

# 2025 IEOM Asia Pacific Awards – Industrial Engineering and Operations Management International Conference

# Bali, Indonesia, August 5-7, 2025

Venue: Warmadewa University (UNWAR), Denpasar, Bali, Indonesia

### Distinguished Leadership Award in Higher Education

Prof. Ir. Togar M. Simatupang, M. Tech., Ph.D., IPU. Professor of Operations and Supply Chain Management Bandung Institute of Technology (ITB) Bandung, Indonesia

#### **Distinguished Academic Leadership Award**

Prof. Dr. Ir. I Gde Suranaya Pandit, M.P. Rector, Warmadewa University Bali, Indonesia

Dr. Dinora Ishmanova Rector, Millat Umidi University Uzbekistan

Prof. Dr. rer. pol. Ir. Didik Notosudjono, M.Sc., IPU., ASEAN Eng., APEC Eng. Rektor, Universitas Pakuan Bogor, Indonesia

### **Distinguished Industry Leadership Award**

Gusti Ngurah Anom (Ajik Krisna) Founder and Owner Krisna Oleh-Oleh Bali Denpasar - Bali, Indonesia

### **Distinguished Industry Practitioner Award**

Ir. Ts. Dr. Hj. Mohd Khairolden Ghani Senior Manager, Consultancy and Inspection Construction Research Institute of Malaysia (CREAM)

### **Distinguished Industry Achievement Award**

H.E. Dr. Nur Hassan Wirajuda CIRSD – Center for International Relations and Sustainable Development

### **Distinguished Educator Award**

Prof. Erry Yulian Triblas Adesta, PhD Vice Rector for Academic, Research and Innovation Universitas Bandar Lampung Lampung, Sumatra, Indonesia Dr. Putu Doddy Heka Ardana Dean, Faculty of Science and Technology Universitas Ngurah Rai Kota Denpasar, Bali, Indonesia

### **Distinguished Professor Award**

Dr. Kurbonov Nurbek Nurullo Ugli Associate Professor, Power Supply Department Tashkent State Technical University (TSTU) Tashkent, Uzbekistan

### **Outstanding Researcher Award**

Professor Dr. Hirohiko Mori
Full Professor and Researcher of Human-Computer Interaction, Human Factors, Cognitive Engineering, and Artificial Intelligence
Tokyo City University (TCU)
Japan and Chairman of the Department of Intelligent Systems at TCU

#### **Outstanding Professor Award**

Asep Denih, S.Kom., M.Sc., Ph.D. Dean, Faculty of Mathematics and Natural Sciences Senior Lecturer, Computer Sciences Universitas Pakuan Bogor, Indonesia

#### **Outstanding Professor Award in Business Management**

Dr. Ir. Ho Hwi Chie, IPU., ASEAN, Eng. Associate Professor Department of Industrial Engineering Binus University Indonesia

#### **Outstanding Lecturer Award**

Bryan Estavan Imanuel Sitanggang Industrial Engineering Study Program Udayana University Badung, Bali, Indonesia

### **Outstanding Professor Award in Operations Research**

Dr. Dino Caesaron Associate Professor in Industrial Engineering Chairman, Department of Industrial Engineering Graduate Program Telkom University, Indonesia

### Distinguished Woman in Industry and Academia Award

Dr. Nurul Rawaida Ain Burhani Senior Lecturer | Industry Collaborator | Youth & Women Development Advocate Senior Lecturer in Mechanical Engineering Universiti Teknologi Malaysia (UTM) Johor Bahru, Johor. Malaysia

### **Entrepreneurship and Innovation Award**

Towaf Totok Irawan, Ph.D. Dean, The Faculty of Economics and Business (FEB) Pakuan University Bogor Kota Bogor, Jawa Barat, Indonesia

