, Singapore Institute of Industrial Engineers
Former Head of Dept of Industrial Systems Engineering and Management, NUS
Former Dean of Engineering, NUS

Outstanding Professor Award

Dr. Aldy Gunawan
Associate Professor of Computer Science (Practice)
School of Computing and Information Systems
Singapore Management University, Singapore

Dr. Rajesh Piplani
Associate Professor
Systems and Engineering Management Division
School of Mechanical and Aerospace Engineering
Nanyang Technological University
Singapore

Outstanding Professor Award in Industry and Trade Law

Dr. Ariawan Gunadi
Chairman, Tarumanagara Foundation
Kota Jakarta Barat Daerah Khusus Ibukota
Jakarta, Indonesia

Distinguished Leadership Award

Assoc. Prof. Tan Yan Weng
Head of Programme, Logistics & Supply Chain Management
School of Business
Singapore University of Social Sciences
Singapore

Outstanding Leadership Award

Dr. Sugoutam Ghosh
Senior Lecturer and Head, Graduate Diploma in Logistics and Supply Chain Management Programme
School of Business
Singapore University of Social Sciences
Singapore

Outstanding Conference Service Award

Tan Seok Yee
Senior Executive
School of Business
Singapore University of Social Sciences
Singapore

Vivian Sim Yong Jun
Assistant Manager
School of Business
Singapore University of Social Sciences
Singapore

Outstanding Student Academic Excellence Award

Undergraduate BSc in Supply Chain Management (Full-time): James Lim Zhi En, SUSS

Undergraduate BSc Logistics and Supply Chain Management (Part-time): Lirry Lum Kwok Hong, SUSS

Outstanding Student Volunteer Award

Wong Zhi Yi, SUSS

Competition Winners

Undergraduate Student Paper Competition sponsored by Siemens Online – Category I (ID 1 – 250)

First Place

ID 228 AI Driven Model for Optimizing the Queuing System at Airport Security Checkpoints for Bagging Inspection
Waad Mubarak Alshahrani, Sara Osama Sallam, Maymona Awn Abdullah, and Raneem Abdulaziz Alshahrani, Undergraduate Students, Industrial Engineering Department, King Khalid University, Abha, Saudi Arabia
Mohammed Al Awadh, Bilal Akbar Chuddher and Abir Mouldi, Assistant Professors, Industrial Engineering Department, King Khalid University Abha, Saudi Arabia

Second Paper

ID 36 Application of the DMAIC Framework, Lean Logistic and Change Management to Improve Logistics Performance: A Peruvian Pharmaceutical SME Case Study
Xiomí Alexandra Maldonado-Condezo, Bachelors in industrial engineering, Facultad de Ingeniería, Universidad de Lima, Perú
Angie Margoth Quispe-Palacin, Bachelors in industrial engineering, Facultad de Ingeniería, Universidad de Lima, Perú
Alberto Enrique Flores-Pérez, Research Professor, Facultad de Ingeniería, Universidad de Lima, Perú

Third Place

ID 30 Enhancing Equipment Availability through Lean-TPM Integration: A Case Study of a Poultry Processing Plant in Peru
Dorita Victoria Aguilar-Orbegoso, Bachelors in industrial engineering, Facultad de Ingeniería, Universidad de Lima, Perú
Yván Jesús García-Lopez, Research Professor, Facultad de Ingeniería, Universidad de Lima, Perú

Undergraduate Student Paper Competition sponsored by Siemens Online – Category II (ID 251 – 540)

First Place

ID 258 Improvement in Merchandise Management of a Logistics Operator Through the Application of SLP, Standardized Work, and Ergonomic Analysis
Freydy Renzo León Grajeda y Favia Giulietta Vargas Romero, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Peru
José Antonio Taquía Gutiérrez, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Peru

Second Paper

ID 450 Enhancing E-Health Services with Artificial Intelligence Based on A Cultural Safety Sociotechnical Framework Approach
Bella Adisty, Belva Fitriana, Surjandy, and Leonard Goeirmanto, Program studi Informatika, Informatics Departement, Institut Teknologi Sains Bandung (ITSB), Indonesia

Third Place

ID 459 Integration of Artificial Intelligence (AI) in Disaster Hazard Management: Development of an Intelligent Framework for Efficient Disaster Response
Albert Jofrandi Hutapea, Alphian Sucipto Lubis, Surjandy and Leonard Goeirmanto, Informatics Departement, Institut Teknologi Sains Bandung, Indonesia

Undergraduate Student Paper Competition sponsored by Siemens - Onsite

First Place

ID 181 Ergonomics-based Design for Usable Kitchen Utensil: Multifunctional Compact Strainer
Sindi Artania, Department of Industrial Engineering, Universitas Atma Jaya Yogyakarta, Sleman, Special Region of Yogyakarta, Indonesia
Gabriella Amanda Ayu Narasitha, Department of Industrial Engineering, Universitas Atma Jaya Yogyakarta, Sleman, Special Region of Yogyakarta 55281, Indonesia
Fricillia Natalee Adesta, Department of Industrial Engineering, Universitas Atma Jaya Yogyakarta, Sleman, Special Region of Yogyakarta, Indonesia
Twin Yoshua R. Destyanto, Department of Industrial Engineering, Universitas Atma Jaya Yogyakarta, Sleman, Special Region of Yogyakarta, Indonesia

