IEOM Distinguished STEM Leadership Award

Ronald Mason, Jr., J.D.
President,
The University of the District of Columbia, Washington D.C.

Dr. Mohammed Aleissa
Cultural Attaché
Saudi Arabian Cultural Mission, Fairfax, VA 22031

IEOM Distinguished Achievement Awards

Dr. Bruce Kramer
Senior Advisor
NSF

IEOM Distinguished Educator Awards

Dr. Russell R. Barton
Distinguished Professor of Supply Chain and Information Systems, Smeal College of Business
The Pennsylvania State University, University Park, PA, USA

Dr. Tonya Smith-Jackson
Professor, Department of Industrial and Systems Engineering
North Carolina Agricultural and Technical State University
Greensboro, NC, USA

Dr. Mohsen A. Jafari
Professor and Department Chair
Department of Industrial and Systems Engineering, School of Engineering
Rutgers, The State University of New Jersey, Piscataway, NJ 08854

Dr. Jose Luis Guerrero-Cusumano
Associate Professor of Operations and Information Management, McDonough School of Business
Georgetown University, Washington D.C., USA

Dr. Rupy Sawhney
Professor and Heath Fellow in Business & Engineering
Department of Industrial and Systems Engineering
Executive Director of CASRE (Center for Advanced System, Research and Education)
University of Knoxville, Knoxville, Tennessee, USA
IEOM Distinguished Industry Awards

Mr. Raj Batra
President, Siemens USA Digital Factory Division
Atlanta, GA, USA

John H. James, Jr.
Executive Director
Missile Defense Agency

IEOM Research Leadership Award

Dr. Jack L. Price
Director of Research
Naval Surface Warfare Center, USA

IEOM STEM Ambassador Awards

Dr. Claudia Rankins
Program Officer, Directorate for Education and Human Resources
NSF

Dr. Brandi Toliver
Academic Program Director
National Institute of Science and Technology (NIST), USA

Derek W. McGowan
Diversity Program Manager-Higher Education Institutions, Global Diversity & Inclusion
Lockheed Martin Corporation, USA

IEOM Diversity Award

Veronica L. Nelson
Executive Director
Advancing Minorities’ Interest in Engineering (AMIE), Washington D.C.

Andrew Swiecki
Senior Director of Strategy
Siemens PLM Software, Livonia, MI

IEOM Young Researcher Award

Faisal Aqlan, Ph.D.
Certified Lean Silver (IBM) and Six Sigma Black Belt (ASQ)
PI & Director: NSF RET Site in Manufacturing Simulation and Automation
Founder & Coordinator: System Simulation and Automation Lab
Assistant Professor of Industrial Engineering and Assistant Prof. of Master of Manufacturing Management
Penn State University, The Behrend College
5101 Jordan Road, Erie, PA 16565 USA

IEOM Woman in Industry and Academia Award

Dr. Pamela McCauley
Program Director - Innovation Corps- National Innovation Network Sites Program (I-Corps Sites)
National Science Foundation
Professor and Director of the Ergonomics Laboratory, Dept. of Industrial Engineering and Management Systems
University of Central Florida
IEOM Teaching Excellence Awards

Dr. Gursel Suer
Industrial and Systems Engineering
Ohio University
Athens, Ohio

Prof. Clinton Aigbavboa, Ph.D.
Vice Dean: Postgraduate Studies, Research and Innovation
Head: Sustainable Human Settlement and Construction Research Centre
Faculty of Engineering and the Built Environment
University of Johannesburg, Johannesburg, RSA
Editor - Journal of Construction Project Management and Innovation (JCPMI)

IEOM Distinguished Service Awards

Dr. Devdas Shetty
Dean, School of Engineering and Applied Sciences
University of the District of Columbia, Washington, DC

IEOM Outstanding Service Awards

Dr. Pule Kholopane
Associate Professor
Head of Department: Quality and Operations Management
Department of Quality and Operations Management
Faculty of Engineering and the Built Environment
University of Johannesburg
Johannesburg, South Africa

Mohammed Mannan
Software Engineer, Social Security Administration
Adjunct Professor, University of the District of Columbia, Washington, DC

Ms. Ann Lankford
School of Engineering and Applied Sciences
University of the District of Columbia, Washington, DC