### **Global Supply Chain Management Award**

Dr. Ir. Yuary Farradia
Vice Rector Human Resource and Finance
Senior Lecturer, Faculty of Economic and Business
School of Postgraduate
Universitas Pakuan
Bogor, Indonesia

#### Al and Data Analytics Award

Feliks P. S. Surbakti, PhD Head of Industrial Engineering Department Atma Jaya Catholic University of Indonesia

Dr. Ir. Lina Gozali Department of Industrial Engineeing Tarumanagara University Jakarta, Indonesia

Dr. Abdul Talib Bon Professor Department of Production and Operations Management Universiti Tun Hussein Onn Malaysia

#### **Best Practice Award**

Dr Natasha Dzulkalnine Senior Lecturer Universiti Teknologi MARA (UiTM) Cawangan Selangor Kampus Puncak Alam, Malaysia

#### **Sustainability Award**

Dr. Suwin Sandhu Department of Industrial Engineering Faculty of Engineering Chiang Mai University Chiang Mai, Thailand

### Lean Six Sigma Award

Ts. Dr. Muhd Ikmal Isyraf bin Mohd Maulana Senior Lecturer & Postgraduate Program Coordinator (Industrial Engineering) Universiti Teknologi Malaysia (UTM) Johor Bahru, Johor, Malaysia

### **Outstanding Teaching Award in Supply Chain Management**

Tengku Nurainun, ST, MT, Ph.D. Associate Professor, Department of Industrial Engineering Faculty of Science and Technology Universitas Islam Negeri Sultan Syarif Kasim Riau Panam, Pekanbaru, Riau, Indonesia

### **Outstanding Teaching Award in Transportation**

Dr Andri Irfan Rifai Professor and Dean, Faculty of Civil Engineering & Planning Batam International University (UIB) Batam, Indonesia

### **Global Manufacturing Award**

Dr. Wresni Anggraini Senior Lecturer, Department of Industrial Engineering Faculty of Science and Technology Universitas Islam Negeri Sultan Syarif Kasim Riau

#### Indonesia

#### **Outstanding Leadership in Business Incubator**

Harry Kasuma (Kiwi) Aliwarga Chief Executive Officer and Co-Owner UMG Myanmar Karet Kuningan Jakarta, Indonesia

### **Outstanding Professor Award**

Prof. Ir. Budi Santosa, M.Sc., Ph.D. Professor of Industrial and System Engineering Institut Teknologi Sepuluh Nopember (ITS) Surabaya, Indonesia

#### **Outstanding Professor Award in Project Management**

Prof. Dr. Ir. Mudjiastuti Handajani, M.T. Professor, Department of Civil Engineering Faculty of Engineering Semarang University Semarang, Indonesia

### Outstanding Teaching Award - Lean Six Sigma, Quality

Dr. Nuryadi, S.Sos., M.M. Rector STIE Pemuda Surabaya, Indonesia

### **Outstanding Teaching Award - OM**

Dr. Musnaini., SE., MM Associate Professor Faculty of Economic and Business Universitas Jambi, Jambi, Indonesia

#### **Outstanding Teaching Award - Engineering Management**

Ir. Muhammad Isradi, ST, MT, Ph.D.
Senior Lecturer
Department of Civil Engineering Universitas Mercu Buana
Jakarta, Indonesia

#### **Distinguished Leadership Award**

Putu Ika Wahyuni Dept. Master of Infrastructure and Environmental Eng. Warmadewa University (UNWAR) Bali, Indonesia

Dr. Muhammad Ikhsan Setiawan Chairman of the Entrepreneurship Program Maritime University AMNI Semarang, Indonesia

Dr. Hendro Sasongko, Ak., MM., CA Associate Professor Faculty of Economics and Business, Universitas Pakuan Bogor, Indonesia

#### **Outstanding Conference Service Award**

Dr. Sara Nurmala, M.Farm.
Department of Pharmacy
The Faculty of Mathematic and Natural Sciences
Universitas Pakuan

