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## 2024 IEOM Awards – 5<sup>th</sup> Asia Pacific Conference on Industrial Engineering and Operations Management Tokyo, Japan, September 10-12, 2024

### **Distinguished Professor in Fuzzy Logic**

Mitsuo Gen, Ph.D., Fuzzy Logic Systems Institute (FLSI): Senior Research Scientist, Tokyo University of Science (TUS), Research Inst. of Sci. & Tech.: Visiting Prof., Fellows of Society: SOFT and APIEMS, Field Chief Editor: Frontiers in Industrial Engineering

### **Outstanding Professor in Industrial Engineering**

Ilkyeong Moon, Ph.D., P.E., Professor, Former President (2019-2020), Korean Institute of Industrial Engineers (KIIE), Department of Industrial Engineering, Seoul National University, Seoul 08826, KOREA

### **Outstanding Professor in Smart factory**

Katsuki Fujisawa, Professor, Ph.D. (Sci.), Professor, Institute of Innovate Research, Digital Twin Unit, Research Unit Leader, School of Computing, Department of Mathematical and Computing Science, Tokyo Institute of Technology, Tokyo, Japan

### **Outstanding Professor in Machine Learning (ML)**

Masanobu Matsumaru, Ph.D., Visiting Researcher, Research Institute for Engineering, Kanagawa University, Kanagawa, Japan

### **Distinguished Young IEOM Researcher Award**

Yuki Kinoshita, Ph.D., Department of Informatics, Faculty of Engineering, Kindai University, Higashiosaka, Osaka, Japan

### **Safety Management Practices Award**

Kenji Watanabe, Professor, Department of Architecture, Civil Engineering and Industrial Management Engineering, Nagoya Institute of Technology, Nagoya, Japan

### **Outstanding Educational Leadership Award**

Tomohiro Kojima, Principal of Salesian Polytechnic, Tokyo, Japan

### **Supply Chain Management Practices Award**

Satoru Hommo, Senior Manager, Global Repair Procurement, Global ESD & Repair, Procurement, Olympus Corporation, Tokyo, Japan

### **Outstanding Professor Award**

Andi Cakravastia Arisaputra Raja, Ph.D., S.T., M.T., Associate Professor in Industrial Engineering, Institut Teknologi Bandung (ITB), Indonesia

### **Outstanding AI Award**

Ashir Ahmed, Ph.D., Associate Professor, Department of Advanced Information Technology, Faculty of Information Science and Electrical Engineering, Kyushu University, Fukuoka, Japan

**Distinguished Young IEOM Researcher Award**

Ziang Liu, Ph.D., Faculty of Environmental, Life, Natural Science and Technology, Okayama University, Okayama, Japan

**NextGen Transportation Systems Award**

Kenji Amagai, Professor, Dr. Eng., Division of Mechanical Science and Technology, Graduate School of Science and Technology, Director, Center for Research on Adoption of NextGen Transportation Systems (CRANTS), Gunma University, Japan

**Outstanding Professor in Optimization Award**

Baoding Liu, Ph.D., Professor, Department of Mathematical Sciences, Tsinghua University, Beijing 100084, China

**Distinguished Industry Achievement Award**

Dr. Takafumi CHIDA  
Principal Researcher  
Connective Automation Innovation Center,  
Hitachi Ltd., Research & Development Group  
Yokohama, Japan

**Global STEM Education Award**

Dr. Khidzir Zakaria  
Head of Manufacturing Laboratory  
Faculty of Mechanical Engineering  
Universiti Teknologi Malaysia  
Johor, Malaysia

**Outstanding Researcher Award**

Dr. M.A.S. Kamal, Associate Professor, Graduate School of Science and Technology, Gunma University, Tenjincho, Kiryu, Japan

**Outstanding Researcher in Supply Chain and Logistics**

Dr. Ir. Yandra Rahadian Perdana, S.T., M.T., IPM.  
Assoc. Prof.  
Industrial Engineering Department  
Universitas Islam Indonesia (UIN) Sunan Kalijaga  
Indonesia

**Outstanding Professor Award**

Sara Nurmala  
Faculty of Mathematic and Natural Sciences  
Universitas Pakuan  
Bogor, Indonesia

**Distinguished Leadership Award**

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

**Outstanding Conference Award**

Dr. Qingfeng Liu, Full professor, Faculty of Industrial and Systems Engineering at Hosei University, Japan