IEOM Special Recognition Awards

Dr. Abby Ilumoka Nwabizour
Program Director, Engineering Education
NSF

Dr. Mohamad Sepehri
Dean, School of Business and Public Administration
UDC

IEOM STEM HS and Middle School Awards

ID 037 An Alerting Device to Prevent Death Risk in Dental Treatment
Kanticha Hothai and Thanadon Pitakwarin, Princess Chulabhorn's College Chonburi, Thailand
Undergraduate Student Paper Competition Awards Sponsored by SIEMENS

1st Place
Dalal Al-Munayes, Fatima Al-Mahdi, Sarah Bahman, Sara Sadeq, Shahad Bojbara and Lawrence Al-Fandi
Industrial Engineering Department, American University of the Middle East, Kuwait
“Reduction of Patient Prolong Length of Stay in the ED using Lean Six Sigma”

Graduate Student Paper Competition Awards sponsored by EATON Corporation

1st Place
André Mendes de Carvalho, University of Minho, Guimarães, Portugal and Sociotechnical Systems Research Center, Massachusetts Institute of Technology, MA, United States
Paulo Sampaio, University of Minho, Guimarães, Portugal
Eric Rebentisch, Sociotechnical Systems Research Center, Massachusetts Institute of Technology, Cambridge, MA, USA
“Business Excellence Models: Supporting the Cultural Perspective to Operationalize Excellence Sustainability in Manufacturing Organizations”

2nd Place
Meshal AlOtaibi, Architectural Engineer, and PhD candidate, University of Kansas, Lawrence, KS, USA
“The Effect of Ceiling Height on the Performance of Air-Distribution Systems Based on thermal Comfort and it’s Environmental Effects”

3rd Place
Seyedmohammad Salehi, University of Delaware, Newark, USA
Mahgsoud Amiri, Allameh Tabataba’i University, Tehran, Iran
Saeed Ramezanzadeh, Amin Ouml-e-entezami University, Tehran, Iran
Mohammadali Abedini, University of Tasmania, Launceston, Tasmania 7250, Australia
“An Enhanced VIKOR MCDM Model to Solve Complex and Multi-Objective Optimization Problems”

Senior Design Project Competition Awards

1st Place
Anfal Al-Safar, Eman Al-Khayat, Hajar Al-Shawaf, Hawra Othman, Shahad Al-Shawaf, and Magdy Helal, Industrial Engineering Department, American University of the Middle East, Kuwait
“Solving the School Bus Routing Problem at a Local School in Kuwait”

2nd Place
Pradeep K Behera, Professor and Chair, Department of Civil Engineering, School of Engineering and Applied Sciences, University of the District of Columbia, Washington DC, USA
“Can Senior Capstone Project Course provide Real-world Work Experience?”

**Doctoral Dissertation Awards**
Vahab Vahdat, Department of Mechanical and Industrial Engineering, Northeastern University, MA, USA
“Simulation and Optimization Methods Applied to Outpatient Health Center Operations”

**Best Poster Awards**

1st Place
Charles Mutigwe and Myra Zhinin, Western New England University, Springfield, Massachusetts, USA
“The Case for Unified Query Language”

2nd Place
Argelia Vargas-Moreno, Leonardo Gabriel Hernández-Landa, Elva Patricia Puente-Aguilar and Patricia Gómez-Fuentes
Industrial Engineering and Management Area, Facultad de Ciencias Químicas, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, NL, 66451, México
“Application of Open Jackson Networks for Time and Costs Reduction in the Quality Control Process in an Electronic Assembler”

Javel Wilson, University of the District of Colombia (UDC), USA
“Metal Matrix Nanocomposite Powder for Laser Powder Bed Fusion”

Olaseni Adeniji, University of the District of Colombia (UDC), USA
“Application of SWIR Camer in the monitoring and Control of Overhang Quality in Selection Melting”

3rd Place
Guelmani-Hesnaoui Naima, Houamdi-Idir Ouiza, Mellak Abderrahmane, and El Heit Kaddour, Mouloud Mammeri University, Algeria
“Study of the Impact of Vegetation management on Microclimatic Dynamics and Grape Quality”

**Undergraduate Research Competition Awards**

1st Place
Anwar Ebrahim, Fatemah AbdulRahman, Fatemah Mohammad, Hala Alhouti, Hessah Alrabiah, and Rifat Ozdemir
Industrial Engineering Department, American University of the Middle East (AUM), Kuwait
“A Two Stage Risk Assessment and Hazard Prevention Approach: A Case Study for Noise Hazard in Oil Industry”