Bogor, Indonesia

Dr. Retno Martanti Endah Lestari Faculty of Economics and Business Pakuan University Bogor, Indonesia

# **Competition Winners**

# **Undergraduate Student Paper Competition sponsored by Siemens - Online**

First Place

ID 215 RFID-Enabled Inventory Accuracy Improvement in a Peruvian Textile Manufacturer: A Case Study
Adriana Milagro Jimenez-Chiang, Bachelor in Industrial Engineering, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Marcelo Estefano Vera-Alonso, Bachelor in Industrial Engineering, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Juan Carlos Quiroz-Flores, Research Professor, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Second Place

ID 216 Assessing Technological Feasibility of an On-shore Circular-Economy Treatment Plant for Recycling Ship-Generated Oily Waste in Peru

Miguel Francisco Colán-Sifuentes, and Jersson Fernando Coronado-Cabrera, Bachelor's in Industrial Engineering, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Juan Carlos Yacono-Llanos, and Juan Carlos Quiroz-Flores, Research Professors, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Third Place

ID 163 The Impact of Content Moderator Accounts on BPO Workers: Exploring How Social Media Content Exposure Contributes to Stress and Mental Health Challenges

Francis Lord Aspecto, Mary Grace P Bello, Christian G. Cabalatungan, Joseph Raniag C. Macarulay, Johnvyllle O. Mallari, Kevin John F. Renido, Lynz Krisha L. Reyes and Maricar M. Navarro, Industrial Engineering Program, College of Engineering and Architecture, Technological Institute of the Philippines, Quezon City, Philippines

# **Undergraduate Student Paper Competition sponsored by Siemens - Onsite**

First Place

ID 193 Effect of Cryogenic Treatment Duration on The Mechanical and Microstructural Properties of Manganese and Cast Steels Sai Pok Ken1, Mohd Azlan Suhaimi, Nurul Farhana Arisha Mohd Faizal, Lim Zuu Qin, Tan Kim Loong, Wan Fahmin Faiz Wan Ali and Muhd Ikmal Isyraf Mohd Maulana, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor, Malaysia

Second Place

ID 188 Pharmamed Chatbot and Audiovisual Media: A Dual Strategy for TB Screening and Education in South Bogor Serina Juniati, Departement Pharmacy, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia Lusi Agus Setiani, Departement Pharmacy, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia Dewi Oktavia Gunawan, Departement Pharmacy, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia Stefanus Nofa, Indonesian Pharmaceutical Informatics Association

Third Place

ID 180 Weather Forecasting Using Markov Chains in Bogor City: Software Implementation for Predicting Weather Patterns
Bandar Anzari, Student, Study Program of Mathematics, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia
Hagni Wijayanti, Lecturer, Study Program of Mathematics, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia
Pilar Kukuh Bintang Rachmadi, Student, Study Program of Computer Science, Faculty of Mathematics and Natural Sciences, Pakuan
University, Bogor, Indonesia

# Undergraduate Research Competition sponsored by Daikin Applied - Online

First Place

ID 214 Sustainable Functional Noodles Enriched with Ultrasound-Extracted Agar from Peruvian Red Seaweed (Chondracanthus chamissoi): Mixture-Design Optimization and Physicochemical Evaluation

Ariana Novoa-Casablanca, Bachelors in Industrial Engineering, Carrera de Ingeniería Industrial, Universidad de Lima, Perú Cristian Toribio Villanueva-Palacios, Bachelors in Industrial Engineering, Carrera de Ingeniería Industrial, Universidad de Lima, Perú Juan Carlos Quiroz-Flores, Research Professor, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Second Place

ID 48 Designing Product Placement Strategy for Outbound Loading Process in C4 Container Trucks at PT XYZ
Fitriadi, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, 11480, Indonesia
Hwi-Chie Ho, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, 11480, Indonesia
Amir Tjolleng, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, 11480, Indonesia

