

# 8TH NORTH AMERICAN CONFERENCE on Industrial Engineering and Operations Management

*Houston,  
Texas*

HOST UNIVERSITIES



Texas A&M Engineering  
Experiment Station  
Institute for Manufacturing Systems



UNIVERSITY OF  
HOUSTON

June 12–15, 2023

ORGANIZER



IEOM Society  
INTERNATIONAL



# Sponsors and Partners



Chiang Mai University



## Organizer



# IEOM Society

"Achieving and Sustaining Operational Excellence"

[www.ieomsociety.org](http://www.ieomsociety.org)

**Industrial Engineering and Operations Management Society International**

IEOM Society International, 21411 Civic Center Dr., Suite 205, Southfield, Michigan 48076, USA  
Phone: 1-248-450-5660, Email: [info@ieomsociety.org](mailto:info@ieomsociety.org)

# Welcome to the 8<sup>th</sup> North American Conference on Industrial Engineering and Operations Management in Huston, Texas, USA

## To All-Conference Attendees:

On behalf of the IEOM Society International, we would like to welcome you to the 8th North American **International Conference on Industrial Engineering and Operations Management**, June 12-15, 2023. It is hosted by Texas A&M Engineering Experiment Station Institute of Manufacturing Systems (TEES-IMS) in collaboration with University of Houston. Venue is Hilton Hotel University of Houston. This unique international conference provides a forum for academics, researchers, and practitioners from many industries to exchange ideas and share recent developments in the fields of industrial engineering and operations management. This diverse international event provides an opportunity to collaborate and advance the theory and practice of major trends in industrial engineering and operations management. There were more than 400 papers/abstracts submitted from 30 countries. After a thorough peer-review process, more than 250 have been accepted for presentation and publication. The program includes many cutting-edge topics in industrial engineering and operations management.

This conference will address many of the issues concerning the continuous improvement of quality and service. The IEOM Society is delighted to have the following keynote speakers at the 8th North American Conference:

1. Dr. Hamid R. Parsaei, Professor of Industrial & Systems Engineering, Texas A&M University, College Station, Texas
2. Dr. Satish Bukkapatnam, Professor, Industrial & Systems Engineering, Rockwell International Professor, College of Engineering and Director, TEES Institute for Manufacturing Systems, Texas A&M University, College Station, USA
3. Dr. Vivek Anand, Vice President & Head of Technology, Deloitte Consulting, Houston, TX, USA
4. Mark A. Bolen, VP of Quality, Engineering & Fleet, Cintas Corporation, Lebanon, Ohio, United States
5. Dr. Gino Lim, R. Larry and Gerlene (Gerri) R. Snider Endowed Chair and Professor & Chair, Department of Industrial Engineering, University of Houston – University Park, Houston, Texas, USA
6. José Rivera, Chief Admin Quality Officer, MD Anderson Cancer Center, Houston, Texas, United States
7. Dr. Robert Swearingen, Head of Strategic Sourcing and Supply Chain Management, Siemens GCI, Texas, USA
8. Dr. Luis Rabelo, Professor, Department of Industrial Engineering & Management Systems, University of Central Florida, Orlando, FL, USA
9. Suresh Vaidyanathan, Chief Engineer & General Manager, Refining Business Improvement, Phillips 66, Westchase, Houston, Texas
10. Bruce Webb, Chief Pilot, Director of Aviation Education and Community Outreach, Airbus Helicopters, Inc., Prairie, Texas, USA
11. Paul Perkins, President, Amatrol, Inc., Jeffersonville, Indiana, USA
12. Dr. Magdy Akladios, Chair, Department of Physical and Applied Sciences and Professor of Occupational Safety and Health with Specializations in Industrial Hygiene or Safety, University of Houston-Clear Lake, Texas, USA

At this conference, the IEOM Society will hold its Global Engineering Education session. It will feature distinguished speakers who will discuss workforce readiness and engineering education challenges and opportunities. The IEOM Industry Solutions will showcase will also be held and feature major topics including lean, six sigma, IoT, AI, data analytics and industry best practices. The IEOM Global Supply Chain and Logistics will address the global logistic challenges. Nine panel sessions have been planned: Global Engineering Education, Data Analytics, Industry 4.0, Human Factors and Ergonomics, Supply Chain, Women in Industry and Academia, Lean Six Sigma, Using Assessment to Improve Student Learning and Curriculum and Diversity & Inclusion sponsored by Ford Motor Company.

The IEOM Society would like to express our deep appreciation to our sponsors, university partners, organization partners, exhibitors, authors, reviewers, keynote speakers, panelists, track chairs, advisors, the local committee, and the many volunteers who have given so much of their time and talent to make this unique international conference an overwhelming success.

Our conference hosts, Texas A&M Engineering Experiment Station Institute of Manufacturing Systems (TEES-IMS) and University of Houston, would like to extend a warm welcome to all participants.

Our very best wishes to all of you for a successful and memorable event.



**Dr. Satish Bukkapatnam**  
Conference Chair  
Rockwell International Professor  
and Director, TEES Institute for  
Manufacturing Systems, Texas  
A&M University, College Station



**Dr. Gino Lim**  
Conference Co-Chair  
Professor & Chair, R. Larry and  
Gerlene (Gerri) R. Snider  
Endowed Chair, Dept. of Industrial  
Engineering, University of  
Houston, Texas, USA



**Dr. Hamid R. Parsaei**  
Conference Co-Chair  
Professor of Industrial &  
Systems Engineering, Texas  
A&M University, College Station,  
Texas, USA



**Dr. Ahad Ali**  
Conference Co-Chair  
Associate Professor and  
Director of IE Program  
Lawrence Tech University  
Executive Director of IEOM



**Eric Ayanegui**  
Industry Chair  
Director Operations  
Engineering, CintasCorp.,  
Houston, Texas, USA



**Prof. Don Reimer**  
Program Chair  
Director of Membership and  
Chapters– IEOM Society  
President, The Small Business  
Strategy Group, Southfield,  
Michigan, USA

# Keynote Speakers

## Tuesday, June 13, 2023

Conference Welcome and Opening: Tuesday, June 13, 2023, 10:00 – 10:20 am



**Professor Hamid Parsaei, Ph.D., PE**  
 Fellow, IISE, ASEE, SME, IEOM  
 Professor, Department of Industrial and Systems Engineering  
 Director, College of Engineering Accreditation and Assessment  
 Texas A&M University  
 College Station, Texas, USA  
 IEOM President, 2021-2023; IEOM Vice President, 2019-2021

Dr. Hamid R. Parsaei is an internationally recognized leader in the field of manufacturing automation, leadership, engineering education, additive manufacturing, economic and financial decision making, and project management with more than three decades of experience in academia. He is awarded as a fellow IISE, ASEE, SME and IEOM.