2nd Place
Paola Puentes Vera, Astrid Gándara Martínez and Jenny Díaz Ramírez, Universidad de Monterrey, Nuevo Leon, Mexico
“Improvement of Material Supply System through Kitting Concept and IT Solutions”

**Lean Six Sigma Competition Award**
Nourhan Hassan, Lina Hamdan, Noor Khourshed and Walid Smew, Industrial Engineering Department, American University of the Middle East (AUM), Kuwait
“Utilization Improvement of Insulation Material Using Lean Six Sigma in Duct Manufacturing Company in Kuwait”

**Best Track Papers Awards**

Case Study
ID 210 An Analysis of Cargo Release Services with Process Mining: A Case Study in a Logistics Company
Sagit Kedem-Yemini, Naor S. Mamon and Gal Mashiah, Logistics Department, Sapir Academic College, Sderot, Israel

Case Studies
ID 237 Supply Model Design for a Dairy Company: A Case Study
Carlos A. Machado Orges, Diego J. Haro Morales, Leandro L. Lorente Leyva, Yakcleem Montero Santos and Israel D. Herrera Granda, Facultad de Ingeniería en Ciencias Aplicadas, Universidad Técnica del Norte, Ibarra, Ecuador
Ivet Challenger Pérez, Facultad de Ingeniería Informática y Matemática, Universidad de Holguín, Cuba

Data Analytics
ID 35 Using Categorical Variables in Linear Models
Jolene Liu, Sarah Kim, and Cesar Acosta-Mejia, Daniel J. Epstein Department of Industrial & Systems Engineering, University of Southern California, Los Angeles, CA 90089, USA

Design and Analysis
ID 192 The Influence of Consumer Behavior on Purchase Decision on Regression-based Model: Application to Portable Kitchen
Muhammad Reza Do. Bagus, Information System Department, School of Information Management and Computer Tidore Mandiri (STMIK Tidore Mandiri), North Mollucas Province, 97812, Indonesia

**E-Business/E-Service**

ID 94 Alternative Digital Packaging Design Strategies to gain visibility in E-tailing
Leila Denmamode, School of Innovative Technologies and Engineering, Department of Creative Arts, Film and Media Technologies, University of Technology, Mauritius, La Tour Koenig, Mauritius.
June Siok Kheng, Faculty of Applied and Creative Arts, Universiti Malaysia Sarawak, Malaysia

**Energy**

ID 145 Rice Husk Briquette with Shredded Paper Additives: a Potential Energy Source at par with the Progress of Bangladesh
Muhammad Mahbubul Alam, Professor, Mechanical Engineering Department, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh
Manik Miah, Assistant Engineer, Titas Gas Transmission and Distribution Company Limited, Dhaka, Bangladesh

**Engineering Education**

ID 214 Equipping graduates for the future: The need for higher institutions to collaborate
John Aliu, Dept. of Civil Engineering, Faculty of Engineering and the Built Environment, University of Johannesburg, RSA
Clinton Aigbavboa, Sustainable Human Settlement and Construction Research Centre, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa.

**Undergraduate Engineering Education**

ID 223: Design of an Architectural Traceability as an Observatory for Decision Making in Undergraduate Curriculums
Lina Nataly Alvarado Riaño, and Jefferson Aldamer Rubiano Forero, Department of Industrial Engineering, Investigative group of Industrial and Environmental Processes (GIPIA), University of Cundinamarca, Bogotá D.C - Soacha, Colombia

ID 286 Empowering Undergraduate Student Researchers Through Inclusive Research Learning Systems
Tonya Smith-Jackson, Department of Industrial and Systems Engineering, North Carolina Agricultural and Technical State University, Greensboro, NC 27411, USA
G. Don Taylor, Learning Systems Innovation and Effectiveness, Virginia Tech, Blacksburg, VA 24061, USA

**Engineering Management**

ID 426 Investigating the relationship between Lean Six Sigma and Innovation
Mohamed Alblooshia and Mohammad Shamsuzzaman, bSustainable Engineering Asset Management (SEAM) Research Group, Department of Industrial Engineering and Engineering Management, University of Sharjah, UAE

