



IEOM Society

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2022 IEOM Awards – 7th North American Orlando Conference

IEOM Distinguished Academic Leadership Award

Dr. Randy Avent
President
Florida Polytechnic University
Florida, USA

Amatrol Innovation and Curriculum Development Award

Dr. Sagit Kedem-Yemini
Logistics Department
Sapir Academic College, Sderot, Israel

Dr. Tali Freed
Director, PolyGAIT-RFID Research and Development Center
Professor, Industrial and Manufacturing Engineering Department
California Polytechnic State University
San Luis Obispo, California, USA

Hamid R. Parsaei Global Distinguished Educator Award

Dr. Abdelaziz Berrado
Professor and Chair, Department of Industrial Engineering
The Ecole Mohammadia d'Ingénieurs (EMI), Rabat, Morocco

Distinguished Industry Leadership Award

Duane Davis, MD
Chief Physician Executive
AdventHealth Institutes
Orlando, Florida, USA

Ms. Donna Slyster
Senior Vice President and CIO
Saddle Creek Logistics Services
Florida, United States

Distinguished Educator Award

Dr. Regiane Relva Romano
Professor and Head of Smart Cities at Facens University
Advisor to Brazil's Ministry of Science, Technology, Innovation and Communication, Brazil

Distinguished Industry Achievement Award

Ms. Jessica Ascough
Chief Software Architect, AI Solutions Architect, Data Scientist
L3Harris Technologies, Florida, USA

H.D. Polumbo Jr., Maj Gen USAF (retired), Founding Partner and Senior Consultant
Two Blue Aces LLC, Winter Haven, Florida, USA

Distinguished Professor Award

Dr. Timothy Kotnour
Lockheed Martin St. Laurent Professor
Department of Industrial Engineering and Management Systems

University of Central Florida
Orlando, Florida, USA

Outstanding Professor in Business Management

Dr. James Mennie
FIPR Business Director
Florida Polytechnic University
Lakeland, Florida, USA

Outstanding Professor in Simulation Award

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

Outstanding Teaching Award in Supply Chain

Alper Senol
Professor- Supply Chain Management
Miami Dade College
Miami, FL, USA

Industry Solutions Award

Hailey Skoglund
Data Analyst
The Walt Disney Company
Orlando, Florida, USA

Innovation and Entrepreneurship Award

Dr. Ahmed Kamel
Senior Key Expert, Additive Manufacturing and Innovation
Siemens Energy
Orlando, Florida, United States

Woman in Industry and Academia Award

Kay M. Stanney, Ph.D.
CEO and Founder, Design Interactive, Inc.
Member, National Academy of Engineering (NAE)
Orlando, Florida, USA

Dr. Mansooreh Mollaghasemi
Associate Professor
Industrial Engineering & Management Systems Department
University of Central Florida
Orlando, Florida, USA

Global Business Management Education Award

Professor Alex Frino
Deputy Vice-Chancellor (Global Strategy)
University of Wollongong
Wollongong, NSW, Australia

Industry 4.0 Award

Lina Khan
Systems Engineer
Strategic Missile Defense
Lockheed Martin Space
Titusville, Florida, United States

STEM Teaching and Learning Award

Dr. Mary Vollaro
Professor and Chair
Department of Mechanical Engineering and Environmental Engineering
Florida Polytechnic University
Lakeland, FL USA

Diversity and Inclusion Award

Yazeli Cruz, Medallia
Expert Services / Latinx@Medallia Lead
Medallia, Washington, DC, USA

Charles W. Davis, Jr., Ph.D.
Associate Professor, Valencia College, Orlando, FL 32811

IEOM Distinguished Service Award

Dr. Shahram Taj, Chair and Professor, Department of Data Science & Business Analytics, Florida Polytechnic University, USA

Dr. Ahmad Elshennawy, Professor, Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL, USA

IEOM Outstanding Service Award

Dr. Reinaldo Sanchez-Arias, Assistant Chair Department of Data Science and Business Analytics, Assistant Professor of Data Science, Florida Polytechnic University, Florida, USA

Dr. Doga Demirel, Assistant Professor and Assistant Chair of the Computer Science Department at Florida Polytechnic University, Florida, USA

Dr. Hayder Zghair, Assistant Professor of Industrial Engineering, Southern Arkansas University, USA

Outstanding Student Academic Award

Magelee Alexandria Delgado, BS in Business Analytics with a concentration in Logistics and Supply Chain Management