Second Place

ID 286 Analysis on the Adoption of E-Wallet Transactions among Micro Enterprises within Metro Manila: A Correlational and Comparative Study
Michaela Gwen B. Baltazar and Trisha D. Bael, Neil T. Awit, College of Business Administration, Lyceum of the Philippines University, Manila, Philippines

Third Place

ID 300 Analyzing the Relationship of Brand Transparency on the Effect of Brand Perception in the Purchase Intention of Generation Z Fast-Food Consumers
Ermilo N. Albina, Shaneen Ericka L. Monasterial, Andrea Marie S. Jadear and Neil T. Awit, College of Business Administration, Lyceum of the Philippines University, Manila, Philippines

ID 451 Transforming Drug Sustainable Supply Chain Framework with Artificial Intelligence
Fajri Adhi Guna, Angga Jovansyah, Surjandy, and Leonard Goermanto, Informatics Department, Institut Teknologi Sains Bandung (ITSB), Cikarang, Indonesia

Undergraduate Research Competition sponsored by Daikin Applied - Online

First Place

ID 464 Optimizing Supply Chain Resilience in Kuwait Oil Industry
Dalal Boland, Student, Industrial Engineering Program, College of Engineering and Technology, American University of the Middle East, Kuwait
Danah Malallah, Student, Industrial Engineering Program, College of Engineering and Technology, American University of the Middle East, Kuwait
Retaj Faisal Alhammedi, Student, Industrial Engineering Program, College of Engineering and Technology, American University of the Middle East, Kuwait
Sarah Alroumi, Student, Industrial Engineering Program, College of Engineering and Technology, American University of the Middle East, Kuwait
Alperen Bal, Assistant Professor, Industrial Engineering, College of Engineering and Technology, American University of the Middle East, Kuwait

Second Paper

ID 485 Dynamic Simulation of the Impact of Silica Gel and Water Working Pairs on the Performance Characteristics of Adsorption Refrigeration Systems
Denny Prasetyo, Isra Mahendra, Ibnu Naufal and Agus Prihatno, Department of Mechanical Engineering, Faculty of Engineering, Sebelas Maret University, Indonesia
Indri Yaningsih and Dominicus Danardono Dwi Prija Tjahjana, Associate Professor, Department of Mechanical Engineering, Faculty of Engineering Sebelas Maret University, Indonesia

Third Place

ID 113 A TPM-Based Maintenance Model for Enhancing Efficiency in Automotive Battery SMEs: A Case Study in Peru
Herzan Antonio Lino-Urbe, Bachelors in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Perú
Lucy Stephanie Schultz-Lajo, Bachelors in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Perú
Alberto Enrique Flores-Pérez, Research Professor, Facultad de Ingeniería, Universidad de Lima, Perú

Undergraduate Poster Competition

First Place

ID 419 Operational and Environmental Benefits of Shore-To-Ship Power Systems in Container Shipping
Javier Gan Kuan Qi, Student, Logistics and Supply Chain Management Programme, School of Business, Singapore University of Social Sciences Singapore
Peter Sundara Swamickannu, Associate, Logistics and Supply Chain Management Program, School of Business, Singapore University of Social Sciences (SUSS), Singapore

Second Place

ID 372 TurtleSafe: Protection and Tracking of Sea Turtle Eggs in Sukamade for Disaster Mitigation
M Ardy Ardan, Undergraduate Student, Chemical Engineering Programme, Faculty of Engineering, University of Jember, Indonesia
Sayyidha Rahma Audyna, Undergraduate Student, Biology Programme, Faculty of Mathematics and Natural Sciences, University of Jember Indonesia
Arif Mohammad Siddiq, Lecturer, Petroleum Engineering Programme, Faculty of Engineering, University of Jember, Indonesia

Third Place

ID 185 Promoting Public Awareness of Geothermal Energy through Interactive Models at Ijen UNESCO Global Geopark
M Ardy Ardan, Undergraduate Student, Chemical Engineering Programme, Faculty of Engineering, University of Jember, Indonesia
Firman Sauqi Nur Sabila, Lecturer, Petroleum Engineering Programme, Faculty of Engineering, University of Jember, Indonesia
Welayatrumadhona, Lecturer, Petroleum Engineering Programme, Faculty of Engineering, University of Jember, Indonesia

Graduate Poster Competition

First Place

ID 461 Thixotropy Evaluation on 3D Printing of Clay
Zulfadzli Zahri and Mustafa Ibrahim, Faculty of Mechanical and Manufacturing Engineering, Universiti Tun Hussein Onn Malaysia, Parit Raja, Johor

Second Place

ID 241 Incorporating ICT in Engineering Projects Design, a Key Driver towards Post Pandemic Economic Recovery and Growth in Africa- Milestones and Challenges
Joel Nadebu Ouma, Senior Superintending Engineer, State Department for Public Works Nairobi (Kenya), P.O. Box 41191 – 00100 Nairobi, Kenya

Third Place

ID 536 Predictive Model for Electric Vehicle Reconfiguration in Malaysia
Nadia Adibah, Nor Asmaa Alyaa Nor Azlan, Mohd Azman Abas, Izhari Izmi Mazali, Zool Hilmi Ismail, Universiti Teknologi Malaysia
Farraen Mohd Azmin, Fortescue Zero, Malaysia
Nur Liyana Mohd Aris and Jafri Mohd Rohani, Universiti Teknologi Malaysia