Dr. Kenta Tsukuura, Assistant Professor, Faculty of Industrial and Systems Engineering at Hosei University, Japan

# COMPETITION WINNERS

## Onsite Competitions

### Undergraduate Student Paper Competition sponsored by Siemens

First Place

**ID 127 Implementation of Lean Manufacturing Concepts to Increase Process Cycle Efficiency (A Case Study of Glove Production Process)**

Diah Nurul Istiqomah, Khusna Dwijayanti, Herninanjati Paramawardhani and Titi Sari, Department of Industrial Engineering, Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, Indonesia

Second Place

**ID 50 Optimal Layout Planning for School Consolidation ~Elementary Schools in Machida City, Tokyo~**

Hiroto Yamazaki, Graduate School of Science and Engineering, Hosei University, Tokyo 184-8584, Japan  
Hiroyuki Goto, Department of Industrial and Systems Engineering, Hosei University, Tokyo 184 8584, Japan

Third Place

**ID 120 Redesign of Warehouse Layout Using Dedicated Storage Method**

Mochammad Iqbaal Syahron, Yandra Rahadian Perdana, Trio Yonathan Teja Kusuma and Syaeful Arief, Department of Industrial Engineering Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, Indonesia

### Undergraduate Research Competition sponsored by Daikin Applied

First Place

**ID 21 A Two-Stage Redistricting-Location Problem in Emergency Evacuation Planning**

Johannie Mae Uy and Shelley Anne Gail Cagaanan, Industrial Engineering Department, Xavier University – Ateneo de Cagayan, Cagayan de Oro City 9000, Philippines

Bonn Kleiford Seranilla, PhD (Adviser), Luxembourg Center for Logistics and Supply Chain Management, University of Luxembourg, 4365 Belval Esch-sur-Alzette, Luxembourg

Second Place

**ID 57 A Matching Theory for Hot-desking Seats Allocation: with Externalities and Network of Relationships**

Fumikazu Hoyano and Aya Ishigaki, Department of Industrial and Systems Engineering, Tokyo University of Science, Chiba 270 8510, Japan

Third Place

**ID 194 “Revolutionizing Supply Chain Education”: Integrating Industry 4.0 and IOT into University Curriculum: (Opportunities and Challenges)**

Affan Al -Kharusi and Mazoon Al-Kalbani, Student, Logistics & Supply Chain management, University of Technology and Applied Sciences Muscat, Oman

Noor Al Huda Al-Majrafi, Student, Chemical Engineering, Muscat University, Muscat, Oman

Jowhara Al-Habsi, Lecturer (Supervisor), University of Technology and Applied Sciences, Muscat, Oman

## Graduate Student Paper Competition

First Place

**ID 114 Advancing Agri-Food Supply Chain Management Under Industry 5.0 Framework: An Edge-AI Approach**

Tala Jano, Ridha Hamila and Farid Touati, Department of Electrical Engineering, College of Engineering, Qatar University, Doha, Qatar  
Mohamed Kharbeche, Qatar Transportation and Traffic Safety Center, College of Engineering, Qatar University, Doha, Qatar

Second Place

**ID 35 Influence of Students' Personality on The Evaluation of Their Positive Attitude Towards Learning**

Masaya Matsushita, Department of Information Science and Control Engineering, Nagaoka University of Technology, Niigata, Japan

Nobumichi Watahiki, Department of Information and Management Systems Engineering, Nagaoka University of Technology, Niigata, Japan

Third Place

**ID 132 Distributed Car-Platoon Control for Improving Urban Traffic Flows**

Md Delowar Hossain, Mahmudul Hasan, Md Abdus Samad KAMAL and Kou Yamada, Graduate School of Science and Technology, Gunma University, Gunma, Japan

**ID 113 Optimizing Multi-Mobility Systems in Smart Satellite Cities: A Case Study of Kiryu City, Japan**

Reo Nakamura, Graduate School of Science and Technology, Gunma University, 1-5-1 Tenjincho, Kiryu, 376-8515 Japan  
Md Abdus Samad Kamal and Kou Yamada, Division of Mechanical Science and Technology, Gunma University, 1-5-1 Tenjincho, Kiryu, Japan