Outstanding Student Leadership Award

Yordanos Jewani, Florida Polytechnic University

Student Chapter Faculty Advisor Award

Dr. Jing Hou
Assistant Professor
Department of Data Science and Business Analytics
Florida Polytechnic University

Dr. James Mennie
Business Director – FIPRI
Department of Data Science and Business Analytics
Florida Polytechnic University

Completion Awards

Undergraduate Student Paper Competition Sponsored by SIEMENS

First Place Winner

ID 133 Applying CAD/CAE/CAM Techniques for Optimizing the Design and Reducing the Cost of a Pediatric Stander
Carlos Arenas-Calvo, Sebastián Gifford-Velasquez, Alberto Flores-Perez, Juan Quiroz-Flores and Martin Collao-Diaz
Facultad de Ingeniería y Arquitectura
Universidad de Lima, Lima, Perú

2nd Place Winner

ID 02 Strategic perspective to improve the environmental sustainability of the copper mining industry in Peru
Gabriela Chumacero-Mamani, Claudia Rossana Chávez-Yáñez and Edilberto Miguel Ávalos-Ortecho, Faculty of Engineering and Architecture
Universidad de Lima, Lima, Perú

ID 276 Assessing the Effect of Physical Health Struggles of the Frontline Delivery Riders to their Mental Workload Using NASA TLX
Jaimelhen M. Aviñante, Roland Batucal, Roi Vincent B. Limin, Rose-Ann P. Pasiona, Danica Myle B. Tibayan and Janina Elyse A. Reyes,
Industrial Engineering Department, Technological Institute of the Philippines-Manila, Philippines

3rd Place Winner

ID 162 Productivity Increase Through the Application of Lean, TQM and SLP Tools in the Peruvian Craft Brewery Cluster
José Ulloa-Durand, Ander Vargas-Altamirano, Alberto Flores-Pérez, Juan Quiroz-Flores and Martín Collao-Diaz
Facultad de Ingeniería y Arquitectura
Universidad de Lima, Lima, Perú

ID 519 Effects of Sleep Quality on the Fatigue Level of Students during COVID-19 Pandemic

Ma. Janice J. Gumasing, Julianne Mikhaella C. Delos Reyes, Louis Miguel C. Dural, Julia Sofia D. Mangaoang, and Gaea Marithe W. Victor
School of Industrial Engineering and Engineering Management
Mapua University
Muralla St, Intramuros, Manila, Philippines

Undergraduate Research Competition

First Place Winner

ID 154 Integrating Virtual Reality and Motion Capture in Unity 3D for the Training of Children with Cerebral Palsy
Xiaoxu Ji, Department of Biomedical, Industrial and Systems Engineering, Gannon University, Erie, USA
Kristen Snarski, Department of Physical Therapy, Gannon University, Erie, USA
Arnon Ashkenazi, Ethan Swierski and Davide Piovesan, Member, IEEE, Department of Biomedical, Industrial and Systems Engineering
Gannon University, Erie, USA

2nd Place Winner

ID 344 Gen Z's Attitude to Cultural Appropriation: a Case Study of The Appointment of Pon Papua's Ambassador
Riza Yuli Astuti and Yanuarita Kusuma Permata Sari
Communication Science Department
Faculty of Digital Communication and Hotel & Tourism
Bina Nusantara University, Jakarta, Indonesia

3rd Place Winner

ID 473 Comparing backpropagation-based neural networks and deep learning to predict the NASA Task Load Index
Gabriel Perez, Juanita Gonzalez and Dr. Luis Carlos Rabelo, Department of Industrial Engineering & Management Systems, University of
Central Florida, Florida

Graduate Student Paper Competition Sponsored by EATON Corporation

First Place Winner

ID 617 Development of a E-bike sharing system through the use of IDES Method
Curzio Pagliari and Martina Marruganti, Master Degree Student, Department of Industrial Engineering, Alma Mater Studiorum University of
Bologna, Bologna, Italy
Leonardo Frizziero, Senior Assistant Professor, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna,
Bologna, Italy

2nd Place Winner

ID 435 Big Data for Village-level Smart Farms
Eric De Vera Reynoso, School of Industrial Engineering and Engineering Management, Mapua University, Manila, Philippines
Grace Lorraine Intal, School of Information Technology, School of Industrial Engineering and Engineering Management, Mapua University,
Manila, Philippines