Dr. Parsaei's leadership experience and accomplishments include serving as Professor and Associate Dean for Academic Affairs at Texas A&M University at Qatar (TAMUQ.) He also served as the Director of Outreach and Accreditation and the Interim Chair of the Mechanical Engineering at TAMUQ while holding the rank of

Professor in the Department of Industrial and Systems Engineering at Texas A&M University in College Station, Texas. Prior to joining Texas A&M University, Dr. Parsaei served as Professor and Chair of the Department of Industrial Engineering at University of Houston for 10 years and Director of Graduate Studies and Graduate Advisor for five years. He also served as Director of the Texas Manufacturing Assistance Center's Gulf Coast Region from March 2001 to September 2005.

Dr. Parsaei is highly regarded worldwide for his scholarship. He served as Area Editor, Methodology, and as an editorial board of The Engineering Economist from June 1990 until January 1995, and he was editor in chief of three international refereed archival journals. He currently serves as a member of the editorial boards and associate editor to over fifteen peer-refereed journals. He has been guest editor for several special issues of peer-reviewed archival journals, and has served as series editor to nine book series published by Wiley and Sons, CRC Press, Taylor and Francis, and several other publishing houses. His newest journal, Engineering Education Letters is a clear testament to Dr. Parsaei's dedication to engineering education.

Dr. Parsaei has been principal and co-principal investigator on projects funded by NSF, Qatar Foundation, the US Department of Homeland Security, Texas Department of Transportation, Houston Transtar, the National Institute of Standards and Technology and the National Institute of Safety and Health, among others, with total funding in excess of \$24 million. He has authored or co-authored 26 archival books and over 280 refereed publications that appear in archival journals and conference proceedings.

He has received several prestigious recognitions from IISE including, the Wellington Award (1993) from the Engineering Economy Division of the Institute for his original contributions to the field of engineering economics, Award of Merit in recognition of his service to the Engineering Economy Division during 1991–1992, the 2006 UPS Excellence Award for innovative development of programs directed to the development of women, minorities and people with disabilities within the field of industrial engineering. He garnered the 2016 George L. Smith Award and in 2018, he was honored with the Fred C. Crane Award for meritorious service to the IISE.

Dr. Parsaei received his M.S. and Ph.D. degrees in industrial engineering from Western Michigan University and the University of Texas at Arlington, respectively. He is a registered professional engineer in the State of Texas and an ABET Engineering Accreditation Commissioner and Program Evaluator.

Keynote I (Day 1 Opening): Tuesday, June 13, 2023, 10:20 – 11:00 am



**Dr. Satish Bukkapatnam**  
 Professor, Industrial & Systems Engineering  
 Rockwell International Professor, College of Engineering  
 Director, TEES Institute for Manufacturing Systems  
 Affiliated Faculty, Multidisciplinary Engineering and Biomedical Engineering  
 Texas A&M University, College Station, Texas, USA

Satish Bukkapatnam is a Professor at Texas A&M University, Director at TEES Institute for Manufacturing Systems. He is also a Rockwell International Professor. He is a co-Director of TEES-TAMU-ENSAM joint research cluster. Satish received B.Sc degree in mechanical engineering from the University Tirupati (India), M.S and Ph.D in Mechanical Engineering from Pennsylvania State University. Satish Bukkapatnam has been awarded with several honors – OSU regents distinguished research award (2011), Best Paper Awards from IIE Manufacturing and Design Division Track (2009), OSU CEAT Halliburton Outstanding Award (Young Faculty 2011, Senior Faculty 2012) to name a few. Dr. Satish Bukkapatnam's research in smart manufacturing addresses the harnessing of high-resolution nonlinear dynamic information, especially from wireless micro-electromechanical systems sensors, to improve the monitoring and prognostics, mainly of ultraprecision and nanomanufacturing processes and machines, and wearable sensors for cardiorespiratory process prognostics. His research has led to over 160 peer-reviewed publications (101 published/accepted in journals and 68 in conference proceedings); five pending patents; \$6.5 million in grants as PI/Co-PI from the National Science Foundation, the U.S. Department of Defense and the private sector; and 17 best-paper/poster recognitions.



Keynote II: Tuesday, June 13, 2023, 11:00 – 11:40 am



**Vivek Anand, PhD**  
Vice President & Head of Technology  
Deloitte Consulting  
Houston, TX, USA

Vivek Anand is the Head of Technology and Vice President of Data Science in the Strategy and Analytics practice at Deloitte Consulting where he specializes in development and implementation of AI solutions. He has successfully launched and scaled AI technology for multiple industries including manufacturing, retail, oil and gas, and life sciences. Prior to joining Deloitte, Vivek held senior positions at several technology companies, where he led the development of cutting-edge technology, software products and platforms. Vivek has authored 20+ papers and 15 patents on applications of AI and machine learning. He is the recipient of

prestigious awards including World Oil Award, Society of Petroleum Engineers Formation Evaluation Award, and Society of Petrophysicists and Well Log Analysts Distinguished Speaker. Vivek holds a PhD in Chemical Engineering from Rice University and Chief Technology Officer Executive Program from Wharton School of Business.

Keynote III: Tuesday, June 13, 2023, 11:40 am – 12:20 pm



**Mark A. Bolen**  
VP of Quality, Engineering & Fleet  
Cintas Corporation  
Lebanon, Ohio, United States

***Environmental, Social and Governance (ESG) Principles at Cintas***

As VP of Quality & Engineering, Mark's responsibility is to manage all aspects of Cintas' Quality, Reliability and Fleet Operations. His primary focus is on equipment, construction, production efficiency, environmental strategies, fleet optimization strategies and product quality. Mark graduated from Miami University in Oxford, OH and joined Cintas in 2000 as a Sales Representative at our Milford, OH facility. He went on to fulfill multiple roles ranging from Service Manager to the National Director of Facility Services. From 2014-2020, Mark was responsible for the build, development, and implementation of Cintas' ERP conversion to SAP. In June of 2020, Mark was promoted to the Vice President of Quality and Engineering. Mark and his wife Kathy have been married for 27 years and have 3 kids: Drew is a Junior at Capital University in Columbus, OH where he plays LAX, Sam is Freshman at Muskingum University in New Concord, OH where he plays LAX and Lily is a

Junior at Lebanon High School where she plays Volleyball & Basketball

Keynote IV: Tuesday, June 13, 2023, 12:20 – 1:00 pm

## Wednesday, June 14, 2023

Keynote V: Wednesday, June 14, 2023, 10:20 – 11:00 am



**Dr. Gino Lim**  
Fellow of IISE, SVP of IISE International Operations  
R. Larry and Gerlene (Gerri) R. Snider Endowed Chair  
Professor & Chair, Department of Industrial Engineering  
University of Houston – University Park  
Houston, Texas, USA