ID 543 Low Cost Hybrid of 3D Printing Processes Through Digital Manufacturing System Integration Approach
M. Asmai Abdul Manan, K. Zakaria, R. Yasak, Jafri. M. Rohani, M.A. Suhaimi, S. Sharif, N. Redzuan and I. Sudin, Department of Materials, Manufacturing and Industrial Engineering, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Malaysia

High School STEM Competition – Category I

First Place

ID 328 Incorporating UV Absorptive Effects in Clear Coatings Through Synergistic Integration of Nanocellulose and Lignin
Keishean Alcoy, Hannah Francesca Zarate, Kathleen Hangad, Danica Rafal, and Kenny Bob Modesto, Santa Rosa Science and Technology High School, Philippines

Second Place

ID 360 Prototype Nutmeg Sorting Innovation (NSI) for Classify Ripeness Fruit
Wa Ode Sadihah Nada Syifa, Students High School Grade 11th, SMA Negeri 1 Fakfak West Papua, Indonesia
Sultan Daffa Alkahfi Bayu A, Students High School Grade 11th, SMA Negeri 1 Fakfak West Papua, Indonesia
Chandra Sri Ubayanti, Mathematics Teacher, SMA Negeri 1 Fakfak West Papua, Indonesia
Rangga Narendra La Hasaleh K, Mathematics Teacher, SMA Negeri 1 Fakfak West Papua, Indonesia

Third Place

ID 156 Elevate the Sky: Redefining Comfort on the Singapore Airlines A380
Deepa Sekhri, MOE Singapore, Singapore

High School STEM Competition – Category II

First Place

ID 430 Modeling the Improvement of Goat Meat Quality and Production Through Back-Crossing Breeding Strategy
Principia D. Haniefah and Diana S. Mardijanti, SMA Negeri 3 Bandung, Jl. Belitung no 8 Bandung, West-Java, Indonesia

Second Place

ID 408 Assessment of Omega Sign Enhancement Across Four Instruments
Beyzanur Emeksiz, Füsün Yönder Anadolu Lisesi, Turkey

Third Place

ID 133 The Hypothetical Effects of Earth's Rotational Reversal: Implications for Planetary Stability and Life
Mohammadsameer R Gorajanal, Impulse pre-university, India

Doctoral Dissertation Competition sponsored by Airbus

First Place

ID 126 Anomaly Detection, Prognostics, and Diagnostics: Machine Learning for the Hadron Calorimeter at the CMS Experiment
Mulugeta Weldezzgina Asres, University of Adger, Norway

Second Place

ID 91 A Structural Model for Improving Performance of Ergonomics in Passenger Cars in Early Vehicle Architecture Phase: A Total Interpretive Structural Modelling Approach
Sriram Rajakumaran and Mathirajan M, Department of Management Studies, Indian Institute of Science, Bangalore, India

ID 463 Driving AI Integration in Air Cargo: Exploring Cause-Effect Dynamics of Key Enablers
Arnab Chakraborty, PhD Student, Operations, Vinod Gupta School of Management, Indian Institute of Technology, Kharagpur, India
M Vimala Rani, Assistant Professor, Production & Operations Management, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, India

Third Place

ID 146 Technology Management Framework for Urban Farming in Selected Cities of National Capital Region for Sustainable Development
Jeffrey Cacho, Faculty, Industrial Engineering Department, Quezon City University, Philippines

ID 78 Developing Mathematical Model for Dynamic Energy-Aware Scheduling of Diffusion Furnaces with Machine Eligibility and Waiting Time Restrictions
Anusheya M and Mathirajan M, Department of Management Studies, Indian Institute of Science, India

Master's Thesis Competition - Onsite

First Place

ID 141 Dynamics of Task Load and Job Satisfaction Levels Among Engineering Faculty in Selected Engineering Schools: A Fuzzy Cognitive Mapping Approach
Chum Keji A. Ocan, Faculty Member, Department of Industrial Engineering, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines
Evangeline C. Evangelista, Dean, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines
Bernadette Joy R. Bendijo, Faculty Member, Department of Industrial Engineering, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines

Second Place

ID 334 Optimization of Silver Electroplating Parameters for Lead Frame Thickness Using Design of Experiment (DOE)
Hamzatul Hanim Husin, Jafri Mohd Rohani and Nurul Rawaida Ain Burhani, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia (UTM) 81300 Skudai, Johor Malaysia

Third Place

ID 224 Analysis of KITA BTS (Buy the Service) Transpakuan Bus Service Corridor 5 Bogor Station-Ciparigi Terminal, Bogor City
Asri Kusuma Wardhani, Master of Civil Engineering Student Narotama University Surabaya, Indonesia
Sri Wiwoho Mudjanarko, Master of Civil Engineering Lecturer Narotama University Surabaya, Indonesia
Syaiful, Lecturer of Civil Engineering Ibn Khaldun University Bogor, Indonesia