**Environmental Engineering**

ID 205 Design of a Lab-scale Anaerobic Biodigester for Renewable Energy from Municipal Solid Waste
Leandro L. Lorente Leyva, Yakcleem Montero Santos, Israel D. Herrera Granda, Carlos A. Machado Orges, Santiago M. Vacas Palacios and Robert M. Valencia Chapi, Facultad de Ingeniería en Ciencias Aplicadas, Universidad Técnica del Norte, Ibarra, Ecuador

**Financial Engineering**

ID 5 Mixtures-based Value at Risk Estimates of Financial Stocks
Raven Castro, Shengyu Huang, Jolene Liu, and Cesar Acosta-Mejia, Daniel J. Epstein Department of Industrial & Systems Engineering, University of Southern California, Los Angeles, CA 90089, USA
Rafael Blay, Department of Computer Science, University of Southern California, Los Angeles, CA 90089, USA

**Healthcare**

ID 82 Multiple Criteria Master Surgical Scheduling Problem: A Case Study
Amirhosein Mohsenigol, Dept. of Industrial Engineering, Mazandaran University of Science and Technology, Mazandaran, Iran
Ashkan Mozdir, Department of Industrial Engineering, K. N. Toosi University of Technology, Tehran, Iran
Shabnam Bozorgzadeh, Dept. of Obstetrics and Gynecology, Iran University of Medical Sciences, Tehran, Iran
Azin Samiei, Bachelor of Industrial engineering, West Tehran Islamic Azad University, Tehran, Iran
Behnood Ghasriani, Department of management, Islamic Azad University Central Tehran Branch, Tehran, Iran

**Human Factors**

ID 282 Ergonomic Assessment of Snow Shovels Using Digital Human Modeling
Carly Wolkiewicz, Katherine Collins and Faisal Aqlan, Industrial Engineering Department, Penn State Erie, The Behrend College, Eme, PA 16563, USA
Osama T. Al Meanazel, The Hashemite University, Zarqa 13115, Jordan

ID 346 Intertwining Trilogy Premises of Hope, Social Support and Trust Relieving Work Stress Influencing to Well-being
Hwi-Chie Ho, Industrial Engineering Department, Bina Nusantara University, Jakarta, Indonesia
Information system and management:
ID 198 How Much Demographically Diversified Are They in Making Decision to Invest in ICT Companies? A Study on Two Million Bangladeshi Investors
Md. Rakibul Hasan and Asif Imtiaz, Lecturer, Department of Management Information Systems, Faculty of Business Studies, University of Dhaka, Dhaka – 1000, Bangladesh
Md. Shakil Ahmad, Department Head- Advisory Services, United Finance Limited, Dhaka-1000
Mina Mahbub Hossain, Assistant Professor, Dept. of Tourism and Hospitality Management, University of Dhaka, Bangladesh

Inventory
ID 401 A multi-product multi-supplier combined inventory and suppliers’ selection model
Mohamed Grida and Boshra Taha, Industrial Engineering Department, Zagazig University, Zagazig, Egypt
Abdel Nasser Zaied, Faculty of Computer and Informatics, Zagazig University, Zagazig, Egypt

Lean
ID 265 Cost Based Overall Equipment Effectiveness Analysis via Application of Value Stream Mapping
Sadaf Zahoor and Walid Abdul-Kader, Department of Mechanical, Automotive, and Materials Engineering, University of Windsor, Windsor, N9B 3P4, Canada
Hamza Ijaz, Atif Qayyum Khan, Zeeshan Saeed and Shoaib Muzaffar, Department of Industrial and Manufacturing Engineering, University of Engineering and Technology, Lahore, Pakistan

ID 283 Analysis of Production Layout Alternatives Using Lean Techniques and Monte Carlo Simulation
David Henry, David Shindledecker and Faisal Aqlan, Master of Manufacturing Management (MMM) Program Penn State Erie, The Behrend College, Erie, PA 16563, USA

Logistics
ID 400 Modeling Prepositioning of Resources for Humanitarian Logistics
Shaligram Pokharel, Department of Mechanical and Industrial Engineering, Qatar University, Doha, Qatar
Jose Holguin-Veras, Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute, Troy, NY, USA

ID 271 Reliable capacitated single allocation hub network design under hub failure: A scenario-based approach
Zahra Booyavi, Department of Industrial Engineering, Science and Culture University, Tehran, Iran
Hamidreza Eskandari, Faculty of Management and Economics, Tarbiat Modares University, Tehran, Iran
Ehsan Teymourian, Department of Management Science and Information Systems, Rutgers, the state university of New Jersey, Newark & New Brunswick, USA