Gino Lim is a professor and R. Larry and Gerlene (Gerri) R. Snider Endowed Chair of the Department of Industrial Engineering at the University of Houston (UH). He is a fellow of the Institute of Industrial and Systems Engineers (IISE) and serves as an editorial board member for several scientific journals. He is currently a Board Member of the IISE Board of Trustees, the Senior Vice President of International Operations of IISE, and holds several other positions such as a member of the Council of Industrial Engineering and Department Heads (CIEADH) and a founding member of the IISE Fellows Council on International Ambassadors Committee. Previously, he served as a member of the Board of Directors of INFORMS, Co-Chair of INFORMS Subdivisions Council, Vice President of Chapters/Fora of INFORMS, Chair of INFORMS Chapters/Fora Committee, the program chair for the 2017 INFORMS annual conference, the program chair of 2012 ISERC Conference, to name a few. His research areas include mathematical optimization, computational algorithm design,

Operations Research applications in community resilience, homeland security, power systems, healthcare delivery, and transportation. He has authored over 160 archival papers and delivered numerous invited talks for plenary, colloquia, seminars, and technical presentations at international conferences and universities. He received both his M.S. and Ph.D. degrees in industrial engineering from University of Wisconsin – Madison.

Keynote VI: Wednesday, June 14, 2023, 11:00 – 11:40 am



**José Rivera**  
Chief Admin Quality Officer  
MD Anderson Cancer Center,  
Houston, Texas, United States

José Rivera joined MD Anderson as the Chief Administrative Quality Officer November 2020. José oversees the quality, safety, accreditation, regulatory and certifications, infection control, process improvement, clinical effectiveness, clinical operation informatics, emergency readiness, tumor registry, and code blue operations. José came to MD Anderson from Beaumont Health in Royal Oak Michigan, with deep knowledge and years of leadership experience in quality, safety, and accreditation programs. José served as Beaumont Hospital's vice president for clinical operations which he was responsible for the organization's strategy and hospital operations. Prior to Beaumont Health, José led inpatient and outpatient quality programs for Nebraska Medicine where he applied Lean principles to strengthen clinical documentation, improve mortality documentation, and commit to robustly monitoring quality and safety indicators. José holds black belt status in Lean Six Sigma methodology and has excelled in systems performance improvement efforts that have surpassed organizational targets. José earned his degree in industrial engineering and a master's degree in business administration from University of Nebraska.

Keynote VII: Wednesday, June 14, 2023, 11:40 – 12:20 pm



**Robert Swearingen, PhD, PMP, CSSBB**  
Head of Strategic Sourcing and Supply Chain Management  
Siemens GCI, Tomball, Texas, United States

Rob Swearingen is responsible for end-to-end global supply chain activities for the Siemens GCI business segment. He leads teams covering all supply chain and logistics functions to include strategic sourcing, material planning, operational purchasing, and in/outbound logistics. Rob brings the experience of a 25-year career in the US Army where he held leadership roles in aviation operations and maintenance, transportation and logistics, and general officer staff. While working toward his PhD, he spent four years consulting on process improvement projects in the private sector and teaching supply chain, lean six sigma and ERP courses at North Dakota State University and Central Washington University. Rob graduated from the North Dakota State University College of Business with a PhD in Transportation & Logistics in Dec 2019. His courses and research focused on change management in a supply chain context – the alignment of operations, organization, strategy, and systems. He holds certifications in project management from the Project Management Institute (PMI), a six-sigma black belt from the American Society for Quality (ASQ) and Business Process Integration from SAP.

Rob and his wife Nakhaly reside in Tomball, TX and have 3 daughters. He enjoys the outdoors as much as possible, volunteers in support of veteran's charities and is the President of his HOA.

Keynote VIII: Wednesday, June 14, 2023, 12:20 – 1:00 pm



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

Dr. Luis Rabelo received the BS in Electro-Mechanical Engineer from the Technological University of Panama in 1983, an MS in Electrical Engineering from the Florida Institute of Technology in 1987 Master's and Doctorate in Engineering Management from the University of Missouri. He was a Postdoc at the University of Missouri in Nuclear Engineering. Dr. Rabelo received a dual MS in Systems and Management from the Massachusetts Institute of Technology. He has worked for the Advanced Technology Group (Goodrich) and Honeywell Laboratories. Dr. Rabelo was a NASA Fellow from 2002 to 2005, and a Project Manager at NASA from 2009 to 2011. He is currently Professor in the Industrial Engineering and Management Systems Department at UCF. He is also the Undergraduate Coordinator. He has written more than 300 articles and a book in Artificial Intelligence. He has been the principal advisor for 39 Master's students and 29 PhDs. He received the award for the Best Scientific Article of the Year 2004 from the Society of Automotive Engineers, received the distinction "ONE NASA" in 2006. He was the recipient of the Fulbright Distinction in 2008. In November 2008, he received the honor of the Technological University of Panama (UTP) of being the 2008 Distinguished Alumni. In 2011, he was the Henaac Award Winner in Education. In 2013 and 2018, he received the Forest R. McFarland Award from the Society of Automotive Engineering (SAE). Lately, he received the SAE Russell S. Springer Award for his article on the modeling of space operations systems in 2017.

## Thursday, June 15, 2023

Keynote IX (Day 3 Opening): Thursday, June 15, 2023, 10:20 – 11:00 am



**Magdy Akladios, Ph.D., PE, CSP, CPE, CSHM**  
Chair, Department of Physical and Applied Sciences  
Professor of Occupational Safety and Health with specializations in industrial hygiene or safety  
College of Science and Engineering  
University of Houston-Clear Lake Texas, USA

Dr. Akladios joined the University of Houston-Clear Lake as an Assistant Professor in 2005 and currently is a Professor and Chair of the Department of Physical and Applied Sciences at University of Houston-Clear Lake (UHCL). Prior to joining UHCL, he was an Associate Professor, at West Virginia University. Dr. Akladios'

received his PhD degree in Industrial Engineering and also holds Master's degrees in Industrial Engineering, Occupational Health & Safety (Industrial Hygiene), and an MBA. Dr. Akladios undergraduate degree is in Mechanical Engineering. All degrees were bestowed by West Virginia University. Dr. Akladios also is a Certified Safety Professional (CSP), a Certified Professional Ergonomist (CPE), a Certified Safety & Health Manager (CSHM), and a Certified Member of the Egyptian Syndicate for Mechanical Engineers. He is a registered professional engineer (PE) also a member of the Industrial Engineering Honorary Society (Alpha-Pi-Mu), Human Factors & Ergonomics Society (HFES), the American Society of Safety Professionals (ASSP), the Institute of Hazardous Materials Management, and a senior member of the Institute of Industrial and Systems Engineers (IISE).