Third Place

ID 164 Balancing Academic Responsibilities, Work, and Leadership: Assessing the Mental Workload and Emotional Capacity of Working Students and Student Leaders in the National Capital Region

Jelsey Marie Concepcion, Justine Julia Marie Sevilla, Cristel Ann Sevilleno, Angelica Aelora Baluyot, Franchesca Roi Cipriano, Christian Jess Garriga, Jhovic Querido, Lynz Krisha Reyes and Maricar M. Navarro, Industrial Engineering Program, College of Engineering and Architecture Technological Institute of the Philippines, Quezon City, Philippines

### **Undergraduate Research Competition sponsored by Daikin Applied - Onsite**

First Place

ID 118 Study of Quality Control in Capillary Side Contour Tolerance of Intravenous Catheters

Nur Ain Sahira Mohamad Tarmizi and Jafri Mohd Rohani, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia

Second Place

ID 115 Al-Based Predictive Maintenance Model in Palm Oil Mill

Nursyuhadah Saleh, Jafri Mohd Rohani and Nurul Rawaida Ain Burhani, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia (UTM)

81300 Skudai, Johor, Malaysia

Third Place

ID 147 An Analysis of Sales and Cash Receipt Procedures to Support Internal Control: A Case Study at Auto2000 Yasmin Bogor Salwa Salsabil, Retno Martanti Endah Lestari and Abdul Kohar, Lecturer, Faculty of Economics and Business, Pakuan University, Bogor, Indonesia

### **Master Thesis Competition**

First Place

ID 120 Comparing Customer-Oriented and Revenue-Oriented Overbooking Strategies in Dynamic Pricing Environments

Junsei Ito, Graduate School of Engineering, Kanagawa University, 3-27-1 Rokkakubashi, Kanagawa-ku, Yokohama, Kanagawa 221-8686,

Janan

Kimitoshi Sato, Faculty of Engineering, Kanagawa University, 3-27-1 Rokkakubashi, Kanagawa-ku, Yokohama, Kanagawa 221-8686, Japan

Second Place

ID 111 Relationship Between Safety Culture and Safety Performance in SME Malaysia

Puteri Mawardati Yasir, Jafri Mohd Rohani and Yuhvhendrra Shrii Kumar, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor, Malaysia

Istas Fahrurrazi Nusirwan, Faculty of Artificial Intelligence, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia

Erialdi Syahrial, Faculty of Business and Economics, Universiti Malaya, Malaysia

Wesley Anak Lock Sulen, International, Policy and Research Development Division, Department of Occupational Safety and Health Malaysia (DOSH), Malaysia

Third Place

ID 68 Predictive Model for Electric Vehicle Reconfiguration in Malaysia

Nadia Adibah Rajab, Nor Asmaa Alyaa Nor Azlan, Nur Liyana Mohd Aris, Mohd Azman Abas, Izhari Izmi Mazali, Wan Muhammad Rifqi Wan Mohd Azmi and Jafri Mohd Rohani, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor Bahru, Malaysia Zool Hilmi Ismail, Malaysia-Japan International Institute of Technology (MJIIT), Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia Farraen Mohd Azmin, Machine Learning Technical Specialist, Elysia Battery Intelligence, Bicester, England, United Kingdom

# **Doctoral Dissertation Competition sponsored by Airbus**

First Place

ID 80 A Qualitative Study on Lean Six Sigma and Robotic Process Automation Integration Marciano Hermo INNOVEO Consulting, Philippines

# **Graduate Student Paper Competition sponsored by Eaton**

First Place

ID 50 Prediction Model and Early Warning System for Compressor Performance Degradation Based on Machine Learning Galih Prihasetya Hermawan, Bobby Kurniawan and Achmad Bahauddin, Industrial Engineering and Management Master Program, Department of Industrial Engineering, Universitas Sultan Ageng Tirtayasa (UNTIRTA), Cilegon, Banten, Indonesia