Master's Thesis Competition - Online

First Place

ID 131 Role of Information Sharing in Improving Supply Chain Performance: A System Thinking Approach
Dalia Khaled, Teaching Assistant, Mechanical Engineering Department, Faculty of Engineering, Pharos University, Alexandria, Egypt
Hadi Fors, Assistant Professor, Industrial Engineering Department, Faculty of Engineering, Alexandria University, Alexandria, Egypt
Reem Alkadeem, Professor, Industrial Engineering Department, Faculty of Engineering, Alexandria University, Alexandria, Egypt

Second Paper

ID 121 Non-Revenue Water Management Strategies in Gauteng Metropolitan Municipalities: Identifying Barriers and Enhancing Effectiveness
RV Mojanaga, BBS Makhanya and A Marnewick, Postgraduate School of Engineering Management, University of Johannesburg, South Africa

Third Place

ID 106 The impact of servant leadership on project success in project-oriented business organization
Lorato Margaret Mhlongo, Bheki Makhanya and JHC Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

**IEOM-FlexSim Student Simulation Problem Solving Competition
Sponsored by Advent2 Labs, Singapore**

First Place

Group No: IFSS008
Member name: TOBI WONG YU FEI, Chloe Angela Sanchez Jaucian, Lim Yonghui
School: Temasek Polytechnic (Singapore)

Second Place:

Group No: IFSS011
Member name: Sivainesh Devi Remesh, Yuvanesh A/L Jeva, Ira Elisa Lajjum
School: Universiti Teknologi Petronas (Malaysia)

Third Place:

Group No: IFSS003
Member name: Ong Zhen Hao, Lim Yi Yin, Weng XinJiaQi
School: Temasek Polytechnic (Singapore)

Supply Chain and Logistics Competition sponsored by aThingz Onsite

First Place

ID 395 A Statistical Modeling Approach to Estimate Plant Closure Durations in Department of Defense (DOD) Supply Chains
D'Andre Tobias, Graduate Student, Supply Chain Engineering Program, Department of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA, United States
Benoit Montreuil, Executive Director, Supply Chain & Logistics Institute, Department of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA, United States
Isabelle Sanders, Associate Director, SDAC, Department of Systems Engineering, United States Military Academy at West Point, West Point, NY, United States

Second Place

ID 367 Analysis Location Public Electric Vehicle Battery Exchange Stations (Spbklu) For Battery Swap in Developing the Electric Vehicle Eco system
Anita Nurbayan, Graduate Student, Industrial Engineering, Telkom University, Surabaya
Silvi Istiqomah, Lecturer, Assistant Professor Logistic and Supply Chain Management, Telkom University, Surabaya
Athaya Rakha Afianto, Undergraduate Student, Industrial Engineering, Telkom University, Surabaya
Wahyudi Sutopo, University Centre of Excellence for Electrical Energy Storage Technology, Research Group Industrial Engineering and Techno-Economic, Industrial Engineering, Department, Faculty of Engineering, Universitas Sebelas Maret, Jl. Ir. Sutami, 36 A, Surakarta, Indonesia

Third Place

ID 236 Cross-Party Collaboration in Perishable Product Logistics: Evaluating Performance Using KPIs in Logexa Warehouses
Nermine Harraz and Saleh Alghamdi, Professor, Associate Professor, King Khalid University (KKU), Industrial Engineering Department
Abha, Asir, KSA
Ruba Ali Alsmea and Amal Hezam Alqahtani, Shatha Mesfer Alahmry, Reem Abdullah ALmutiq, Senior Industrial Engineering Student, King Khalid University (KKU), Abha, Asir, KSA

Supply Chain and Logistics Competition sponsored by aThingz - Online

First Place

ID 502 Implementation of Work Standardization to Improve the Fuel Efficiency Ratio in an SMB in the Hydrocarbon Transportation Sector
Angel Fernando Dávila-Zorrilla, Faculty of Engineering, University of Lima, Peru
Gustavo Campos-Panduro, Faculty of Engineering, University of Lima, Peru
Elsie Bonilla Pastor de Céspedes, Research Professor, Faculty of Engineering, University of Lima, Peru

Second Place

ID 480 Addressing Critical Supply Chain Challenges in Bangladesh's Textile Industry: Insights from a Delphi-AHP Study
Arjun Das and Amir Mohammad Mazed, Industrial Engineering and Management, Khulna University of Engineering & Technology, Khulna, Bangladesh

Third Place

ID 424 Warehouse model to Increase the OTIF by applying BPM and Lean Warehousing in a SME in the footwear sector
Cristhian Alvarez-Gavilan and Piero Franco-Rodríguez, Facultad de Ingeniería. Universidad de Lima, Perú
José Antonio Taquia Gutiérrez, Research Professor, Facultad de Ingeniería. Universidad de Lima, Perú

Simulation Competition (Technical Papers)

First Place

ID 72 The Impact of Telemedicine on The Carbon Footprint of Patient Visits: A Case Study Using System Simulation
Kun-Yeh Hsieh and Shao-Jen Weng, Department of Industrial Engineering and Enterprise Information, Tunghai University, Taichung, Taiwan
Yao-Te Tsai, Department of Information Management, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan

Second Place

ID 233 Enhancing Inventory Efficiency through the Application of Drone Technology in Automation
Heba Ibrahim Mahamoud Elkhoully, Assistant Professor at King Khalid University in the Industrial Engineering Department, Saudi Arabia
Wejdan Mohammed Alamri and Heba Saeed Al-Shahrani and Bedoor Abdullah Alshehri and Rana Saad Al Qahtani, Senior Industrial Engineering Student at King Khalid University, Saudi Arabia