Dr. Akladios is an accomplished researcher, a distinguished educator, and an effective trainer with specific knowledge concerning a wide variety of programs, including occupational safety and health in general and construction industries, ergonomics, and human factors. He served as PI or Co-PI to a number of grants and projects funded by governmental and private entities. His distinguished service includes serving as an ABET-Program Evaluator (PEV), Team Chair, Board of Delegates representing ASSP, Global Council, and a Commissioner. He is fluent in Arabic and English. He has provided consultation services in ergonomics and safety for a number local oil companies including ExxonMobil, ConocoPhillips, BHP Billiton, Humantech, TransCanada, etc.

Keynote X: Thursday, June 15, 2023, 11:00 – 11:40 am



**Suresh Vaidyanathan**  
Chief Engineer & General Manager  
Refining Business Improvement  
Phillips 66  
Westchase, Houston, Texas

Suresh Vaidyanathan is chief engineer & general manager, Refining Business Improvement for Phillips 66. A chemical engineer, Suresh has more than 30 years of global experience in the oil and gas industry.

Prior to assuming his current role in 2018, he served in a variety of positions for the company, including operations manager at Sweeny Refinery, refining technical services manager for Refining Business Improvement, West Coast strategy manager for Refining, technical manager at Trainer Refinery and optimization manager at Ponca City Refinery. He started his career at HPCL Refinery, India in 1991 (formerly Exxon-Caltex Refining), and later worked in the Fractionation industry with Koch Industries and Sulzer Chemtech in India, Europe and the U.S. Suresh holds a master's degree in chemical engineering from the Indian Institute of Technology (IIT), and an MBA from Southern Methodist University.

Keynote XI: Thursday, June 15, 2023, 11:40 – 12:20 pm



**Mr. Bruce Webb**  
Chief Pilot  
Director of Aviation Education and Community Outreach  
Airbus Helicopters, Inc.  
Prairie, Texas, USA

Bruce Webb is the Director of Aviation Education and Community Outreach for Airbus Helicopters, Inc. After 16 years, in July 2016 he stepped down as the Chief Pilot for Airbus Helicopters to pursue his current role. His 40 years as a helicopter pilot, and his experience as an accident investigator, has convinced him that the path to aviation safety is a better understanding of the human mind. In his new capacity Mr. Webb studies human behavior and cognition to build and deliver presentations which are both captivating and educational. His background includes owning/operating a Part 145 Repair Station, Part 137 Agricultural Aircraft Operation, and Part 135 Air Carrier Operation in the Chicago area. He also flew HAA (Helicopter Air Ambulance) for many years prior to joining Airbus (American Eurocopter in 1999). He regularly teaches aerodynamics and helicopter systems for TSI (Transportation Safety Institute) in Oklahoma City and is an FAA FAAS Team Representative in North Texas.

Keynote XII: Thursday, June 15, 2023, 12:20 – 1:00 pm



**Paul Perkins**  
President  
Amatrol, Inc.  
Jeffersonville, Indiana  
USA

Paul Perkins is president and co-founder of Amatrol, Inc., a Jeffersonville, Indiana based manufacturer of technical learning systems and online interactive multimedia software for colleges, industry and high schools. Perkins holds a B.S. Degree in Mechanical Engineering Summa Cum Laude from Georgia Institute of Technology, is the author of over 20 books on industrial controls and automation, and has designed numerous training systems for teaching engineering and technical skills. His community service activities include serving as Chair of the Indiana State Workforce Innovation Council, past Chair of the National Governors Association State Workforce Board Chairs Association, and board member of many other national, state and local organization.



## Six Sigma Certification Workshop

Tuesday, June 13, 2023, 4:00 – 7:00 pm – Ballroom (Onsite)



**Dr. Ahad Ali**

Associate Professor and Director of Industrial Engineering Program  
A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering  
Lawrence Technological University, Southfield, Michigan, USA  
Executive Director, IEOM Society International

Dr. Ahad Ali is an Associate Professor and Director of Industrial Engineering at the Lawrence Technological University, Michigan. Dr. Ali is the Director of Smart Manufacturing and Lean Systems Research Group. He earned B.S. in Mechanical Engineering from Khulna University of Engineering and Technology, Bangladesh, Masters in Systems and Engineering Management from Nanyang Technological University, Singapore and Ph.D. in Industrial Engineering from University of Wisconsin-Milwaukee. Dr. Ali is the Executive Director of IEOM Society and Conference Chair of the Sixth International Conference on Industrial Engineering and operations Management, Kuala Lumpur 2016. He advised six doctorate students in Doctor of Engineering in Manufacturing Systems. Dr. Ali has published journal and conference papers. He was past President of IIE Lean Division. Dr. Ali has done research projects with Chrysler, Ford, DTE Energy, Delphi Automotive System, GE Medical Systems, Harley-Davidson Motor Company, International Truck and Engine Corporation (ITEC), National/Panasonic Electronics, and Rockwell Automation. His research interests include quality, reliability, six sigma, manufacturing, simulation, optimization, scheduling, maintenance, e-manufacturing, and lean. He is a member of ASEE, IEEE, IEOM, INFORMS, and SME.

## SCM Workshop: Supply Chain 4.0 - The Next-Generation Supply Chain Practices

June 15, 2023, 8:00 - 9:45 am - Ballroom (Onsite)



**Mohammad Anwar Rahman, Ph.D.**

Associate Professor, Manufacturing and Construction Management  
Central Connecticut State University, New Britain, CT, USA

Dr. Mohammad Anwar Rahman is a faculty at the Central Connecticut State University in Manufacturing and Construction Management. He has published papers in referred journals and presented results in conferences. His research focuses on logistics, supply chain management, stochastic process and designing quality procedure. Dr. Rahman conducted several research projects with Mississippi Dept. of Education (MDE) and US Dept. of Transportation (USDOT). He has various certifications including Lean Six Sigma Green Belt (Purdue University), Lean Principles (Purdue University), Demonstrated Master Logistician (The International Society of Logistics), Malcolm Baldrige Quality Award Examiner (Louisiana Quality Foundation), and Certified Transportation & Logistics (American Society of Transport & Logistics). Dr. Rahman is affiliated with ISERC, DSI, AST&L and IEOM.

## Innovation and Entrepreneurship Workshop

June 15, 2023, Thursday, 4:00 – 6:00 pm – Ballroom (Onsite)

Each team will develop an idea to solve an engineering problem that may have commercial potential. They will develop a business plan using the business model canvas. Teams will compete for prizes with best ideas and best commercial potentials. Students need to bring their laptops. Innovation and Entrepreneurship Workshop – A hands-on interactive learning experience.