## **Doctoral Dissertation Competition sponsored by Airbus**

First Place

**ID 24 Stochastic Dual Dynamic Programming Applications and its Variants**

Bonn Kleiford Seranilla, Ph.D., Luxembourg Centre for Logistics and Supply Chain Management, University of Luxembourg, Kirchberg Campus, Luxembourg City, Luxembourg

Second Place

**ID 203 The Seaport-fulcrum Supply Chain Risk Evaluation for An Archipelagic Country: Study of Indonesian Stakeholders**

Muhammad Reza Do. Bagusa, Department of Transdisciplinary Science and Engineering, Tokyo Institute of Technology, Tokyo, Japan  
Department of Information Systems, College of Informatics and Computer Management Tidore Mandiri (STMIK Tidore Mandiri), Kota Tidore Kepulauan 97812, Indonesia

Third Place

**ID 99 Optimizing Pricing Strategies in Duopolistic Media Platforms: A Study of Cross-Network Effects and Multi-Homing**

Ajit Pratap Singh, Department of Operations Management, Indian Institute of Management Lucknow, Lucknow, 226013, India

## **Master Thesis Competition**

First Place

**ID 205 Artificial Intelligence and AHP for EVs Charging Station Selection Problem**

Mohammed Ha. Al Gafri, Graduate Student in the Department of Industrial and Systems Engineering, College of Computing and Mathematics King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia  
Salih O. Duffuaa, Full Professor in the Department Industrial and Systems Engineering, College of Computing and Mathematics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia  
Anas Al-Sayed AlGhazi, Chairman of the Department Industrial and Systems Engineering, College of Computing and Mathematics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

**ID 96 Design of Product Preparation Planning and Control for A Franchised Food Stall**

Patcharin Jomkui, Master of Engineering Department of Industrial Engineering, Chulalongkorn University, Bangkok 10330, Thailand

Second Place

**ID 230 Safety Culture Practices Level for Malaysia's Small and Medium Enterprise (SME)**

Puteri Mawardati Yasir, Jafri Mohd Rohani and Yuhvendhra Shrii Kumar, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor, Malaysia  
Erialdi Syahrial, Faculty of Business and Economics, Universiti Malaya, Kuala Lumpur, Malaysia

Third Place

**ID 303 Model of The Influence of Contract Changes on Project Performance (Cost, Time, and Quality) in Government Building Project**

I Gede Adi Pawitra, Master Program of Infrastructure and Environmental Engineering, Faculty of Postgraduate, Warmadewa University, Denpasar, Indonesia  
Putu Ika Wahyuni, Master Program of Infrastructure and Environmental Engineering, Faculty of Postgraduate, Warmadewa University, Denpasar, Indonesia  
I Wayan Muka, Department of Civil Engineering, Faculty of Engineering, Hindu Indonesia University, Denpasar 80239, Indonesia  
José Manuel Maniquim, Master Program of Infrastructure and Environmental Engineering, Faculty of Postgraduate, da Paz University, Timor Leste  
Canossa de Araujo Lopes, Master Program of Infrastructure and Environmental Engineering, Faculty of Postgraduate, da Paz University, Timor Leste

## **High School STEM Competition**

First Place

**ID 278 Developing The Industry 4.0 Ozone Generator Controlling System For In-Patient room Sterilization**  
Chutitad Singkarin, Salem Academy Christian School, Salem, Oregon, USA  
Deren Fu, Suankularb Wittayalai School, Bangkok, Thailand  
Tai Bandisak, Department of Electrical and Computer Engineering, Naresuan University, Bangkok, Thailand

## **Human Factors and Ergonomics Competition**

First Place

**ID 117 Safety Enhanced Control of Automated Vehicles for Efficient Railway Level Crossing**  
Hayato Miura, Aiman Haziq Bin Azmi Muhammad, Md Abdus Samad Kamal and Kou Yamada, Graduate School of Science and Technology Gunma University, Gunma, Japan

Second Place

**ID 60 Exploring Middle Eastern Passengers' Perceptions of Airline Mobile App Usability: A Focus Group Study**  
Abdulrahman Mousa Khamaj, Industrial Engineering Department, College of Engineering and Computer Science, Jazan University, Jazan, Saudi Arabia

