



# **IEOM Society**

*"Achieving and Sustaining Operational Excellence"*

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## **2022 IEOM Australia Awards**

### **First Industrial Engineering and Operations Management Australia Conference**

#### **Distinguished Professor Award**

Dr. Sami Kara

Professor, School of Mechanical & Manufacturing Engineering, University of New South Wales (UNSW), Sydney, New South Wales, Australia

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

Devdas Shetty Ph.D, PE

Dean, School of Engineering and Applied Sciences

Professor of Mechanical Engineering

University of the District of Columbia

Washington, DC, USA

#### **Outstanding Professor Award**

Prof. Raimo P. Hämmäläinen

Emeritus Professor

Systems Analysis Laboratory

Aalto University, Finland

#### **Outstanding Professor Award**

Prof. Srinath Perera

Director, Centre for Smart Modern Construction c4SMC

Chair of Built Environment & Construction Management

Western Sydney University, Australia

#### **Distinguished Leadership Award**

Prof. Morris Fan

Dean, National Taipei University of Technology

Taipei, Vice President and Board Member

Asia Pacific Industrial Engineering and Management Systems Society

Ministry of Science & Technology (MOST), Taiwan

#### **Outstanding Researcher Award**

Dr Gnana K Bharathy

Artificial Intelligence and Research Data Specialist,

Faculty of Engineering & Information Technology

University of Technology Sydney (UTS), Sydney, Australia

#### **Teaching Excellence Award in SCM**

Dr Shams Rahman

Professor of Supply Chain Management

School of Accounting, Information Systems and Supply Chain

College of Business and Law

RMIT University, Melbourne, Australia

#### **Outstanding Teaching Award**

Prof. Dr. Mohammed Abdur Razzaque

School of Business

University of New South Wales (UNSW)

Sydney, Australia

**Outstanding Leadership Award**

Prof. Dr. MukhamadNajib  
Education Attaché, Indonesian Embassy in Canberra  
Vice Chair, IPB SDGs Network  
IPB University Risk Monitoring committee, PT BRI Syariah  
Vice Dean, Faculty of Economics and Management  
IPB University, Indonesia

**Distinguished Industry Leadership Award**

Frank Will  
Founder and CEO  
Ino8 Pty Ltd  
Victoria, Australia

**Outstanding Professor Award**

Dr. Hasan H. Turan  
Research Lead at Capability  
Systems Centre, University of New South  
Wales (UNSW Canberra), Australia

**Outstanding Academic Achievement Award**

Professor Dr. Azharul Karim  
School of Mechanical, Medical & Process  
Engineering, Queensland University of Technology, Brisbane, Australia

**IEOM Service Excellence Award**

Dr Matthew Pepper  
Associate Professor, School of Business, Faculty of Business and Law  
University of Wollongong NSW 2522 Australia

**IEOM Service Excellence Award**

Dr Imran Ali  
Lecturer in Operations and Innovation Management, School of Business and Law  
Central Queensland University (CQU), Melbourne, VIC 3000, Australia

**Outstanding Industry Achievement Award**

Dr Mervat El-Hoz  
Founder and CEO  
Environmental Engineering Consulting  
Sydney, New South Wales, Australia

**Global Engineering Education Award**

Dr Ataur Rahman  
Professor, Water and Environmental Engineering  
School of Engineering, Design and Built Environment  
Western Sydney University, Australia

**Curriculum Development Award**

Dr. Ir. Eko Pujiyanto  
Associate Professor, Head of Master of Industrial Engineering Program  
Sebelas MaretUniversity  
Surakarta Indonesia

**Distinguished SCM Award**

Dr Aries SusantyST MT.  
Professor and Head of Optimization and Industrial Planning System Laboratory  
Industrial Engineering Department  
Diponegoro University Central Java, Indonesia

**Global Supply Chain and Logistics Award**

Dr Ferry Jie  
Associate Professor  
Supply Chain and Logistics Management, ECU, School of Business and Law  
Edith Cowan University  
Western Australia, Australia

## **IEOM Society Awards – First Australian IEOM Sydney Conference, Dec. 26-28, 2022**

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### **Outstanding Industry Achievement Award**

Ashini Soysa  
Import and Export Coordinator  
General Mills, Chadstone, Victoria, Australia