### Topics:

- Idea Generation
- Opportunity Recognition
- Ventura Creation
- Value Creation
- Understanding and working with the Business Model Canvas as a validation tool
- Identifying "Customer Segments" and the "Customer Archetype"
- Introduction to the Business Planning Process
- **Presentation and Recognition**

**Join us for an exciting and interactive learning experience on how to make your dream a reality.**



**Professor Donald M. Reimer**

President, The Small Business Strategy Group, Detroit, Michigan, USA  
Director, Membership and Chapter Development, IEOM Society

Donald M. Reimer is an adjunct faculty at the A. Leon Linton Department of Mechanical Engineering in College of Engineering at Lawrence Tech in Southfield, Michigan. He coordinates the Certificate of Entrepreneurial Engineering Skills. Mr. Reimer holds a Bachelor of Science degree in Industrial Management from Lawrence Technological University and a Master of Arts degree in Political Science from University of Detroit/Mercy. He is a Certified Management Consultant with over 35 years of experience in working with closely-held businesses. He has taught courses in entrepreneurship, strategic management, corporate entrepreneurship and innovation for engineers. Mr. Reimer is a member of the Lawrence Tech Kern Campus Committee, Coordinator of the Lawrence Tech Innovation Encounter. He is faculty Advisor of the Collegiate Entrepreneurs' Organization. Mr. Reimer serves as a Kern Fellow of The Kern Family Foundation, Co-Direct of the Coleman Fellows Program, member of the National Collegiate Entrepreneurs' Organization Faculty Advisory Council and is a member of the American Society of Engineering Education. He has operated his own consulting company – The Small Business Strategy Group for 23 years. He published numerous articles on small business, entrepreneurship and strategic thinking. He has received several awards and recognition by local, state and federal agencies for his work in entrepreneurship and minority business development. Mr. Reimer served as member of the Minority Economic Development Committee of New Detroit. Mr. Reimer is member of the Small Business Advisory Council of the Detroit Regional Chamber of Commerce. Mr. Reimer is a member of Advisory Board of the Milwaukee Junction Small Business Assistance Center. He is also a member of the Applied Innovation Alliance. Mr. Reimer serves as a KEEN Fellow for The Kern Family Foundation and is a member of United States Association of Small Business and Entrepreneurship.



# Panel Sessions

## Women in Industry and Academia (WIIA) Panel

Tuesday, June 13, 2023, 8:00 – 9:45 am – Room 2 (Onsite)

Panel Chair



### Dr. Johanna Trujillo Díaz

Titular-II Professor at Business Administration  
Support of Vice-Rector for Research  
Fundación Internacional De La Rioja (UNIR)  
Bogotá, Colombia

Johanna Trujillo Díaz is in the Vice-Rector for Research and is a Titular-II-professor at Business Administration at Fundación Universitaria Internacional de la Rioja (UNIR-Colombia). She did postdoctoral in health modeling and analytics from the Universidad de Los Andes (Colombia) and Doctor in Strategic Planning and Technology Management from the Universidad Popular Autónoma del Estado de Puebla (Mexico). Johanna received Magister in Industrial Engineering from the Pontificia Universidad Javeriana (Colombia) and Industrial Engineer from the Universidad Católica de Colombia. She has conducted research projects, and in that way, Johanna has published

relevant books and articles with a great scientific contribution to the state-of-the-art. His research has focused on the Manufacturing, Logistics, Agriculture, and Health sectors applying techniques: statistics, simulation, optimization, multicriteria, data mining and business intelligence, process control, and decision making. Johanna has fifteen years of academic and research experience, as a research project director and an undergraduate and postgraduate teacher. On the other hand, his work experience is another ten years in positions such as Administrative and Financial Director, Logistics, and Supply Chain.

Panelists

## Industry 4.0 Panel

Tuesday, June 13, 2023, 2:00 – 3:45 pm – Room 2 (Onsite)

Panel Chair



### Dr. Hayder Zghair

Assistant Professor of Industrial Engineering  
Director of Industrial Engineering Development  
College of Science and Engineering  
Southern Arkansas University  
Magnolia, Arkansas, USA

Dr. Hayder Zghair is an assistant professor of industrial engineering and the director of Industrial Engineering development in the College of Science and Engineering at Southern Arkansas University. He completed a B.S. and an M.S. from the University of Technology, where he majored in Industrial and Production Engineering. Dr. Zghair earned his second master's degree in Manufacturing Systems Engineering and Doctor's Degree in Manufacturing Systems Engineering from Lawrence Technological University, Michigan, USA. He has published journal and

conference papers. His research interests include Flexible-Automated Manufacturing, Robotics, Human Factors and Ergonomics, Sustainability Engineering, Analytical Modeling & Simulation, and Optimization. Dr. Zghair continues to explore new and cutting edges areas for research and education in engineering disciplines and got recently had an extensive interest in industry 4.0 tech such as IIoT, smart sensors, and cloud computation and control. Dr. Zghair chairing and member of several committees at the department, college, and university levels. Dr. Zghair is the faculty advisor of SAE students chapter at SAU and IEOM. He is a professional member of ASEE, SAE, and IEOM.

Panelists

Panelist – I



### Dr. Tom Jones

Continuous Improvement Industrial Engineer  
Department of Operational Excellence  
Leonardo DRS  
Melbourne, Florida, United States

Tom Jones, PhD in Industrial Engineering and is an Industrial Engineer with 9 years of industry experience. He has worked primarily in quality engineering roles and has experience in multiple industries. Tom currently works as a Continuous Improvement Industrial Engineer for Leonardo DRS, a tier 2 defense contractor. He works in the department of operational excellence and his current role focuses on improving current business processes. Dr. Jones earned both a Bachelor of Science and Master of Science from Wichita State University, both in Industrial Engineering, with specializations in Quality and Human Factors during his Master's studies. Dr. Jones's PhD in Industrial Engineering with a research focus on Quality 4.0 from the University of Central Florida. Dr. Jones has

made his career primarily at high growth companies where he has used his IE skills to develop standard practices from processes based on individual tribal knowledge. In his first role as a Quality Improvement Engineer at Inline Plastics he helped develop a true new product introduction process, as a Quality Engineer at Viega LLC his role focused on qualification of new production processes and equipment with the commissioning of a new factory, and currently at Leonardo DRS he works to develop business process standardization and compliance across different business units as the company grows through acquisition.

## Panelist – II



**Alper Senol**  
 Professor- Supply Chain Management  
 Miami Dade College  
 Miami, Florida, United States

Alper Senol is an experienced Engineering Manager, Supply Chain Management Professor, and visionary founder of the Yunuak supply chain consulting firm. With 14+ years of experience in transportation, supply chain & logistics management, and manufacturing, he excels in Project Management, Lean Six Sigma, Operations Management, Quality Management, Continuous Improvement, and Industry 4.0. Alper is pursuing a Ph.D. in Industrial Engineering and Management Systems at the University of Central Florida, focusing on the "Impact of Industry 4.0 on Global Supply Chain Management." He holds an M.S. in Engineering Management and Systems Engineering from Old Dominion University and a B.S. in Information Management Systems from Strayer University. Certified in Lean Supply Chain Management and Lean Six Sigma Green Belt, Alper brings extensive knowledge to his work.