Second Place

ID 234 Net-Zero Al: A Paradigm Shift in Environmentally Conscious Machine Learning Development
Katya Victory Liu, Lina Gozali and Adianto Adianto, Program Studi Teknik Industri, Universitas Tarumanagara, Indonesia

# **High School STEM Competition**

First Place

ID 127 A Computational Approach to Chinese Calligraphy: Data-Driven Feedback Through Pixel-Based Stroke Segment Analysis
Lai Pin-Jen, Junior Student, Kang Chiao International School Linkou Campus, Taipei, Taiwan
Ho Jo-Yu, Junior Student, Kang Chiao International School Linkou Campus, New Taipei, Taiwan
Tai Yu-cheng, Undergraduate student, National Taiwan University, Taipei, Taiwan

Second Place

ID 126 NEUTRA: Autonomous Smart Waste Neutralizer

Shreya Chauhan, High School Student, Delhi, India

### **Human Factors and Ergonomics Competition**

First Place

ID 256 Correlation and Regression of Heart Rate Changes Due to Variations in Speed and Incline During Treadmill Exercise

I Wayan Sukania, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

Marthinus Chandra, Industrial Engineering Department, Tarumanagara University, Jakarta, Indonesia

Florencia Charlene Teng, Industrial Engineering Department, Tarumanagara University, Jakarta, Indonesia

Second Place

ID 179 The Impact of Patient Education on Knowledge of Gastritis and Its Management in Public Health Centers

Sara Nurmala, Pharmacy Study Program, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia Nisa Yulianti Suprahman, Faculty Sains Institut Teknologi Sumatera, Lampung 35365, Sumatra, Indonesia

Usep Suhendar, Pharmacy Study Program, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia

Ladya Putri Kartini Gunawan, Pharmacy Study Program, Faculty of Mathematics and Natural Sciences, Pakuan University, Bogor, Indonesia

ID 231 Designing a Smart Monitoring System to Facilitate Remote Monitoring Services Using a Design Thinking Approach
Herfaida Nadia Ningrum, Dino Caesaron, Nadia Daliana, Ilma Mufidah, Department of Industrial Engineering, Telkom University, Bandung,
Indonesia

# **Simulation Competition**

First Place

ID 63 Environmental-friendly Pathfinding on Three-dimensional Terrain Surface Models

Ken Bruno Aono and Hiroyuki Goto, Department of Industrial and Systems Engineering, Hosei University, Tokyo 184-8584, Japan Taiki Otsuka, Faculty of IT and Business, Cyber University, Fukuoka 813-0017, Japan

Yoichi Shimakawa, Department of Computer Science and Technology, Salesian Polytechnic, Tokyo 194-0215, Japan

Second Place

ID 235 The Green Shift: Quantifying the CO2 Reduction Potential of Electric Vehicle Production and Allied Innovations Christhoper Robin, Lina Gozali, and Adianto, Department of Industrial Engineering, Universitas Tarumangara, Jakarta, Indonesia

Third Place

ID 45 Improving Hospital Management Efficiency with Simulation using Six Sigma Methods: The Case of Dajia Lee's General Hospital

Giulliana Schulz, Abigail Borja, Fiorella Duarte, Ivan Olmedo, Shih-Hsien Tseng and Robert Ruey Huei Yeh, National Taiwan University of Sciences and Technology, Taiwan

# Supply Chain and Logistics Competition sponsored by aThingz

First Place

ID 124 Performance Evaluation of Demand Forecasting Models for Textile industry in Bangladesh: Seasonality, Time Series, and Machine Learning Approaches

Amir Mohammad Mazed and Arjun Das, Industrial Engineering and Management, Khulna University of Engineering & Technology, Khulna, Bangladesh

Bhabna Das, Computer Science & Engineering, East Delta University, Chattogram, Bangladesh