Third Place

**ID 56 Optimal Hospital Bed Allocation under Indonesia's National Health Insurance Scheme**  
Oki Almas Amalia, Irwan Endrayanto and Fajar Adi Kusumo, Department of Mathematics, Faculty of Mathematics and Natural Sciences Universitas Gadjah Mada, Yogyakarta, Indonesia  
Oki Almas Amalia, Anne B. Zander and Richard J. Boucherie, Department of Applied Mathematics, Faculty of Electrical Engineering, Mathematics and Computer Science, University of Twente, Enschede, the Netherlands

**ID 18 People: Biggest Variable Risk in Successful Project Execution**  
Ir Mohamad Fadzil Adnan, M Hafiz B Azlam and A Rahman B A Aziz A, Petronas, Malaysia

## **Lean Six Sigma Competition**

First Place

**ID 54 Exploring the Integration of Lean Six Sigma and Industry 4.0 in Manufacturing Industry: A Bibliometric Analysis and Systematic Review**  
Juman Alsadi, Maher Maalouf and Ravindra Goonetilleke, Department of Industrial and Systems Engineering, Khalifa University, Abu Dhabi, United Arab Emirates

Second Place

**ID 19 Criticality of Lean Six Sigma (Lss) Approach In Optimising Resources**  
Ir Mohamad Fadzil Adnan, A Rahman B A Aziz A and Saleha Bt M Hussein, Petronas, Malaysia

## **Supply Chain and Logistics Competition**

First Place

**ID 27 On the Extensions of Dynamic Facility Location Problems under Multi-Parameter Uncertainty**  
Bonn Kleiford Seranilla, Ph.D., Luxembourg Centre for Logistics and Supply Chain Management, University of Luxembourg, Kirchberg Campus, Luxembourg City, Luxembourg

Second Place

**ID 225 Reverse Logistics Network Optimization for e-commerce**  
Albert Tan and Florian Gerth, Asian Institute of Management, Philippines

Third Place

**ID 103 A Mixed Integer Programming Model to Identify Vulnerable Supply Chain Sectors in Saudi Arabia and their Interdependencies**  
Mastoor M. Abushaega, Department of Industrial Engineering, College of Engineering and Computer Science, Jazan University, Jazan, Kingdom of Saudi Arabia

## **Poster Competition**

## **Outstanding Research Posters**

First Place

**ID 187 A Case Study of Humanitarian Aids to Ukraine During Russo-Ukrainian War: Efficiency, Effectiveness, and Equity**  
Lei Xu, Georgia Tech Shenzhen Institute, Tianjin University, Shenzhen, China  
Xinchen Hu, Georgia Tech Shenzhen Institute, Tianjin University, Shenzhen, China

Second Place

**ID 34 Mathematical model to determine average travel distance of shared taxi**  
Yuichi Kozakai and Yoichi Shimakawa, Department of Computer Science and Technology, Salesian Polytechnic, Tokyo 194-0215, Japan  
Hiroyuki Goto, Department of Industrial and Systems Engineering, Hosei University, Tokyo 184 8584, Japan

Third Place

**ID 247 Maximizing System Availability Using a Markov Decision Process (MDP) Model**  
Raft Al-Rebati, Department of Industrial & Systems Engineering, King Fahd University for Petroleum & Minerals, Dhahran, Saudi Arabia  
Mohammad AlDurgam, Department of Industrial & Systems Engineering, King Fahd University for Petroleum & Minerals, Interdisciplinary Research Center for Smart Mobility & Logistics, Dhahran, Saudi Arabia  
Ali Nasir, Department of Control and Instrument Engineering, King Fahd University for Petroleum & Minerals, Interdisciplinary Research Center for Intelligent Manufacturing & Robotics, Dhahran, Saudi Arabia  
Mohammad Nabhan, Department of Industrial & Systems Engineering, King Fahd University for Petroleum & Minerals, Dhahran, Saudi Arabia

## **Outstanding Poster Presentation**

First Place

**ID 163 Optimizing White Kidney Bean Extract for Enhanced Alpha-Amylase Inhibition: A Box-Behnken and Response Surface Methodology Approach**  
Ratchadaporn Oonsivilai, School of Food Technology, Institute of Agricultural Technology, Health and Wellness Research Unit, Suranaree University of Technology, Nakhon Ratchasima, Thailand  
Atcha Uawongwattana, Arpasiri Buason and Anant Oonsivilai, School of Food Technology, Institute of Agricultural Technology, Suranaree University of Technology, Nakhon Ratchasima, Thailand  
School of Electrical Engineering, Institute of Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