With an accomplished background as an Industrial Engineer, Alper has successfully overseen and managed various aspects of production, quality, supply chain, and logistics operations. His broad skill set encompasses; need assessment, system upgrades, process flow and layout design, inventory management, performance metrics (KPIs), lean six sigma initiatives, production planning, and manpower optimization. Throughout his career, Alper has played a pivotal role in driving streamlined operations and establishing strategic partnerships with stakeholders for international supply chain projects. As the founder of the Yunuak supply chain consulting firm, Alper leads a dynamic team in delivering innovative and sustainable solutions in logistics management, warehouse optimization, and end-to-end supply chain management. With a focus on cutting-edge Industry 4.0 technologies, such as artificial intelligence, robotics, automation, and data analytics, Alper's firm empowers organizations to embrace digital transformation and gain a competitive edge. Alper contributes as an advisory committee member for the Supply Chain Management board at Miami Dade College, and he played a pivotal role in establishing concentrations in Data Analytics, Procurement, and Project Management within the Supply Chain Management program, successfully obtaining state approval.

## Panelist – III



**Dr. Galia Novakova Nedeltcheva**  
 Scientific Researcher, ICT & Digital Transformation  
 Polytechnical University of Milan, Italy

*"Nowadays we see that Smart manufacturing (Manufacturing as a Service), Digital engineering & operations, Digital connectivity & sensors are the main fields where Industry 4.0 finds application, but still keeping human-centric processes."*

University lecturer and researcher with sound scientific experience and working at the interface of science, knowledge, and policy.

Engineering Management professional obtained her Doctor of Philosophy (Ph.D.) in Industrial and Manufacturing Engineering from the Polytechnic University of Turin, Italy. Also, Dr. Nedeltcheva holds two MSc degrees in Quality Management, and in Information Management Systems. She performed extended postdoc research in Germany, Italy, and the USA.

Skilled in Project Management, Operations and Service Management, Quality Management, Lean and Agile Methodologies, and Continuous Improvement.

MIT Certified Professional in Cloud and DevOps: Continuous Transformation.

About eight years of experience as an Asst. Prof. with Sofia University (Bulgaria), about 40 scientific publications in journals and conference proceedings, and a couple of academic awards.

Giving talks at various international scientific conferences, numerous times serving as a conference session chair, a reviewer for a number of scientific journals and conferences, as well as a project reviewer for the European Commission.

Research interest in Digital Manufacturing, Cloud-based Supply Chain Management, Security in the Supply Chain, and Performance Measurement. President of the IEOM Chapter in Bulgaria.

Currently, Dr. Galia Nedeltcheva is with the Polytechnical University of Milan, Italy.

## Panelist – IV



**Dr. Doga Demirel**  
 Assistant Professor of Computer Science  
 Director of Virtual Reality, Interactive Simulation, and Biomedical (VRISB) Lab  
 Florida Polytechnic University, Lakeland, Florida, USA

Dr. Doga Demirel is an assistant professor of Computer Science and the Director of Virtual Reality, Interactive Simulation, and Biomedical (VRISB) Lab at Florida Polytechnic University. Before joining Florida Poly, He has worked in the areas of medical simulations for over 10 years teaching and research assistant at University of Central Arkansas, and University of Arkansas at Little Rock. Dr. Demirel had earned Ph.D. in Computer Science from University of Arkansas at Little Rock, 2018, M.S. in Applied Computing from University of Central Arkansas, 2015, and B.S. in Computer Science from University of Arkansas at Little Rock, 2013. Dr. Doga's research interests include virtual reality, augmented reality, surgical simulators, and haptics.



## Human Factors and Ergonomics Panel - Maintenance and Reliability

Tuesday, June 13, 2023, 4:00 – 5:45 pm – Room 2 (Onsite)



Panel Chair

**Eric Ayanegui, CPMM, CRL**  
 Director Operations Engineering  
 Cintas Corporation, Houston, Texas, USA

Mr. Eric Ayanegui is currently the director of Operations Engineering of CINTAS. As one of the technical leaders at CINTAS, he has been directing engineering, reliability, quality and safety initiatives across 210 industrial sites across North America and China. He has over 20 years of experience in the industrial laundry industry and has been involved in industrial leading efforts in Reliability and Safety. He is a member of the CINTAS Corporate Executive Faculty teaching Reliability and a certified Plant Maintenance Manager and Certified Reliability Leader. He is a member of Industrial Engineering Academy of Distinguished Alumni of UH and has served on the advisory board of Industrial Engineering Department at UH since 2015. He holds a BS degree in Industrial Engineering from the University of Houston.

## Global Supply Chain Management and Logistics Panel

Wednesday, June 14, 2023, 8:00 – 9:45 am – Room 2 (Onsite)

Panel Chair



**Shahram Taj, Ph.D.**  
 Chair and Professor, Department of Data Science & Business Analytics  
 Chair, Department of Computer Science  
 Florida Polytechnic University, Lakeland, Florida, USA

Dr. Shahram Taj joined Florida Polytechnic University in August 2016 as a professor of logistics and supply chain management. He served as the academic program coordinator of science and technology management and the academic program coordinator of graduate programs in 2017. Since January 2018, he has served as the chair of the department of data science and business analytics. Taj is an accomplished academician, executive consultant with an expertise in business model innovation, lean and sustainable operations, strategic management, production systems design, systems optimization/simulation, and supply chain management.

Taj has extensive tenure in academia. He was professor and chair of the Department of Management and Marketing at Lawrence Technological University in Michigan from 2013 to 2016. He served as The Cameron Endowed Chair of Management and Marketing at the University of St. Thomas in Houston from 2008 to 2013. Taj previously taught for more than 20 years at the University of Detroit Mercy and earned the institution's President's Award for Faculty Excellence. He also taught in the Global Entrepreneurial MBA Program at Fu Jen Catholic University in Taiwan from 2004 to 2006 and was a visiting professor at Peking University in China teaching in the Beijing International MBA Program in 2004. Taj also taught at Baruch College, The City University of New York from 1984 to 1987.

Taj has developed several graduate programs such as the master's degree in product development in collaboration with Massachusetts Institute of Technology (MIT), Ford, Xerox, and the National Science Foundation. He also developed graduate degree programs in software engineering, EMBA, and supply chain/transportation efficiency systems (funded by the U.S. Department of Transportation).

Taj has conducted more than 100 projects at Ford, Visteon, New Venture Gear (formerly joint venture of GM and DaimlerChrysler), GM-Holden, Baker Hughes, and Schlumberger in the United States, Germany, Australia, and Japan. The projects have covered productivity improvements, implementing lean manufacturing, and optimizing process design. In 1999, he earned the Franz Edelman Finalist Award for Achievement in Operations Research/Management Science for projects that resulted in \$15.5 million capital savings and a profit increase of more than \$2 billion for Ford Motor Company. From 1998 to 2000, Taj worked as an executive consultant for New Venture Gear Company to design a lean automotive manufacturing plant in Leipzig, Germany, to supply powertrain to Porsche Cayenne and Volkswagen Touareg that resulted in savings of \$21 million (This plant has been designated by Porsche as the supplier of the year.). From 2009 to 2010, Taj served as an executive technical advisor to executives in the new worldwide Supply Chain and Manufacturing Division at Baker Hughes in Houston.