3rd Place Winner

ID 67 COVID-19 Vaccination Intention in Indonesia: A Comprehensive Conceptual Model
Tri Widiyanti and Romadhani Ardi, Department of Industrial Engineering, Faculty of Engineering
Universitas Indonesia, Depok, Indonesia
Himma Firdaus, National Research and Innovation Agency of the Republic of Indonesia, Tangerang Selatan, Indonesia

Master Thesis Competition

First Place Winner

ID 576 Unlocking the Full Potential of Augmented Reality for Decision Making Under Battlefield Stress
Betsy Guzmán
Department of Industrial Engineering and Management Systems
University of Central Florida
Orlando, Florida, USA

2nd Place Winner

ID 262 Lean Construction Analysis of the Interior Project
Dinda Ayu Nawangsasi and Zulfa Fitrikatrinasari, Department of Industrial Engineering
Universitas Mercu Buana, DKI Jakarta, Indonesia

3rd Place Winner

ID 185 Supply Chain Coordination Under Retail Competition: Literature Review and Research Opportunity
Dewi Rahmasari and Ninietl. Arvitrida
Department of Industrial Engineering
Institut Teknologi Sepuluh Nopember (ITS)
Surabaya, Indonesia

ID 191 Evaluation of the Implementation of Construction Safety Management System During The COVID-19 Pandemic in Rental Apartment
Construction Projects to Improve Construction Safety Performance
Muhammad Indra Nur Pratama and Yusuf Latief, Department of Civil Engineering, University of Indonesia, Depok, West Java, Indonesia

Doctoral Dissertation Competition

First Place Winner

ID 482 Integrated Agent-Based Simulation, Machine Learning, and Optimization of the Urban Food-Energy-Water Nexus and Incorporating Renewable Electrification, and Micro Supply Chains
Marwen Elkamel and Luis Rabelo, Industrial Engineering & Management Systems Department, University of Central Florida, Orlando, FL, USA

2nd Place Winner

ID 395 Leveraging Data Analytics to Study the Impact of State Budget Cuts on Public Higher Education Institutions in USA
Praveen Kumar Guraja, Coleman College of Business, University of Pikeville, Pikeville, Kentucky, USA
M. Affan Badar and Farman A. Moayed, College of Technology, Indiana State University, Terre Haute, Indiana, USA
Christopher J. Kluse, Department of Engineering Technology, Bowling Green State University, Bowling Green, Ohio, USA

3rd Place Winner

ID 113 Preoperative Predictors for 30-day Postoperative Emergency Department Visit after a Bariatric Surgery
Pawan Bhandari and M. Affan Badar, Department of Applied Engineering and Technology Management, Indiana State University, IN, USA
Christopher Kluse, College of Technology, Architecture and Applied Engineering, Bowling Green State University, Bowling Green, OH, USA
Suhansa Rodchua, School of Technology Graduate Programs, University of Central Missouri, Warrensburg, MO, USA

4th Place Winner

ID 555 A Framework for Assessing the Maturity Level of Implementing Quality 4.0 in Higher Education Institutions
Bandar Alzahrani, PhD student and Ahmad Elshennawy, Professor, Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, Florida, USA

Human Factors and Ergonomics Competition

First Place

ID 151 Competence management in Industry 4.0: An innovative concept to support a Skill@Mgmt4.0 tool
Tiago Bastos and Juliana Salvadorinho, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), University of Aveiro, Aveiro, Portugal
Andreia Vitória, Department of Economics, Management, Industrial Engineering and Tourism (DEGEIT), Research unit in Governance, Competitiveness and Public Policies (GOVCOPP), University of Aveiro, Aveiro, Portugal

2nd Place Winner

ID 520 Effects of Academic Workload on the Burnout of Students during Online Learning
Ma. Janice J. Gumasing, Christian Jay E. Sesnorio, Henrie Louis P. Subido and Charles Kristian K. Ilo, School of Industrial Engineering and Engineering Management, Mapua University, Muralla St., Intramuros, Manila, Philippines

3rd Place Winner

ID 120 Reducing the Ergonomic Risk Level in the Production Area of a Manufacturing Company
Arturo Realyvásquez-Vargas, Karina Cecilia Arredondo-Soto, Guadalupe Hernández-Escobedo, Departamento de Ingeniería Industrial Tecnológica Nacional de México/Instituto Tecnológico de Tijuana, Tijuana, Baja California, Mexico
Jorge Luis García Alcaraz, Department of Industrial Engineering and Manufacturing, Autonomous University of Ciudad Juárez, Ciudad Juárez, Chihuahua, Mexico
Cuahtémoc Sánchez Ramírez, Division of Research and Postgraduate Studies, Tecnológico Nacional de México/Instituto Tecnológico de Orizaba, Orizaba, Veracruz, Mexico