Maintenance
ID 112 Availability Based Comparison of Fixed Age and Life Cycle Cost Replacement Maintenance
Paul Amaechi Ozor and Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

Operations Research
ID 335 Warehouse Storage Assignment by Genetic Algorithm with Multi-objectives
Chi-Bin Cheng & Yu-Chi Weng, Dept. of Information Management, Tamkang University, New Taipei City, Taiwan

Effect of FSW on the Mechanical Properties and Microstructure of 6082-T6 AA
Stephen Akinlabi, Department of Mechanical and Industrial Engineering, University of Johannesburg, South Africa
Samuel Fatoba, Esther Akinlabi, Department of Mechanical Engineering Science, University of Johannesburg, South Africa

Operations Management
ID 228 Batch Sizing in Sustainable Production Systems with Imperfect Quality
Farnaz Ghazi Nezami, Department of Industrial and Manufacturing Engineering, Kettering University, Flint, MI 48504, USA
Mojtaba Heydar, School of Electrical Engineering and Computing, University of Newcastle, Callaghan, NSW 2308, Australia

ID 156 Integrating Lean, Green, and Resilience Criteria in Designing a Sustainable Food Supply Chain
Kanchan Das, College of Engineering and Technology, East Carolina University, Greenville, NC 27858, USA

ID 216 Application of open Jackson networks for time and costs reduction in the quality control process in an electronic assembler
Argelia Vargas-Moreno, Leonardo Gabriel Hernández-Landa, Elva Patricia Puente-Aguilar and Patricia Gómez-Fuentes, Industrial Engineering and Management Area, Facultad de Ciencias Químicas, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, NL. 66451, México

ID 247 Resource Scheduling Algorithm for Maintenance Planning
Sarma Yadavalli, Rikus Kellerman and Kirsten Young, Department of Industrial Engineering, University of Pretoria

166 Large Neighborhood Search for Outbound Truck Scheduling Problem in a Cross-docking
Warisa Wisittipanich and Nattapong Kamsura Department of Industrial Engineering Excellence Center in Logistics and Supply Chain Management Faculty of Engineering, Chiang Mai University

Production planning and management
ID 150 Identification and Evaluation of Critical Success Factors for Construction Projects
Antonio Carlos Pacagnella Junior, School of Applied Sciences-FCA, State University of Campinas – UNICAMP, Limeira, BRA
Marcelo Sales Paschoal, Methodist University of Piracicaba, Santa Bárbara D’Oeste - BRA
Ornella Pacífico, Universidade Estácio de Sá, Ribeirão Preto – BRA

169 An Optimization Method for Sustainable Multi-level Capacitated Production Planning with Carbon Emissions
Tao Wu, Ameya Dhaygude, Barnali Bhattacharjee Advanced Analytics Department, Dow Chemical, 48642 Midland, MI, USA

Project Management
ID 151 Block chain Technology for Efficient Management of Supply Chain
Mohamed Awwad, Sohit Reddy Kalluru, Varun Kazhana Airpulli, Madhubala Santosh Zambre, Aniket Marathe and Prasham Jain, Industrial and Systems Engineering Department, University at Buffalo, The State University of New York, Buffalo, USA

Supply Chain
ID 220 Sustainable Supply Chain Design using Two-stage Stochastic Modeling under Demand Uncertainty
Vahab Vahdat, Amir T. Namin, and Rana Azghandi, Department of Mechanical and Industrial Engineering, Northeastern University, Boston, MA 02114, USA

Sustainability
ID 457 Evaluating the sustainability of Rea Vaya System through measuring the service quality.
Omphemetse Lengana, Phindile Mabaso, Bhenkumuzi Mavuso and Sebonkile Thaba, Department of Transport and Supply chain Management, University of Johannesburg, Auckland Park, Johannesburg, RSA

Transportation
ID 399 Ridge Penalization-based Generalized Linear Model (GzLM) for Predicting Risky-Driving Index
Khadija B. Abdur Rouf, Department of Civil and Architectural Engineering, Qatar University, Doha, Qatar
Galal M. Abdella, Department of Mechanical and Industrial Engineering, Qatar University, Doha, Qatar
Khalifa N. Al-Khalifa, Department of Mechanical and Industrial Engineering, Qatar Transportation and Traffic Safety Center (QTTSC), Qatar University, Doha, Qatar