Taj also collaborated with the Production System Design Laboratory at MIT conducting research in the design and the implementation of "lean production systems" in the automotive industry in the U.S. and Europe. Taj has served as thesis advisor/reader of more than 100 graduate students at the University of Detroit Mercy, including a doctoral thesis committee at MIT. He served as the track chair of the "Lean Manufacturing, Manufacturing Information Management, Supply Chain, and Product Development" for the SAE International in Ireland, Spain, and France. He has published 68 refereed articles in journals and proceedings of many international conferences. Recently, he published several articles on the adaptation of lean production in China, and most recently in areas of sustainability and business model innovation.

Panelists

Panelist – I



**Michael Ehsani (MBA, DBA)**  
Global Quality Director  
Arcadis  
Houston, Texas, USA

Michael Ehsani has over 30 years experience in Leadership, Quality Management, Process Improvement, Operational Excellence, and Global Supply Chain Management. He has collaborated with fortune 500 companies, in 33 countries, to strategize and deploy comprehensive forward looking business strategies, integrated management systems, and effective supply chain management programs. Michael is currently the Global Quality Director and a member of the Senior Leadership Group at Arcadis, the world's leading company delivering sustainable design, engineering, and consultancy solutions for natural and built assets. Arcadis has over 36000 employees and operates in more than 70 countries worldwide. Michael is responsible for strategizing and deploying a comprehensive integrated management system covering hundreds of Arcadis offices worldwide.

Panelist – II



**Dr. Milad Talebzadehosseini**  
Visiting Assistant Professor  
Department of Data Science and Business Analytics  
Florida Polytechnic University  
Lakeland, Florida, USA

Dr. Milad Talebzadehosseini joined Florida Polytechnic University as a visiting assistant professor in the Department of Data Science and Business Analytics in August 2022. Before joining Florida Poly, he was a post-doctoral scholar at the University of Central Florida. Talebzadehosseini received his Ph.D. in industrial engineering from the University of Central Florida in December 2021. His research mainly focuses on the applications of network science and data science techniques in the areas of sustainability, supply chain management, economic complexity, economic development, and green economic development.

economic development, and green economic development.

Panelist – III



**Dr. Mohamad Nayeypour**  
Visiting Assistant Professor  
Marilyn Davies College of Business  
University of Houston-Downtown (UHD)  
320 N Main St, Houston, TX 77002, USA

Dr. Nayeypour is Management consultant and educator with over 35 years of experience in the industry and higher education. He is currently a visiting Assistant Professor at Marilyn Davies College of Business at the University of Houston-Downtown. He earned B.S. degree in Petroleum Engineering, M.S. in Engineering Management and PhD in Applied Statistics. He has extensive experience as an industry consultant in areas of quality management, operations management, statistical process control, data analysis, forecasting, financial modeling, optimization techniques, sampling methodology, and project management. He is a certified Quality Engineer by ASQ and has published scholarly work in Technometrics, Journal of Quality Technology, and Journal of Business Ethics to name a few.

Panelist – IV



**Manohar S. Madan, PhD**  
Professor, ITSCM Department  
University of Wisconsin-Whitewater

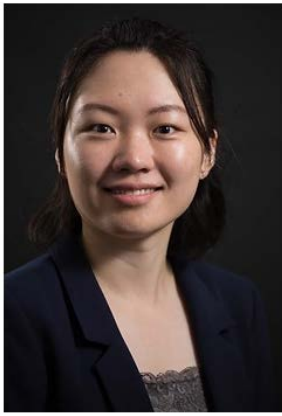
Manohar Madan is a Professor in the Information Technology and Supply Chain Management Department in the College of Business and Economics at the University of Wisconsin-Whitewater. He has a Ph.D. in Operations Management from the University of Tennessee, Knoxville, Tennessee. He has a Master's degree in Engr. Mgmt. from the University of Detroit, Detroit, Michigan. His teaching and research interests are in the areas of Operations Management, Supply Chain Management and Project Management. Manohar's research has been published in many professional journals such as the Journal of Operations Management, IIE Transactions, OMEGA – The Journal of Management Science, International Journal of Operations and Production Management, International Journal of Production Research, International Journal of Production Economics and the Journal of Operational Research Society. He is certified as CPIM by APICS (now ASCM).

## Data Analytics Panel

Wednesday, June 14, 2023, 2:00 – 9:45 am – Room 2 (Onsite)

Panel Chair





**Dr. Ying Lin**  
 Assistant Professor  
 Industrial Engineering Department  
 Director, Smart Health & Intelligent Engineering Systems (SHINES) Lab  
 University of Houston  
 Houston, Texas  
 USA

Dr Ying Lin is an assistant professor in the Industrial Engineering Department at the University of Houston (UH). She is also the director of Smart Health & Intelligent Engineering Systems (SHINES) lab at UH. Her research lies at the interactions of machine learning, biomedical informatics and quality engineering. She has developed innovative machine learning models for modeling, monitoring and prognosis of complex and heterogeneous systems. She has also developed computational techniques to integrate massive and network-structured datasets in clinical practice and bioinformatics. Her work is published in journal including PLOS One, Mathematical Biosciences, and Scientific Reports. Her research is funded by the National Institute of Mental Health and the Advanced Manufacturing Institute.

Panelist – I



**Assaf Gottlieb, PhD**  
 Assistant Professor  
 UTHealth School of Biomedical Informatics (SBMI)  
 Houston Texas Medical Center, Houston, TX 77030

Assaf Gottlieb, Ph.D., joined the UTHealth School of Biomedical Informatics (SBMI) in January 2017 as an assistant professor and one of the core faculty members of the Center for Precision Health. Dr. Gottlieb arrived to SBMI from IBM Research where he served as a research associate at the Machine Learning for Healthcare and Life Science group in Haifa labs. Prior to his position with IBM, Dr. Gottlieb was a postdoctoral fellow at both Stanford University and Tel-Aviv University. He has degrees in Physics and Computer Science and has also worked in software and algorithmic development in various software companies. Our lab is interested in precision medicine with special emphasis on pharmacogenomics. In order to address the challenges of precision medicine, we employ an integrative computational approach, combining multiple types of data and applying methodologies from systems biology, systems medicine, machine learning and causal inference domains. Our primary interest is to improve health outcomes by integrating diverse types of data, including genomic/biological data, data from fitness trackers and clinical data from electronic health records data. Some of our on-going projects include predicting drug

response in cancer therapy, early predictions of Alzheimer's Disease and determining HIV risk.