Lean Six Sigma Competition Sponsored by Tooling Tech Group

1st Place Winner

ID 651 Applying Lean Six Sigma to Enhance the Medical devices Repair Process in Public Healthcare Sector in Egypt
Lina El-Sherif Ismail, Assistant Professor, Department of Industrial and Management Engineering, Arab Academy for Science Technology & Maritime Transport (AASTMT), Alexandria, Egypt
Heba Elhaddad, Assistant Professor, Department of Industrial Engineering, Alexandria Higher Institute of Engineering and Technology (AIET), Alexandria, Egypt
Mohamed S. Saleh, Military Technical College, Egyptian Armed Forces, Cairo, Egypt
Ayman A. Nassar, Medical Services Administration, Egyptian Armed Forces, Cairo, Egypt
Ahmed A Mohamed, Director, Solutions Engineering, Healthcare System

2nd Place Winner

ID 266 Improving Patient Experience and Processing Times in a Major Metropolitan Hospital Through the Application of a Lean Six Sigma Methodology
Michael Sedlack, Department of Electrical and Computer Engineering, University of Central Florida, Orlando, USA
Chirag Merchant, Ismael Hussein, Matthew Kenney, Nathan O'Brien, and Thomas Strock, Department of Industrial Engineering and Management, Systems, University of Central Florida, Orlando, Florida, USA

3rd Place Winner

ID 238 Failure Analysis Process Leadtime Reduction in a Manufacturing Company through Eliminate, Combine, Re-arrange, and Simplify (E-CRS) Concept
Gerlyn Calica Altes, Klint Allen A. Mariñas, Michael N. Young, and Yogi Tri Prasetyo, School of Industrial Engineering and Engineering Management, Mapúa University, Manila, Philippines
Klint Allen A. Mariñas and Yung-Tsan Jou, Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taiwan
Reny Nadlifatin, Department of Information Systems, Institut Teknologi Sepuluh November, Kampus ITS Sukolilo, Surabaya, Indonesia

High School STEM Competition

1st Place Winner

ID 665 The Relationship Between Achievement in and Attitude toward Mathematics in the Digital Age
Alina Zhong, Stanford Online High School, California, USA

2nd Place Winner

ID 581 Design a Digital Music Melody Hearing Test
Mason Chen, Stanford Online High School, San Jose, CA, USA

3rd Place Winner

ID 563 Widget Design Project (Extended Fighting Glove)
Zaeed Saif, Washtenaw Technical Middle College, Ann Arbor, Michigan, United States

Innovative Idea Competition

ID 8A Design, Verification, and Testing (DVT) Protocol for a Detection System of Acoustic Signals
Sarah Ali, Clinical Assistant Professor, Department of Engineering, Loyola University Chicago, Chicago, Illinois, USA

Simulation Competition

1st Place Winner

ID 338 Machining process optimization using simulation in Flexsim
Renan Pontes, Samuel Francisco das Virgens, Talia Pontes, Rodrigo Luiz Gigante and Henrique Ewbank, Facens University, Sorocaba, São Paulo, Brazil

Poster Competition

1st Place Winner

ID 322 Mathematical Analysis of Self-Heating in Materials with High Dissipation
Irina Viktorova, Leo Rebholz, and Victoria Luongo, School of Mathematical and Statistical Sciences, Clemson University, South Carolina, USA
Abdullah Kose, Graduate Student, Department of Automotive Engineering, Clemson University, Clemson, South Carolina, USA

2nd Place Winner

ID 433 Development Food Heating Application Based on Mood Identification Using Intelligent Automatic Heartbeat Recognition System
Nicholas Jason Antonio, Yosse Ricardo Nobel, and Winda Astuti, Automotive and Robotics Program, Computer Engineering Department
BINUS ASO School of Engineering, Bina Nusantara University, Jakarta, Indonesia

Senior Design Project Competition Sponsored by Tooling Tech Group

ID 99 Pharmaceutical Warehouse Product Flow Optimization
Hecyaliz Rubero, Leslie Ann Feliciano, Abneris Ayala and Jannette Pérez-Barbosa
Department of Engineering, Universidad Ana G. Méndez, Gurabo, Puerto Rico, USA