ID 154 Impact of Simultaneous and Sequential decision-making on the Supply Chain Operation under Encroachment and Reselling: A Game-theoretic Analysis
Arnab Adhikari, Assistant Professor, Quantitative Methods & Operations Management Area, Indian Institute of Management Kozhikode
IIMK Campus P.O., Kozhikode, Kerala 673570, India

Third Place

ID 184 Optimization of TEMPO-mediated Cellulose-based Aerogel from Tobacco Stems as a Surface Modification Method for Wound Healing Application
Muhamad Adriansyah, Faculty of Engineering, Chemical Engineering, University of Jember, Jember, Indonesia
Darryl Akeyla Rachman, Faculty of Engineering, Chemical Engineering, University of Jember, Jember, Indonesia
Emeralda Fatima Zahra, Faculty of Medicine, Medical Education, University of Jember, Jember, Indonesia

ID 209 Designing a Smart System to Handle Accidents in the City of Bisha in the Kingdom of Saudi Arabia
Lama A Alshahrani, Lina T Alhamza, Ghina S Alshahrani and Elaf M Alhadi, Undergraduate Student in Industrial Engineering Department, College of Engineering, University of Bisha Bisha 61922, Saudi Arabia
Khaled Ali Abuhase, Full Professor in Industrial Engineering Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Human Factors and Ergonomics Competition - Onsite

ID 19 Effect of Working Heights on Body Postures During Wall Construction Tasks: Investigation of Bending and Twisting Movements
Md. Sumon Rahman and Tatsuru Yazaki, Division of Transdisciplinary Sciences, Graduate School of Frontier Science Initiative, Kanazawa University, Kakumamachi, Kanazawa, Japan
Takanori Chihara, Faculty of Frontier Engineering, Institute of Science and Engineering, Kanazawa University, Kakumamachi, Kanazawa, Japan
Jiro Sakamoto, Professor, Division of Transdisciplinary Sciences, Graduate School of Frontier Science Initiative, Kanazawa University, Kakumamachi, Kanazawa, Japan

Second Place

ID 80 Safe and sound? The effects of safety and productivity audio reminders on warehouse driver behavior
Mahsa Alirezaei, PhD Candidate, Department of Technology and Operations Management, Rotterdam School of Management, Erasmus University
The Netherlands
Jelle de Vries, Associate Professor, Department of Technology and Operations Management, Rotterdam School of Management, Erasmus University, The Netherlands
René de Koster, Professor, Department of Technology and Operations Management, Rotterdam School of Management, Erasmus University, The Netherlands

Third Place

ID 411 Machine Learning Approach to Predict Student Employability: Development of an SVM-FSMOTE Model
Cherry Casuat, Associate Professor, College of Engineering/Open University System/Graduate School, Polytechnic University of the Philippines, Manila, Philippines

Human Factors and Ergonomics Competition - Online

First Place

ID 137 Is the required Skillset of the Operator 5.0 and the Ageing Workforce compatible? A Review to indicate Synergies and Target Conflicts
Andreas Dörner, Industrial Engineering and Management, University of West Bohemia, Pilsen, Czech Republic
Industrial Engineering and Health, University of Applied Sciences Amberg-Weiden, Weiden, Germany
Marek Bures, Industrial Engineering and Health, University of West Bohemia, Pilsen, Czech Republic

Second Place

ID 214 Exploring Key Factors and Performance Dimensions in Group Decision-Making: Scale Development and Empirical Analysis
Jiapeng Yang, Zuhua Jiang and Kexin Cheng, School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai, China

Third Place

ID 177 Role of Social Factors in Mass-gathering Health
Shruti Tewari, Associate Professor, Humanities & Social Sciences, Indian Institute of Management Indore, India

ID 406 Design & Development of Multipurpose Ergonomic Cart for reducing physical workload: Implication towards occupational safety
Md. Ariful Islam, Mr Shah Murtoza Morshed, Md Rayan Haque, and Md Farhan-E-Noor-Labib, Department of Mechanical and Production Engineering, Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh

Graduate Student Paper Competition sponsored by Eaton - Onsite

First Place

ID 63 Optimizing AED Placement and Human Resource Dispatch for OHCA Emergency Medical Services Considering the Stochastic Behavior of Volunteers
Hsing-Yu Chou, Department of Industrial Engineering and Engineering Management, National Tsing Hua University, Hsinchu, Taiwan
Kuo-Hao Chang, Department of Industrial Engineering and Engineering Management, National Tsing Hua University, Hsinchu, Taiwan
Tzu-Li Chen, Graduate Institute of Intelligent Manufacturing Technology, National Taiwan University of Science and Technology, Taipei, Taiwan

Second Place

ID 142 Financial Distress Levels of Selected Big Corporations in Cebu City: An Economic Perspective Modelling Using Fuzzy Cognitive Map
Chum Keji A. Ocan, Faculty Member, Department of Industrial Engineering, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines
Gensbergh G. Rago, Faculty Member, Department of Accountancy, College of Management, Business, and Accountancy, Cebu Institute of Technology – University, Cebu City, Philippines