Second Place

ID 117 Development of Computer Simulation Model for Capacity and Resource Planning: A Case Study of Intraocular Lens Manufacturing System

Parid Jaisuda, Graduate Program in Logistics and Supply Chain Engineering, Department of Industrial and Manufacturing Engineering, Faculty of Engineering, Prince of Songkla University, Thailand

Nikorn Sirivongpaisal and Dollaya Buakum, Department of Industrial and Manufacturing Engineering, Smart Industry Research Center, Faculty of Engineering, Prince of Songkla University, Thailand

Narttakarn Khunjun, Smart Industry Research Center, Faculty of Engineering, Prince of Sonka University, Thailand

Third Place

ID 56 Information Firewall and Component Procurement

Ehsan Bolandifar, HSBC Business School, Peking University, China

# **Poster Competition**

#### **Based on the Presentation**

First Place

ID 186 Disability, Stigma, and Public Trust: Understanding Community Perspectives on Inclusive Education Henny Suharyati, and Padel M. Rallie Rivaldy, Universitas Pakuan, Indonesia

Second Place

#### ID 150 Organic Waste Management with the Pentahelix Model in Bogor City

Indi Naswa, Faculty of Economics and Business, Department of Management, Faculty of Economics and Business, University of Pakuwon (UNPAK), Bogor, West Java, Indonesia

Abel Gandhy, Head of Quality Assurance Unit, Management Study Program, Pakuan University, Bogor, West Java, Indonesia

Third Place

# ID 157 SWOT Analysis of QRIS (Quick Response Code Indonesian Standard) Adoption for MSME Sales Enhancement: A Strategic Framework for Digital Payment Integration

Nazla Primanita Gunawan, Student, Faculty of Economics and Business, Pakuan University, Bogor, Indonesia Abel Gandhy, Lecturer, Faculty of Economics and Business, Pakuan University, Bogor, Indonesia

#### **Based on Overall Content**

First Place

#### ID 220 Predictive maintenance for on load tap changer (OLTC) failure in oil transformer

Nurulfatin Fasihah Roslan, and Mohd Faridh Ahmad Zaharuddin, Department of Materials, Manufacturing and Industrial Engineering, Universiti Teknologi Malaysia, UTM Johor Bahru, Johor, Malaysia

Second Place

#### ID 66 Designing of the K-LEXO (Korea Lower-limb Exoskeleton) for Elderly Agricultural Workers

Yong-Ku Kong, Hyun-Ho Shim, Dokyeong Lee, Hyun-Seok Yang, Jaehwi Lee and Hyunji Keum, Department of Industrial Engineering, Sungkyunkwan University, Suwon-si, Republic of Korea

Third Place

# ID 133 An Analysis of Transformer Health Index for Optimizing Asset Management Strategies Based on Operational and Environmental Data

Mayendra Yudhanarko, Postgraduate student, Industrial and Systems Engineering Department, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

Nani Kurniati, Lecturer, Industrial and Systems Engineering Department, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia

#### ID 232 Enhancing Teacher Innovation through Digital Literacy, 21st-Century Learning, and Visionary Leadership

Enur Mutiah Islami, Department Educational Management, Universitas Pakuan, Bogor, Indonesia Henny Suharyati, Department Educational Management, Universitas Pakuan, Bogor, Indonesia Rais Hidayat, Department Educational Management, Universitas Pakuan, Bogor, Indonesia

**Best Track Papers** 

Track ID	Track Name	Best Track Paper ID
1	Artificial Intelligence and Data Science	149
2	Automation, Robotics and Autonomous Systems	187
3	Business Management and Operations Management	87
4	Digital Manufacturing, Industry 4.0 and IoT	178
5	Engineering Education and Curriculum Improvement	233
6	Engineering Management and Project Management	11
7	Entrepreneurship and Innovation	47
8	Facility Planning and Layout	258
9	Human Factors, Ergonomics and Healthcare System	256
10	Lean Six Sigma and Operations Excellence	74
11	Manufacturing, Assembly and Design	221
12	Quality, Reliability and Maintenance	5
13	Simulation, Optimization and Productivity Improvement	134
14	Supply Chain and Logistics	124
15	Sustainability, Green Systems and Energy	53
16	Case Studies and Best Practices	192