Second Place

**ID 198 Simulation-Based Optimization for Multi-Echelon Petrochemical Supply Chain**  
Chairil Akbar, Omar Alsawafy, Nabeel Alanbar and Ahmed Attia, Department of Industrial and System Engineering, College of Computing and Mathematics, King Fahd University of Petroleum and Minerals, Dhahran 31261, Kingdom of Saudi Arabia

Third Place

**ID 241 SLM Post Processing of Manufacturing Plan and Control by Machining Process Toward for Digital Manufacturing Approach**  
F.I. Rosli, K. Zakaria, R. Yasak, M.S.M. Shaharoum, M.K.M.Kamal, 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

# **Online Competitions**

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

First Place

**ID 125 Approach to Eliminate Cost Losses in Returnable Facilities: A Case Study**  
Danish Faizi Adinata and Wahyudi Sutopo, Department of Industrial Engineering, Universitas Sebelas Maret, Surakarta, 57216, Indonesia  
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, Surakarta, Indonesia

**ID 221 Manufacturing of a Quinoa and Soy-Based Protein Bar Prototype**  
Renán Pachas Cueva, Carrera de Ingeniería Industrial, Universidad de Lima, Perú  
Miguel Avalos Ortecho, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Second Place

**ID 97 Optimizing Production Efficiency and Quality in Plastic SMEs: A Lean Manufacturing and TPM Approach**

Fabrizio Sangiacomo-Espinosa, Bachelor in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Perú  
Carlos Ramos-Almerco, Bachelor in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Perú  
Juan Carlos Quiroz-Flores, Research Professor, Facultad de Ingeniería, Universidad de Lima, Perú

**ID 102 Optimizing Operational Efficiency and Product Quality in Fashion SMEs: A Lean Manufacturing Approach in Jeans Production**

Jorge Luis Huaylinos-Vicente, Bachelors in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Peru  
Jaime Manuel Martín-Calero, Bachelors in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Peru

**ID 165 Polymetallic Mining Tailings Reuse Within the Framework of Circular Economy for Concrete Production**

Andrea Carolina Ojeda-Zamudio and Salvador Carlos Montori-Barba, Bachelors in Industrial Engineering, Facultad de Ingeniería, Universidad de Lima, Perú  
Juan Carlos Quiroz-Flores, Research Professor, Facultad de Ingeniería, Universidad de Lima, Perú

Third Place

**ID 86 Lean Warehousing Optimization in the Peruvian Plastic Sector: Reducing Returns and Costs**

Ana Milagros Pineda-Moreno, Bachelors in Industrial Engineering, Faculty of Engineering, Universidad de Lima, Peru  
Fabiola Dongo-Rivero, Bachelors in Industrial Engineering, Faculty of Engineering, Universidad de Lima, Peru

**ID 101 Enhancing Operational Efficiency in Textile SMEs: Integrating Lean Manufacturing and Total Productive Maintenance for Superior Performance**

Ignacio Herrera-Barreda, Bachelors in industrial engineering, Facultad de Ingeniería, Universidad de Lima, Peru

**ID 192 A Goal Programming Model for Optimizing Production Quotas, Productivity and Profit in Girl's Hat Manufacturing Firm**

Mae Ann S. Bodiongan, Angelica P. Dalumpines, Mesica B. Sarabia, Justin P. Candaza, John Lester P. Peñaflorida 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**

First Place

**ID 286 Product Design: A Sustainable Eco Multifunction Nightstand Design Project**

Stephen Thiodinata, Rafilia Vita Liveani Pertiwi, and Ivan, Lina Gozali, Frans Jusuf Daywin, Ahmad, Edy Chandra, Lamto Widodo, Carla Olyvia Doaly, and Didi Widya Utama, Department of Industrial Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

Second Place

**ID 124 Productivity Improvement of Cement Production Process Using Objective Matrix (OMAX) Method: A Case Study**

Danica Marshafina Tamimy Hanun, Department of Industrial Engineering, Faculty of Engineering, Universitas Sebelas Maret, Surakarta, Indonesia  
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, Surakarta, Indonesia

Third Place

**ID 22 Assessment of Ride-Hailing Apps Using Customer Satisfaction Framework for University of Santo Tomas Engineering Students**