Graduate Student Paper Competition sponsored by Eaton - Online

First Place

ID 365 Implementation of Blockchain Technology in Railway Industry of Bangladesh
Dr. Md. Nurul Absar Chowdhury, Professor, Department of Mechanical and Production Engineering Ahsanullah University of Science and Technology, Dhaka
MD Eusuf Jamil, Bsc. Graduated, Industrial and Production Engineering Ahsanullah University of Science and Technology, Dhaka
Tasfiah Tasnim, Bsc. Graduated, Industrial and Production Engineering Ahsanullah University of Science and Technology, Dhaka
Fahim Hossain Tomal, Bsc. Graduated, Industrial and Production Engineering Ahsanullah University of Science and Technology, Dhaka

Second Paper

ID 304 Reliability of Power Grid Infrastructure: A Review Analysis of the 2021 Texas Power Grid Failure
Kartik Sahay, PhD Student, Bailey College of Engineering and Technology, Indiana State University, Terre Haute, Indiana 47809, USA

Alexander Collado-Méndez, PhD Student, Bailey College of Engineering and Technology, Indiana State University, Terre Haute, Indiana, USA
M. Affan Badar, Professor, Bailey College of Engineering and Technology, Indiana State University, Terre Haute, Indiana 47809, USA

ID 510 Bayesian Estimation of the Impact of Service Quality and Customer Experience on Online Store Choice and Platform-Exit
Reeju Guha, PhD Candidate, Operations Management, IE Business School, IE University, Madrid, Spain

Third Place

ID 143 A Focused Study on Integrating Industry 4.0 and Lean Manufacturing
Ismail Medhat, Teaching Assistant, M.Sc. Student, Faculty of Engineering, Mechanical Engineering Department, Manufacturing Engineering
German International University (GIU), Cairo, Egypt
Amr Nounou, Associate Professor, Faculty of Engineering, Mechanical Engineering Department, Manufacturing Engineering, German International University (GIU), Cairo, Egypt

Global Design Competition sponsored by Amatrol Inc. - Online

First Place

ID 320 Eco-friendly tea cup and Saucer made from rice husk
Khadijatul Kubra Moni, Marufa Akter, Tamim Vuiyan, Md. Firoz Kabir, Md. Asif Kobir, Md. Dipu and Shihab Uddin Sarker, Department of Industrial and Production Engineering, Jashore University of Science and Technology, Bangladesh

Second Place

ID 370 Smart Water Monitoring Tap: Ecoflow
Chinmaya Nadig, RV College of Engineering, India

Lean Six Sigma Competition

First Place

ID 117 Enhancing Mold Change Efficiency in Rubber Injection Molding for Automotive Suspension Components Using SMED and Lean Manufacturing Techniques
Wichian Jueram, Systems Engineering Program, School of Industrial Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand.
Jongkol Srithorn, School of Industrial Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

ID 291 Enhancing Marketing and Sales Processes in a Colombian Energy Services Company: A Holistic Approach
Luis Rabelo, University of Central Florida, Orlando, FL, USA
Omar Felipe Perdomo Sanchez and Andres Perez Escobar, Universidad de la Sabana, Chia, Cundinamarca, Colombia
Danny Waldir Ibarra Vega, Universidad de Antioquia, Medellín, Colombia
Adalberto Prada Rico, Universidad de la Sabana, Chia, Cundinamarca, Colombia
Marwen Elkamel, University of Central Florida, Orlando, FL, USA

Second Paper

ID 65 The Application of Lean Techniques in Improving the Payment Process: A Case Study of a Tissue Paper Manufacturing Plant
Paiboon Laochan, Systems Engineering Program, School of Industrial Engineering, Institute of Engineering, Suranaree University of Technology
Nakhon Ratchasima, Thailand
Jongkol Srithorn, Systems Engineering Program, School of Industrial Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

Third Place

ID 69 Integrating Robotic Systems in Healthcare: The Challenges and Opportunities for A Smarter Future
Jalene Ng Chu Lin, Student, Logistics and Supply Chain Management Program, School of Business, Singapore University of Social Sciences (SUSS), Singapore
Miti Garg, Associate Faculty, Logistics and Supply Chain Management Program, School of Business, Singapore University of Social Sciences (SUSS), Singapore
Tan Yan Weng, Associate Professor and Head of Program, Logistics and Supply Chain Management Program, School of Business
Singapore University of Social Sciences (SUSS), Singapore

ID 469 Application of Six Sigma DMAIC Methodology to Improve Workplace Safety in a Construction Site in Kuwait
Anfal Ali Alshamali, Sara Abdullah Alajmi, Aljadel Ahmad Aldass, Atheer Saad Alhusainy, Hala Saud Alotabi, and Hussam Ali Allothman, College of Engineering and Technology, American University of the Middle East, Kuwait

AI-ML Competition

First Place

ID 203 Securing Mobile Connectivity: A Data-Driven Approach for Detection of Electricity Theft and Anomalies in 4G and 5G Telecommunications Base Stations
Malebo L. G Maboko, M. Sc (Eng) Student, School of Mechanical, Industrial, and Aeronautical Engineering, University of the Witwatersrand (Wits)
Johannesburg, South Africa
Mncendisi Dewa, Ph.D., Senior Lecturer, School of Mechanical, Industrial and Aeronautical Engineering, University of the Witwatersrand (Wits)
Johannesburg, South Africa