### **Outstanding Industry Achievement Award**

Michael Huang  
Chief Operating Officer  
Natural Solar  
Sydney, Australia

### **IEOM Industry Solution Award**

Mansoor Ahmed  
MEP Engineer, ZIE, PC, MSc Mech. Eng., US, MSc Eng. Mech., Sweden  
Alley Stream, New York, United States

### **Global Business Management Award**

Dr. Ir. Meilita Tryana Sembiring  
Associate Professor  
Secretary of Magister Management Program  
Universitas Sumatera Utara  
Medan Indonesia

### **Healthcare Systems Award**

Dr Reema Harrison  
Associate Professor  
Centre for Health Systems and Safety Research  
Australian Institute of Health Innovation  
Faculty of Medicine, Health and Human Sciences  
Macquarie University, NSW 2109, Australia

### **Women in Industry and Academia Award**

Dr. Spring Zhou  
Faculty of Business and Law  
School of Business  
University of Wollongong, Australia

### **Women in Industry and Academia Award**

Professor Hannelie Nel  
Regional Assurance Manager, Worley OUIA (Oman, UAE, Iraq and North Africa),  
Associate Professor of Practice, University of Johannesburg, South Africa

### **Best Track Chair Award**

Dr. Sabrina Fawzia  
Senior Lecturer, Faculty of Engineering, School of Civil & Environmental Engineering, Queensland University of  
Technology (QUT), Australia

### **IEOM Track Chair Award**

Dr Sumana Biswas  
Associate Fellow, Higher Education Academy (AFHEA),  
Capability Systems Centre School of Engineering and Information Technology  
University of New South Wales, Canberra

### **Review Management Award**

Dr Feng-Jang Hwang  
Senior Lecturer, Operational Research, School of Mathematical and Physical Sciences  
University of Technology Sydney

Professor Jan-Harm Christiaan Pretorius  
Postgraduate School of Engineering Management  
University of Johannesburg  
South Africa

Dr Xin Ma  
Senior Lecturer in Operations and Supply Chain Management, Department of Management  
Monash University, Australia

Dr AmanyMohamed Mamdouh AKL  
Capability Systems Centre  
School of Engineering and IT  
University of New South Wales (UNSW)  
Canberra, Australia

Dr Mohsin Malik  
Senior Lecturer & Director –Master of Project Management, Swinburn Business School  
Swinburn University of Technology, Australia

### **Conference Service Award**

Tasfia Nuzhat  
Wiley Park Girls High School  
Sydney, NSW, Australia

Saifullah Tawsif  
Wolsey Hall Oxford  
Sydney, NSW, Australia  
Conference Service Award

## **Competition Winners**

### **Undergraduate Student Paper Competition Sponsored by SIEMENS**

#### **First Place Winner**

ID 265 Increased production of a Peruvian SME sleepwear manufacturer through a model integrating Lean Manufacturing and Systematic Layout Planning  
Angelica Christel Vargas-Sanders and Javier Arturo Velásquez-Camarena, Facultadde Ingeniería y Arquitectura, Universidad de Lima, Perú  
Juan Carlos Quiroz-Flores and Martín Fidel Collao-Díaz, Research Professors, Facultadde Ingeniería y Arquitectura, Universidad de Lima, Perú

#### **2ndPlace Winner**

ID 620 The Assessment Model to Rank Applicants for Research and Development Job Position in PT ABC  
Janice Santoso, Evy Herowati, Joniarto Parung, Industrial Engineering, Faculty of Engineering, University of Surabaya, Indonesia

#### **3rdPlace Winner**

ID 551 What did I forget? An investigation into refresher training intervals for a multi-skilled maintenance workforce  
CAPT Andrew Starka, AmanyAkIb, Hasan Turanb, SondossElsawahb, Electrical Engineering Student, School of Engineering and Information Technology, University of New South Wales, Canberra, Australia

### **Undergraduate Research Competition**

#### **First Place Winner**

ID 411 Comparative Mental Workload Assessment of Work Arrangements for Call Center Agents  
Charlene H. Ballard, Sheeno F. Dasmariñas, John Margel A. Otalla, Rhea Ann G. Perez, and Maria Louise C. Valenzuela, Industrial Engineering Department, Technological Institute of the Philippines –Manila, Philippines  
Janina Elyse A. Reyes, Professor of Industrial Engineering Department, Technological Institute of the Philippines, Quiapo, Metro Manila, Philippines