Justin Mark S. Agno, Alexandrei Matthew O. Castillo Josemaria Franco and Nestor R. Ong MSIE, PIE, ASEAN Engr (Co-Author), Department of Industrial Engineering, Faculty of Engineering, University of Santo Tomas, Espana Blvd., 1008, Manila, Philippines

## **Doctoral Dissertation Competition sponsored by Airbus**

First Place

**ID 250 Perceived Organizational Support as a Moderator of Job Insecurity, Turnover Intention, and Job Satisfaction in Private Higher Education**

Muji Gunarto, Lecturer of Master of Management Program, Universitas Bina Dharma, Palembang, Indonesia  
Sri Yusriani, Student of Doctoral of Management Program, Universitas Sain Malaysia, Penang, Malaysia  
Shine Pintor Siolomba Patiro, Lecturer of Master of Management Program, Universitas Terbuka, Jakarta, Indonesia

Second Place

**ID 29 Impact of Information Technology, Innovation, Customer Relationship Management, and Environmental Compliance on Organizational Performance: Evidence in Vietnam**

Hieu Thuc Tran, PhD Student, Center for Public Administration, International University, Vietnam National University-Ho Chi Minh City, Vietnam

Nhu Nguyen Ngoc Quynh, Quyen Nguyen Thi Diem and Phuong Ho Thi My, Bachelor Students, The School of Economics, Finance, and Accounting, International University, Vietnam National University, Ho Chi Minh City, Vietnam  
Anh Phuong Nguyen, Lecturer, The School of Economics, Finance, and Accounting, International University, Vietnam National University-Ho Chi Minh City, Vietnam  
Phuong Van Nguyen (Corr), Associate Professor, Center for Public Administration, International University, Vietnam National University-Ho Chi Minh City, Vietnam

Third Place

**ID 167 Balancing Burnout and Boosting Self-Efficacy: The Role of Work-Life Balance in Enhancing Career Satisfaction Among Banking Employees**

Muji Gunarto, Master of Management Program, Universitas Bina Darma, Palembang, Indonesia  
Tiara Amiroh, Student of Doctoral of Management Program, Universitas Sriwijaya, Palembang, Indonesia

## **Masters Thesis Competition**

First Place

**ID 233 Strategy for Determining the Optimal Number of Manpower to Increase Work Productivity in The Beauty Services Industry (Case Study of PT XYZ)**

Ariyan Eka Putra, Dwi Agustina Kurniawati and Yandra Rahadian Perdana, Department of Industrial Engineering, Sunan Kalijaga State Islamic University, Yogyakarta, Indonesia

Second Place

**ID 277 The Role of Digitalization, Self-Efficacy, and Family Support in Shaping Perceived Work-Life Balance Among Public Sector Employees in Indonesia**

Sri Yusriani, Student of Doctoral of Human Resource Management Program, GSB, Universiti Sains Malaysia, Pulau Penang, Malaysia  
Shine Pintor Siolomba Patiro, Senior Lecturer of Master of Management Program, Indonesia Open University, Jakarta, Indonesia

## **Senior Design Project Competition**

First Place

**ID 288 Product Design And Marketing Strategy Analysis Of Modular Magnetic Shoes**

Sherine Angellina Hoswari, Rina Sugianto Gunawan, Hans C Lietanujaya, Lina Gozali, Frans Jusuf Daywin, Wilson Kosasih, Lamto Widodo, Adiando, Ahmad, I Wayan Sukania, Mohammad Agung Saryatmo, Carla Olyvia Doaly, Maitri Widya Mutiara, and Edy Chandra  
Department of Industrial Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

Second Place

**ID 290 Product Design and Marketing Strategy Analysis of Sustainable Eco Drum Toolbox (SEDТ)**

Moses Xanthus Suhendra, Vincent, Kezia Samosir, Lina Gozali, Frans Jusuf Daywin, Lamto Widodo, Ahmad, Carla Olyvia Doaly, Edy Chandra, and Didi Widya Utama, Department of Industrial Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

Third Place

**ID 302 Product Design And Marketing Strategy Analysis of Coffee Lounge Chair**

Jonathan Evan Rahardjo, Siane Meliani Ongko, Willsen Angkawijaya, Bryan Keyura Lazuardi, Wilson Kosasih, Adiando, I Wayan Sukania, Mohammad Agung Saryatmo, Lithrone Laricha, Carla Olyvia Doaly, and Maitri Widya Mutiara, Department of Industrial Engineering, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