Second Paper

ID 316 Dynamic Traffic Signal Control with Reinforcement Learning: Improving Throughput and Reducing Wait Times in Urban Networks
Thomas Wiese, Ph.D., MBA, PMP, CMRP, SUNY Empire State University, United States

Third Place

ID 454 AnAI: A Mobile Application to Predict Household Termite Infestation Using Machine Learning from Smartphone Sensor Data

Francis Terence Amit, Jamaica Casio, Vince Christian Manlunas, Pel Jane Mantes, Dennis Anthony Kilongkilong, and June Anne Caladcad, Department of Industrial Engineering, School of Engineering, University of San Jose-Recoletos, Philippines
Eduardo Jr. Piedad, Advanced Science and Technology Institute, Department of Science and Technology, Philippines

Senior Design Project Competition – Category I

First Place

ID 75 Streamlining and Automating Workflow at McLaren Automotive APAC - An Action Research Case Study of Sales Forecasting and Order Pipeline Management of Luxury Supercars in Asia Pacific
Chee Wai Meng and Kaleo Mak Kai Long, Senior Lecturer, Head of Procurement Management Minor, School of Business, Singapore University of Social Sciences, Singapore

Second Place

ID 272 Development of a Predictive Maintenance System Using IoT and Machine Learning
Imen Bouazzi, Associate Professor, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
Shahd Faisal Al-Qahtani, Reema Abdullah Al-Asmari, Rana Abdullah Al-Tawr and Ghala Mohammed Al-Qahtani, Senior Industrial Engineering Students, Industrial Engineering Department, College of Engineering, King Khalid University, Abha, Kingdom of Saudi Arabia

Third Place

ID 254 Safety Access Point (SAP) Based on PPE Recognition and Toxic Gas Detection
Hajar Daghash Alharthi, Lara Yahya Alshowaim, Najd Hassan Alshahrani and Albandri Ali Alqahtani, Undergraduate Students, Industrial Engineering Department, King Khalid University, Abha, Saudi Arabia

Senior Design Project Competition - Online

First Place

ID 431 Sustainable Bus Stop with Wind Turbine and Solar-Powered Carbon Capture to Reduce Urban Emissions
Hamdani Maftuh Rohman, Aqila Ekaputri Ghaisani, Muh. Linggar Adi Wardhana, Gigih Laksana Dewanda and Ubaidillah, Mechanical Engineering, Faculty of Engineering, Universitas Sebelas Maret, Indonesia

Second Place

ID 421 Design of an Advanced safety system with anti-sleep alarm: A lifesaver on the road
Hrittik Mural, Adri Dash and Md. Mahabub-A-Khoda, Lecturer, Department of Industrial and production Engineering, Bangladesh Army University of Science & Technology (BAUST), Saidpur 5311, Bangladesh
Md. Firoz Kabir, Assistant Professor, Department of Industrial and Production Engineering, Bangladesh Army University of Science and Technology (BAUST), Saidpur 5311, Bangladesh
Jannatul Bony, Noman Pervez and Azmain Fahim, Department of Industrial and production Engineering, Bangladesh Army University of Science & Technology (BAUST), Saidpur 5311, Bangladesh

Third Place

ID 420 Design and Fabrication of a Horizontal Belt Abrasive Grinding Machine with Pulley System
Hrittik Mural and Adri Dash, Lecturer, Department of Industrial and production Engineering, Bangladesh Army University of Science & Technology (BAUST), Saidpur 5311, Bangladesh
Md. Firoz Kabir, Assistant Professor, Department of Industrial and Production Engineering, Bangladesh Army University of Science and Technology (BAUST), Saidpur 5311, Bangladesh
Md Foyzal Rahman, Afsana Akter, and Dewan Tanjim-ul-Islam, Department of Industrial and production Engineering, Bangladesh Army University of Science & Technology (BAUST), Saidpur 5311, Bangladesh

Best Track Paper Award

Engineering Education and Curriculum Improvement (1:30 – 3:30 pm, Tuesday)

ID 484 The Impact of Ergonomics Factors on Learning Motivation and Academic Attention
Nera Mae Lagahid and Nanette Salazar, Department of Industrial Engineering, School of Engineering, University of San Jose-Recoletos, Cebu City 6000, Philippines
Ricky Villeta, Associate Professor, Department of Mathematics, College of Computing, Artificial Intelligence and Sciences, Cebu Normal University Cebu City 6000, Philippines

Manufacturing, Assembly and Design (1:30 – 3:30 pm, Wednesday)

ID 67 Equity in Demand Response: Designing Balanced Incentives for Power Grid Efficiency
Senay Solak, University of Massachusetts Amherst, United States

Supply Chain and Logistics (1:30 – 3:30 pm, Wednesday)

ID 93 Exploring the Link Between Supply Chain Integration and Resilience
Melanie Gerschberger, Assistant Professor, University of Applied Sciences Upper Austria, Logistikum, Austria
Ata Karbasi, Assistant Professor, Valparaiso University, College of Business, United States

Digital Manufacturing, Industry 4.0 and IoT (4:00 – 6:00 pm, Wednesday)