#### **2ndPlace Winner**

ID 513 Prediction of Peruvian companies' stock prices using Machine Learning  
Jose Antonio Espiritu Pera, Senior Lecturer, School of Industrial Engineering, Universidad de Lima, Lima, Perú  
Alexis Oneillbañez Diaz, Senior Lecturer, School of Industrial Engineering, Universidad de Lima, Lima, Perú  
Yvan Jesús García López and José Antonio Taquía Gutiérrez, School of Industrial Engineering, Universidad de Lima, Lima, Perú

#### **3rd Place Winner**

ID 586 Factors Bridging the Satisfaction of Generational Cap among Philippine Delivery Riders with the Use of Safety Mobile Application  
Raineri Albert Grafil and Ethan Tumala, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines, Quezon City, Philippines

### **Graduate Student Paper Competition Sponsored by EATON Corporation**

#### **First Place Winner**

ID 351 A Social Media Analysis of the Prevalence of COVID-19 on Public Transit Ridership in the United States  
Likhitha Yelamanchili, Department of Computer Science, San Jose State University, San Jose, CA 95192, USA

## **IEOM Society Awards – First Australian IEOM Sydney Conference, Dec. 26-28, 2022**

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Engbe-Etu Etu, PhD, Department of Marketing & Business Analytics, San Jose State University, San Jose, CA, USA  
Lin Jiang, PhD, Department of Mechanical Engineering, San Jose State University, San Jose, CA 95192, USA  
Imokhai Tenebe, PhD, Software Engineer, Westerville, OH 43081, USA  
OnomeEdo, Department of Information Systems, Auburn University at Montgomery, Montgomery, AL 36117, USA

### **2ndPlace Winner**

ID 340 On the pioneering IDESmethodology applied to the development of a new luxury car  
Marco Freddi, Niccolò Borri, Giulia Alessandri, Giulio Galiè, Giampiero Donnici and Leonardo Frizziero, Department of Industrial Engineering  
University of Bologna, Bologna, BO 40136, Italy

### **3rdPlace Winner**

ID 490 Proximate and Ultimate Analysis of Indonesian Bamboo for Power Electrical Generation  
Elysia Maida Joanda, Mohd Zamri Mohd Yusop and Jafri Mohd Rohani, School of Mechanical Engineering, Faculty of Engineering, Universiti Teknologi Malaysia, Skudai, Johor, Malaysia  
Norhuda Abdul Manaf, Department of Chemical Process Engineering, Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia  
Budi Hartono, Mechanical and Industrial Engineering Department, Gadjah Mada University, Yogyakarta, Indonesia  
Nguyen DucTuyen, School of Electrical Engineering, Hanoi University of Science and Technology, Hanoi, Vietnam  
Abdul Samad Ahmad, My Bamboo Sdn. Bhd., Subang Jaya, Selangor, Malaysia

### **Master Thesis Competition**

#### **First Place Winner**

ID 456 An Investigation of the Risk Factors Affecting Financial Sustainability in NGOs: A Case Study of Lusaka NGOs  
Hope Mutchule Nunkwe and Lubinda Haabazoka, Graduate School of Business, University of Zambia, Lusaka, Zambia

#### **2ndPlace Winner**

ID 600 Sustainable Supplier Selection Using the Multi-Attributive Border Approximation Area Comparison (MABAC) and F-MABAC in Chemical Industry  
Fazrul Hamonangan Tanjung, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, Indonesia  
Farizal F, Senior Lecturer, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, Indonesia

#### **3rdPlace Winner**

ID 128 Impact of Digital Transformation on Behaviour Intention in Pension Fund Sector in Indonesia  
Ibnu Hasyim, M. As'ad Abdullah and Anita Charolina Megawaty Siahaan, Student Magister Management, Binus School University, Indonesia

### **Doctoral Dissertation Competition**

#### **First Place Winner**

ID 249 A Model for Production Possibility Frontier of an Enterprise using Multi-Objective Optimization Approach  
Ma. Teodora E. Gutierrez, Assistant Professor IV, Industrial Engineering Program, Technological Institute of the Philippines, Quezon City, Philippines

#### **2ndPlace Winner**

ID 432 Characterization and Prediction of P420 laser cladding for Digital Twins  
Malek Mousa and Hany Osman, Production & Operations Management Research Lab, University of Windsor, Windsor, Ontario, Canada  
Systems Engineering Department, College of Computer Sciences and Engineering, King Fahd University of Petroleum & Minerals, Kingdom of Saudi Arabia  
Ahmed Azab, Production & Operations Management Research Lab, University of Windsor, Windsor, Ontario, Canada  
Fazle Baki, Odette School of Business, University of Windsor, Windsor, ON, Canada