# **Best Track Papers**

### **Artificial Intelligence and Data Science**

**ID 149** Development of a Beehive Prototype to Produce Honey Through Digital Manufacturing Technologies Leonardo Fabian Juan Tercero Yzaguirre Mendoza, University of Lima, Faculty of Engineering, Lima, Peru Gabriel De Souza Pellanne, University of Lima, Faculty of Engineering, Lima, Peru

### **Automation, Robotics and Autonomous Systems**

#### ID 187 Adaptive Differential Control Strategy for an AGV with LiDAR-based Obstacle Sensing

Isaree Srikun, Department of Electrical Engineering Technology, Faculty of Industrial Technology, Phranakhon, Rajabhat University, Thailand Keeradit Saipattalung, Department of Intelligent Electronics and Computer Engineering, Faculty of Industrial Technology, Phranakhon, Rajabhat University, Thailand

Somjai Klin-ngam, Department of Digital Technology and Information Management, Faculty of Industrial Technology, Phranakhon, Rajabhat University, Thailand

### **Business Management and Operations Management**

ID 87 Application of the 5S and TPM methodology in the forming process for the manufacture of gas cylinders Kevin Rodrigo Nuñez-Fernandez, and Gino Alonso Zevallos-Fiascunari, Facultad de Ingeniería, Universidad de Lima, Perú Paul Sanchez Soto, Research Professor, Facultad de Ingeniería, Universidad de Lima, Perú

### Digital Manufacturing, Industry 4.0 and IoT

ID 178 Strategic Hospital Cluster-based Delivery Planning for Centralized Healthcare Additive Manufacturing Systems Chanipa Nivasanon, Department of Industrial Engineering, Kasetsart University, Bangkok, Thailand Pornthep Anussornnitisarn, Department of Industrial Engineering, Kasetsart University, Bangkok, Thailand Kasin Ransikarbum, Faculty of Engineering, Ubon Ratchathani University, Ubon Ratchathani, Thailand

### **Engineering Education and Curriculum Improvement**

ID 233 Transforming Indonesia Drilling Training Center – Pertamina Drilling Services Indonesia as One of Biggest Drilling Training Center in South East Asia: Implementation of MINDCRAFT to Drive Revenue and Competency Development

Ng Willam Wijaya, Chair Rony, Muhammad Iqbal Shahputra, Hilman Himawan, Ardian Aminuddin, Aktrilianjas Ulpa, Minar Prianto, and Dora Indah, Pertamina Drilling Services Indonesia, Subholding Upstream, Pertamina, Jakarta, Indonesia

# **Engineering Management and Project Management**

### ID 11 Evaluation of Maintenance and Repair Contracts Used in the Mining Industry by Service Providers

Charles B. Mahowa, Postgraduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

Edoghogho Ogbeifun, Civil Engineering Department, Faculty of Engineering, University of Jos, Nigeria
Jan Harm C. Pretorius, Postgraduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of

Jan Harm C. Pretorius, Postgraduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

# **Entrepreneurship and Innovation**

# ID 47 An Analysis of the Causes of Small and Medium-Size Enterprises Failure in Developing Countries: The Case of South Africa

Paul Saah, Department of Industrial Engineering, College of Science, Engineering and Technology, University of South Africa Charles Mbohwa, Department of Industrial Engineering, College of Science, Engineering and Technology, University of South Africa