ID 128 Industry 4.0 and the SME Challenge: A Mixed-Methods Study on IIoT Adoption in Mechanical Engineering Enterprises
Rainer Eber, Professor of Industrial Engineering and Management, Member at the Center Industry 4.0, Department of Mechanical Engineering, Aalen University of Applied Sciences, Aalen, Germany
Steffen Schwarzer, Professor and Chair of Center Industry 4.0, Department of Management and Business Science, Aalen University of Applied Sciences, Aalen, Germany
Nathalie Tok, Master candidate and graduate student, Trumpf SE + Co. KG and Aalen University of Applied Sciences, Ditzingen/Aalen, Germany

Simulation, Optimization and Productivity Improvement (4:00 – 6:00 pm, Thursday)

ID 374 Development of a Multi-Objective Ship Operations Optimization Decision Support System
Malcolm Yoke Hean Low, Associate Professor, Infocomm Technology Cluster, Singapore Institute of Technology, Singapore
Chin Soon Chong, Research Fellow, Infocomm Technology Cluster, Singapore Institute of Technology, Singapore
Changjun Yang, Senior Professional Officer, Professional Officer Division, Singapore Institute of Technology, Singapore
Sivakumar Nadarajan, Associate Professor, Engineering Cluster, Singapore Institute of Technology, Singapore
Wei Zhang, Associate Professor, Singapore Institute of Technology, Singapore

Artificial Intelligence and Data Science

ID 171 The Moderating Role of Generation in the Intention to Adopt Business Intelligence Tools Among Filipino Decision-Makers in SMEs
Illaga, Lynne Ivy L.; Rivero, Donna Marie C., PhD; Boholst, Mc Clyde Ann P., Instructor, Department of Industrial Engineering, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines
Cabanlit, Cheradee Ann M., MEIE, PIE, Chair, Department of Industrial Engineering, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines
Ortiz, Marielle O.; Ballera, Maika Mae L.; Ortega, Patricia Marie F., Department of Industrial Engineering, College of Engineering and Architecture, Cebu Institute of Technology – University, Cebu City, Philippines

Business Management and Operations Management

ID 335 Production Process Optimization for a Dress Manufacturing SME in Lima, Peru
Enrique Carlos Barrios Garaboa and Oscar Omar Murillo López, Bachelor of Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Perú
Ezilda María Cabrera Gil Grados, Industrial Engineer, Facultad de Ingeniería, Universidad de Lima, Perú

Case Studies and Best Practices

ID 190 Logistics Optimization for the Use of Solid Urban Waste as Fuel in Cement Production: An Approach Based on Operations Research and Scenario Analysis
Virgilio S. Acosta Villarreal, Mariana Dingler Villarreal, and Emilia Montes, Student, Industrial and Systems Engineering, School of Engineering and Technologies, Universidad de Monterrey, Mexico

Engineering Management and Project Management

ID 220 Streamlining the Process of Sample Registration to a Paperless System
Mohd Kamaruddin Jaffar, Nurul Ain Jalil and Aziah Azri, Central Analytical Laboratory, R&D and Agricultural Services Division, Johor Plantations Group Berhad, 81900 Kota Tinggi, Johor, Malaysia
Aziant Ismail, College of Engineering, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia

Human Factors, Ergonomics and Healthcare Systems

ID 164 Ergonomic Risk Assessment of Nurses' Station in a Philippine Tertiary-Care Hospital
Michelle S. Cariño-Adiwang, Professor and Head, Industrial Engineering, School of Engineering and Architecture, Saint Louis University-Baguio City, Philippines
Adriana Feliz L. Yap-eo, Chelsea Ann C. Boado, Justine Renzo O. Rivera and Eliezer Jethro D. Torrecer, Students, Industrial Engineering School of Engineering and Architecture, Saint Louis University-Baguio City, Philippines

ID 222 Exploring the Influence of Human-Machine Collaboration Degree on Situational Awareness and Trust within the Context of Automation Technology
Xiaofang Yuan and Kexin Han, School of Management, Xi'an University of Science and Technology, Xi'an 710054, China

Project Management and Engineering Management

ID 409 Accelerating Inter-Disciplinary Learning: A Scoping Review of Objective Decision-Making Research in Project Selection
Ilse Doyer and Michael K. Ayomoh, Department of Industrial and Systems Engineering, University of Pretoria, Pretoria, Gauteng, South Africa

Quality, Reliability, and Maintenance

ID 526 An Optimal Hybrid Inspection and Maintenance Policy for a Multi-Component System with a Protective Component
Anchi Li and Yian Wei, Department of Data and Systems Engineering, The University of Hong Kong, Pokfulam, Hong Kong

Supply Chain and Logistics

ID 38 Analyzing Global Semiconductors Supply Chain Resilience Using Structural Equation Modeling
Noor Sadiyah, Haya Rashid M A Fetais, Majed Hadid, Adel Elomri and Laoucine Kerbache, Division of Engineering Management and Decision Sciences College of Science and Engineering Hamad Bin Khalifa University, Doha, Qatar

ID 105 Inventory Management Improvements by Applying the Theory of Determining the Optimal Order Size

Wananta Mungsudjai and Tuangyot Supeekit, Faculty of Engineering Mahidol University, 25/25 Phutthamonthon 4 Road, Salaya, Phutthamonthon, Nakhon Pathom, Thailand



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