## **Human Factors and Ergonomics Competition sponsored by CINTAS**

First Place

**ID 98 Assessment of Manual Material Handling (MMH) risks among Workers in Stone Cutting and Polishing industry by NIOSH Lifting Equation**

Qutubuddin S.M., Keerti Kulkarni, Sheetal Kulkarni, Anil Kumar and Ranjitha, Industrial & Production Engineering Department, P.D.A. College of Engineering, Kalaburagi, Karnataka, India

Second Place

**ID 287 Occupational Health and Safety (O.H.S.) Analysis Of Ergonomic Risk Factors Of Work Posture On Operators At P.T. A.B.B. Sakti Industri - Cibitung Plant**

Rina Sugianto Gunawan, Adiando, and Natasia Aurelia, Industrial Engineering Department, Faculty of Engineering, Tarumanagara University, Jakarta, Indonesia

Third Place

**ID 107 Impacts of Ergonomic Conditions on Quality and Cycle Time in Automotive Shock Absorber Assembly**

Val Urman and Kuldeep Agarwal, Department of Automotive and Manufacturing Engineering Technology, Minnesota State University Mankato, 205 Trafton Science Center E, Mankato, MN 56001, USA

## **Lean Six Sigma Competition sponsored by Tooling Tech Group**

First Place

**ID 111 Enhancing Operational Efficiency and Quality Control through Digital Solutions and Lean Methodologies: A Case Study of Hearth & Home Technologies**

Naim Islam and Kuldeep Agarwal, Department of Automotive and Manufacturing Engineering Technology, Minnesota State University, Mankato, MN 56001, USA

Second Place

**ID 307 Lean Six Sigma in Maintenance Management in Packaging Industry**

Katya Victory Liu and Lina Gozali, Department of Industrial Engineering, Tarumanagara University, Jakarta, Indonesia

Third Place

**ID 46 Application of Lean Concepts Increase Efficiency in The Scholarship Process Merit Scholarship for Undergraduate: Case Study of Subdivision of Scholarship Division of Student Affairs Suranaree University of Technology**

Thatsani Yaemmanat, Department of Systems Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand  
Nara Samattapong, Assistant Professor, Faculty of Industrial Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

## **Simulation Competition**

First Place

**ID 199 Financial Feasibility Analysis of Pumped Storage Hydro Power Plant Considering Uncertainty Factors Using the Value at Risk (VaR) Method**

Atsalabi Dimas Fadillah and Armand Omar Moeis, Department of Industrial Engineering, Universitas Indonesia, Depok 16424, Indonesia

Second Place

**ID 42 Optimizing Driver Allocation and Minimizing Travel Distance in Chicken Farm Transportation: A Case Study of Nakhon Ratchasima, Thailand**

Phichet Onchaem, School of Systems Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand  
Natdanai Chanlawong, School of Industrial Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

Third Place

**ID 48 Manufacturing Process Improvement with Simulation Technique by Flexsim Software Case Study: Lighting Steel Pole Manufacturing Process**

Kannaphat Seanun, Systems Engineering Program, School of Industrial Engineering, Institute of Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand  
Nara Samattapong, Systems Engineering Program, School of Industrial Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

**ID 17 Sustainable Design and Manufacture of a Butterfly Valve for Water Supply in Irrigation, Mining and Industry in Zimbabwe**

Clemence Fuma and Charles Danga, Harare Polytechnic, Mechanical and Production Engineering, Harare, Zimbabwe

## **Supply Chain and Logistics Competition**

First Place

**ID 168 An Improved Hybrid Grey Neural Network Model for Predicting Demand**

Shirin Begum and Minhazur Rahman Bhuiyan, Department of Industrial and System Engineering, Lamar University, Texas, USA

Second Place

**ID 305 ERP Production Planning and Inventory Control for Pump Company**

Christopher Robin, Lina Gozali, and Kenneth Anderssen, Department of Industrial Engineering, Faculty of Engineering, Universitas Tarumanagara, Jakarta, Indonesia

Third Place

**ID 306 ERP and Production Planning for Dishwashing Sponge Company**

Sylvia, Lina Gozali, Levina Halim Wijaya, and Natasia Aurelia, Industrial Engineering Department, Faculty of Engineering Tarumanagara University, Jakarta, Indonesia