# **Facility Planning and Layout**

ID 258 Analysis of Influence Optimization Factors of Risk Management Strategies in Infrastructure Projects
Andy, Faculty of Civil Engineering and Planning, Universitas Internasional Batam, Batam, Kepulauan Riau, Indonesia
Indrastuti, Faculty of Civil Engineering and Planning, Universitas Internasional Batam, Batam, Kepulauan Riau, Indonesia
Joewono Prasetijo, Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia
Muhammad Isradi, Department of Civil Engineering, Universitas Mercu Buana Jakarta, Indonesia

### **Human Factors, Ergonomics and Healthcare System**

ID 256 Correlation and Regression of Heart Rate Changes Due to Variations in Speed and Incline During Treadmill Exercise

I Wayan Sukania, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia Marthinus Chandra, Industrial Engineering Department, Tarumanagara University, Jakarta, Indonesia Florencia Charlene Teng, Industrial Engineering Department, Tarumanagara University, Jakarta, Indonesia

### Lean Six Sigma and Operations Excellence

ID 74 Improvement of Productivity in Portland Cement Production Applying Lean Manufacturing and Six Sigma

Macarena Crespo Egúsquiza and Camila Belén Minauro Núñez, From the Faculty of Engineering, students of the Industrial Engineering

program Universidad de Lima, Santiago de Surco, Lima, Perú

Richard Meza Ortiz, Faculty of Industrial Engineering, Professor, School of Industrial Engineering, Member, Operations Management and Green Logistics Research Group, Industrial Engineering Career, Universidad de Lima, Santiago de Surco, Lima, Perú

### Manufacturing, Assembly and Design

ID 221 Parametric analysis & iterative engineering design for low-cost sago processing machine
Daniel Kale, Jimmy Ovia, and Dr. Mohamed, School of Mechanical Engineering, PNG University of Technology, Lae 411, Papua New Guinea

### Quality, Reliability and Maintenance

ID 5 Improvement of Output and Waste Reduction Through Equipment Reverse Deterioration in an FMCG Industry: A TPM 4-Phases to Zero Breakdowns Approach

Edward Sontaga Makua, Department of Industrial Engineering, Durban University of Technology, Durban, South Africa Mendon Dewa, Lecturer, Durban University of Technology, Durban, South Africa

### Simulation, Optimization and Productivity Improvement

ID 134 Productivity systems used for improving the operational process of making building blocks for productivity growth within the small-scale masonry block manufacturing in Gauteng, South Africa

Lucky Boy Tebogo Makhubedu, University of Johannesburg, South Africa

Nelson Madonsela, Faculty of Engineering and Built Environment, University of Johannesburg, Doornfontein, Johannesburg, South Africa

# **Supply Chain and Logistics**

ID 124 Performance Evaluation of Demand Forecasting Models for Textile industry in Bangladesh: Seasonality, Time Series, and Machine Learning Approaches

Amir Mohammad Mazed and Arjun Das, Industrial Engineering and Management, Khulna University of Engineering & Technology, Khulna, Bangladesh

Bhabna Das, Computer Science & Engineering, East Delta University, Chattogram, Bangladesh

# Sustainability, Green Systems and Energy

ID 53 A Delphi Analysis on the Barriers of Battery Circularity in Indian Electric Vehicle Battery Infrastructure
Rudra Prakash Pradhan, Ann Mary Varghese, Himanshu Chandra, Akanksha Jaiswal, and P. Vanita, Vinod Gupta School of Management,
Indian Institute of Technology, Kharagpur, WB- 721302, India

### **Case Studies and Best Practices**

ID 192 Regional Clustering and Forecasting of Chili Prices in Indonesia Using K-means with Canberra Distance and VARD Modeling

Embay Rohaeti, Department of Mathematics, Pakuan University, Bogor, West Java, Indonesia Ani Andriyati, Department of Mathematics, Pakuan University, Bogor, West Java, Indonesia Muhammad Edy Rizal, Department of Physics and Mathematics, Tadulako University, Palu, Central Sulawesi, Indonesia