#### **3rdPlace Winner**

ID 578 Resilience and Sustainability Supply Chain Network Design: A Systematic and Bibliometric Review  
Rahmi Yuniarti, Suparno, and Niniet Indah Arvitrida, Department of Industrial and Systems Engineering, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember  
Department of Industrial Engineering, Faculty of Engineering, Universitas Brawijaya, Indonesia

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

#### **First Place Winner**

ID 133 Ergonomics and Human Factors in Rice Farm: A Link for Safety and Efficiency  
Charmine Sheena R. Safflor, Christy Maria C. Sanchez and Michelle D. Enriquez, College of Engineering, Occidental Mindoro State College

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Labangan, San Jose, Occidental Mindoro, Philippines  
Klint Allen A. Mariñas, School of Industrial Engineering and Engineering Management, Mapúa University, 658 Muralla St., Intramuros, Manila, Philippines  
Yung-Tsan Jou, Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taoyuan City, Taiwan

### 2nd Place Winner

ID 669 The Impact of Corporate Governance Practices on Employee Work-Life Balance: An Empirical Study  
Sonam Chawla, Assistant Professor, Department of Organizational Behaviour and Human Resource, Jindal Global Business School, O.P. Jindal Global University, India  
Ateequr Rahman, Ph.D. Research Scholar, School of Management & Entrepreneurship, Indian Institute of Technology, Jodhpur, India

### 3rd Place Winner

ID 333 Workload Assessment of Online Classes on Teachers in Technological Institute of the Philippines -Manila  
Thea G. Espinueva, Vincent Matthew F. Labrador, Angel ShaineN. Martin, Christine Joy V. Olanosa and Mary Jo M. Santiago, Industrial Engineering Department, Technological Institute of the Philippines –Manila, Philippines  
Janina Elyse A. Reyes, Industrial Engineering Department –Adviser, Technological Institute of the Philippines – Manila, Philippines

### **High School STEM Competition**

#### 1st Place Winner

ID 412 Practice Makes Perfect: New Empirical Data and Statistical Analysis to Test Preconceived Notions  
TeiKim, Stanford Online High School, Redwood City, CA 94063, USA

#### 2ndPlace Winner

ID 677 Microplastics Pollution in Marine Life And Reduction Strategies through PET Hydrolase Enzyme Target of Ideonella Sakaiensis  
Tasfia Nuzhat, Wiley Park Girls High school, NSW, Australia

#### 3rdPlace Winner

ID 322 Development of Performance Prediction Model of Deep Neural Network-Based Solar and Air Source Heat Pump Convergence System  
Se In Jung, Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea

### **Supply Chain and Logistics Competition**

#### First Place Winner

ID 393 Backlog of Container Ships at Los Angeles Ports  
Tyler Deis, Zoe Atkins, Kashin Gupta, Duc-HuyDam and Mohamed Awwad, Industrial and Manufacturing Engineering Department, California Polytechnic State University, San Luis Obispo, CA 93407, USA

#### 2nd Place Winner

ID 7 Green -Lean Practices and Reverse Logistics: Evidence from Manufacturing Industry of a Developing Economy  
Muhammad Junaid Ahsan, PhD Scholar, Department of Economics and Management, University of Pisa, Pisa, Italy  
Muhammad Hasham Khalid, Department of Management Sciences, RiphahInternational University, Islamabad, Pakistan  
Dr Anas Iftikhar, Lancaster University Management School, Lancaster University, UK

#### 3rd Place Winner

ID 648 Do Human Resources Management (HRM) Practices Impact on Seaport Competitiveness?  
Kayode Adeyemi, Shams Rahman and Muhammad Abdulrahman  
School of Accounting, Information System and Supply Chain  
Royal Melbourne Institute of Technology (RMIT) University, Melbourne Victoria 3001 Australia

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

#### First Place Winner

ID 68 Resolving Gross Rejections in Assembly Manufacturing Plant Through 8D Methodology in Addressing High Cost of Non-Quality  
Marilou Agapay-Bigcas, Klint Allen A. Mariñas, Michael N. Young, and Yogi Tri Prasetyo, School of Industrial Engineering and Engineering Management, Mapúa University, 658 Muralla St., Intramuros, Manila 1002, Philippines  
Klint Allen A. Mariñas and Yung-TsanJou, Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taoyuan City, Taiwan  
Satria Fadil Persada, Entrepreneurship Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia

#### 2nd Place Winner

## **IEOM Society Awards – First Australian IEOM Sydney Conference, Dec. 26-28, 2022**

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ID 444 Optimization of the bicycle assembly process by applying tools Lean Manufacturing: A Case Study.  
Pamela V. Escobar-Aroyave, Yakcleem Montero-Santos, Ramiro V. Saraguro-Piarpuezan, Jenyffer A. Yépez-Chicaiza and Edgar V. Lema-Cáceres, Facultadde Ingenieríaen Ciencias Aplicadas, Universidad Técnica del Norte, Ibarra, Ecuador

3rd Place Winner

ID 506 A Systematic Review of the Implementation of Lean Six Sigma Tools to Improve the Logistics of Retail Businesses

Renzo Melgar Torres, Néstor Javier Plasencia Machuca and Rafael Mauricio Villanueva Flores, Facultadde Ingeniería y Arquitectura, Universidad de Lima, Perú

### **Poster Competition**

First Place Winner

ID 241 Block chain applications in the Food Supply Chain: A Systematic Review of Literature

Claudia Abad Gutiérrez & Flavia Estrada Florez, Engineering and Architecture School, Universidad de Lima, Peru  
Rosa Patricia Larios-Francia, Research Professor, Engineering and Architecture School, Universidad de Lima, Peru

2nd Place Winner

ID 583 Hybrid Miata

Eng. Vajidullah Molvizadah, Graduate student in Industrial Technology, Jordan College of Agricultural Sciences and Technology, California State University, Fresno, California, United States of America

Dr. Athanasios "Alex" Alexandrou, Professor and Project Supervisor, Jordan College of Agricultural Sciences and Technology, California State University, Fresno, California, United States of America

3rd Place Winner

ID 552 Gentle and Energy-Efficient Pneumatic Conveying of Solids

Adriano Gomes de Freitas and Luis Alberto Martinez Riascos, Postgraduate Program in Energy, Federal University of ABC (UFABC), Santo André, SP, Brazil

Jose Eduardo, Munive-Hernandez, Faculty of Engineering and Informatics, University of Bradford, West Yorkshire, United Kingdom

Ruiping Zou, Lab for Simulation and Modelling of Particulate Systems (SIMPAS), Monash University, Clayton, Australia

### **Best Track Paper Award in Sustainable Manufacturing**

ID 348 Aligning Education and Workforce Training with Industry needs: A perspective on human capital development

Nelson Sizwe Madonsela, Faculty Engineering and the Built Environment, University of Johannesburg, Auckland Park, South Africa

### **Best Track Paper Award in Supply Chain**

ID 577 Bridging the Gap Between Cloud ERP and Enterprise Resilience: A Systematic Literature Review

Imran Ali, Senior Lecturer in Operations and Innovation Management, School of Business and Law, Central Queensland University, Melbourne,

Australia, Ngoc Dang Khoa Nguyen, PhD Scholar, School of Business and Law, Central Queensland University

### **Best Track Paper Award in Education Management**

ID 632 Are the knowledge and skills achieved by students through the university study congruent with their future career choice?

Dr. Sabrina Fawzia, Senior Lecturer, School of Civil Engineering, Queensland University of Technology, Australia

Dr. Kazi Saidul Islam, Lecturer, School of Business and Law, CQUniversity, Australia

Dr. Azharul Karim, Professor, School of Mechanical, Medical & Process Engineering, Queensland University of Technology, Australia

### **Best Track Paper Award in Operations Management**

ID 642 Relocation activities for the development of competitiveness and employment situations

Janne Heilala, Dissertation Researcher, Mechanical Engineering, Department of Mechanical Engineering, University of Turku, Faculty of Technology, Turku, Finland

Jussi Kantola, Professor, Mechanical Engineering, Department of Mechanical Engineering, University of Turku, Faculty of Technology, Turku, Finland

Antti Salminen, Professor, Mechanical Engineering, Department of Mechanical Engineering, University of Turku, Faculty of Technology, Turku, Finland

Wallace Bessa, Associate Professor, Smart Systems, Department of Mechanical Engineering, University of Turku, Faculty of Technology

Turku, Joukahaisenkatu3-5, 20520, Finland