Supply Chain and Logistics Competition

First Place Winner

ID 603 Risk Factors Analysis in Apparel Supply Chain Management
Md Mamunur Rashid and Mohammed Raihan Uddin
Department of Industrial & Production Engineering
Bangladesh University of Textiles, Dhaka, Bangladesh

COVID Data Analytics Competition

First Place Winner

ID 247 Construction Company Performance Trends during the Covid-19 Pandemic
Andie M. Endrijatno and Isti Surjandari
Industrial Engineering Department
Universitas Indonesia, Jakarta, Indonesia

2nd Place Winner

ID 492 Development of COVID-19 Regional Forecast Models Using Machine Learning Approaches
Md Mamunur Rashid and Ben D. Sawyer, Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, Florida, United States

Undergraduate Student Paper Competition Sponsored by SIEMENS - Onsite

First Place Winner

ID 457 Application of The Bpm-Kraljic Model to Improve Supply Management in An Agro industrial Mse
Ljubica Kovac-Alvarado and Camila Rivera-Gómez, Thesis writers, Universidad de Lima, Lima, Perú
Edilberto Miguel Avalos Ortecho, Professor, Department of Industrial Engineering, Universidad de Lima, Lima, Perú

2nd Place Winner

ID 73A Case for Solar Energy System Dashboards to Validate Performance Warranties
Amaya McNealey, College of Engineering
North Carolina Agricultural and Technical State University, Greensboro, NC, USA
Esteban A. Soto and Lisa B. Bosman
Purdue Polytechnic Institute, Purdue University, West Lafayette, IN, USA

Graduate Student Paper Competition Sponsored by Eaton

First Place Winner

ID 490 Application of Network Models to Assist in Data Science Curriculum Using Program and Course Learning Outcomes
Orel Yoshia, Graduate Program in Computer Science –Data Science, Florida Polytechnic University, Lakeland, Florida,
Dr. Reinaldo Sanchez-Arias, Assistant Chair Department of Data Science and Business Analytics, Assistant Professor of Data Science,
Florida Polytechnic University, Florida, USA
Dr. Shahram Taj, Chair and Professor, Department of Data Science & Business Analytics, Florida Polytechnic University, Lakeland, Florida,
USA

2nd Place Winner

ID 81 Fine-Tuning the Parameters for Solving the Multi-Objective D-FACTS Optimal Allocation Problem
Eduardo Castillo Fatule, Department of Industrial, Manufacturing and Systems Engineering, The University of Texas at El Paso, Texas, USA
Yuanrui Sang, Department of Electrical and Computer Engineering, The University of Texas at El Paso, El Paso, TX, USA
Jose Espiritu, Department of Mechanical and Industrial Engineering, Texas A&M University, Kingsville, Texas, USA

3rd Place Winner

ID 50 Holistic QA: Software Quality Assurance for the Machine Learning Era
Shane Downing and M. Affan Badar
Department of Applied Engineering and Technology Management
Indiana State University, IN, USA

Lean Six Sigma Competition Sponsored by Tooling Tech Group – Onsite

First Place

ID 186 Lean Healthcare Transformation Model: Success story from Oman
Yousuf Al Khamisi, Sultan Qaboos University, Oman

2nd Place Winner

ID 514 Product Development by Means of Industrial-Design Structure (IDeS) Method. Studies for Future Mobility Solutions
Christian Leon-Cardenas, Leonardo Frizziero, Giulio Galie, Department of Industrial Engineering, Alma Mater Studiorum University of
Bologna, Viale Risorgimento, Bologna, Italy

3rd Place Winner

ID 554 Case Study on Using a Time Study Project to Improve Manufacturing Efficiency and Safety
Dr. Mahmoud Al-Odeh, Professor, School of Technology
Bemidji State University, Bemidji, MN, USA

Supply Chain and Logistics Competition – Onsite

ID 345 Marketing Sustainability Investment
Wenqing Zhang, Yorkville University, Canada

Doctoral Dissertation Competition – Onsite

ID 346 Navigating with Sharks: How the Persuasive Usability Framework Help To Create Successful Phishing Emails
Erica Castilho-Grao, Graduate Researcher, Department of Industrial Engineering and Management Systems, University of Central Florida
Orlando, Florida, USA