Panelist – II



**Dr. Meng Li**  
 Associate Professor, Bauer Fellow  
 SCM PhD Coordinator, C.T. Bauer College of Business  
 University of Houston, Houston, Texas, USA

Dr. Meng Li is the director of Bauer Human-Centered AI Lab, an Associate Professor, and Bauer Fellow at C.T. Bauer College of Business, University of Houston. My recent research interests focus on human-centered AI. His research has appeared in journals such as Management Science, Manufacturing and Service Operations Management, Operations Research, Production and Operations Management, Journal of operations Management, Strategic Management Journal, and Nature Sustainability. Dr. Li is a Senior Editor for Production and Operations Management, and a Department Editor for Decision Sciences Journal. His work has been funded by companies

such as Shell and HPE. He received Ph.D. in Operations Management, The University of Texas at Dallas, 2013. Dr. Li received many academic honors and awards including Lucile and Leroy Melcher Excellence in Research Award, 2023, Finalist of the POMS College of Service Operations Management (CSOM) Best Student Paper, 2023, Shell Sustainability Research Grant (\$100,000), 2022, Rutgers Research Council Award, Rutgers University, 2020 and Second Place of JFIG Paper Competition, 2019.

Panelist – III



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

Dr. Sanchez-Arias joined Florida Polytechnic University in Fall 2018 and is currently an Assistant Professor of Data Science and serves as the Assistant Chair of the Department of Data Science and Business Analytics. Reinaldo (Rei) Sanchez Arias earned his Bachelor of Science degree in Mathematics from Universidad del Valle in Cali, Colombia. In Fall 2008 he started his doctoral studies in the Computational Science Program at The University of Texas at El Paso (UTEP). During his years at UTEP he was involved in research projects for the Army High Performance Computing Research Center (AHPARC) in collaboration with a group at Stanford University. He interned at Repsol Oil Company USA during the summer of 2011, where he worked with the Research and

Innovation Geophysics Department. He obtained a Ph.D. degree in Computational Science from UTEP in the spring of 2013, working on sparse representation methods for classification problems and dimensionality reduction. He completed a postdoctoral researcher appointment for the AHPARC working in reduced order models for underbody-blast simulations and compression techniques. From 2014 to 2016, Dr. Sanchez-Arias was part of the Applied Mathematics Department at Wentworth Institute of Technology (WIT) in Boston, MA where he taught courses for Applied Mathematics and Engineering students, nominated and served as the Faculty Advisor for the Society of Industrial and Applied Mathematics (SIAM) Student Chapter, coordinated linear algebra and capstone courses, and helped develop different elective courses in applied mathematics. In Fall 2016, Dr. Sanchez-Arias joined St Thomas University, in Miami, FL, where he served as the Program Director for the MS in Big Data Analytics in

the School of Science, advised and supervised graduate students in the School of Science, and revised curriculum for the Computer Science and Mathematics undergraduate programs.

In Fall 2018, he joined the Department of Data Science and Business Analytics (DSBA) at Florida Poly in Lakeland, FL where he leads multiple data science research projects, and teaches courses for the BS in Data Science, BS in Business Analytics, MS in Data Science, and MS in Engineering Management programs. Dr. Sanchez-Arias was the recipient of Florida Poly's Excellence in Teaching Ablaze Award in 2020. He was invited as scientific session speaker in the area of statistics and data analysis for the LatMath 2022 conference sponsored by the Institute for Pure and Applied Mathematics (IPAM) at UCLA, and was also an invited speaker for the INFORMS Teaching Effectiveness Colloquium in 2021, which featured speakers from business and engineering schools who address different aspects of incorporating and assessing effective teaching techniques in OR/MS/analytics undergraduate or graduate curriculum.

His general areas of interest include data mining and machine learning, computational linear algebra and optimization, and data science education. His work has been presented at international and national conference meetings including SIAM annual meetings, the International Conference for High Performance Computing, the IEEE International Conference of the Engineering in Medicine and Biology Society, the IEEE International Conference in Machine Learning and Applications, and INFORMS annual meeting. Dr. Sanchez-Arias is a member of SIAM, IEEE, IEOM, ACM and INFORMS.

#### Panelist – IV



#### **Dr. Hrayr Aprahamian**

Assistant Professor, Industrial & Systems Engineering  
Wm Michael Barnes '64 Department of Industrial & Systems Engineering  
Texas A&M University, College Station, Texas, USA

Dr. Hrayr Aprahamian is an Assistant Professor at the Wm. Michael Barnes Department of Industrial and Systems Engineering at Texas A&M University. He received his Ph.D. in Industrial and Systems Engineering from Virginia Tech in 2018. Dr. Aprahamian's research interests lie at the interplay between combinatorial/discrete and continuous optimization, with particular interest in applications related to healthcare systems and public policy decision-making. His research papers have appeared in journals such as Management Science, INFORMS Journal on Computing, Stochastic Systems, and IIE Transactions. He was awarded the 2022 Pierskalla Best Paper Award, was a finalist for the 2021 JFIG Paper competition, received the IIE Transactions Award in 2020, the Pritsker Doctoral Dissertation Award in 2019, the Paul E. Torgersen Research Excellence Award in 2018, and was runner-up for the 2017 Pierskalla Best Paper Award.

## Using Assessment to Improve Student Learning and Curriculum – Panel

Wednesday, June 14, 2023, 4:00 – 5:45 pm – Room 2 (Onsite)

#### Panel Chair



#### **Professor Abu Masud, Ph.D., P.E.**

Professor Emeritus, Department of Industrial and Manufacturing Engineering  
Wichita State University, Kansas, USA

Dr. Abu Masud is a professor of industrial and manufacturing engineering at Wichita State University. He has been named the Boeing Global Engineering Professor at Wichita State University. In this new post, Dr. Masud is expected to advance the College of Engineering's strategic alliances for global enrichment and experiential learning of students as well as international research collaborations and partnerships. He received Duane and Velma Wallace Outstanding Educator Award from WSU College of Engineering. Previously he was held various positions at Wichita State including associate dean, graduate school (2008-2013), coordinator, college ABET affairs (2006-2008), associate dean, college of engineering (2004-2005), chair, industrial and manufacturing engineering department (1994-2004) and graduate coordinator of IME (1991-94, 1996-98, 2001-2004). Dr. Masud has engaged with various

companies and governmental research centers including NASA Langley Research Center, VA, NASA/ASEE Summer Faculty Fellow (1991 and 1992), Boeing, Consulting Analyst, and Kuwait Institute for Scientific Research. He is member of Accreditation Review Council (2011-2014). Dr. Masud published book, book chapters, and numerous journal and conference papers. He is registered Professional Engineer at Kansas State. Dr. Masud is an IIE fellow. He received Ph.D. and M.S. in Industrial Engineering from Kansas State University, and B.S. in Mechanical Engineering from Bangladesh University of Engineering & Technology.

#### Panelist – I



#### **Dr. Adedeji Badiru**

Dean, Graduate School of Engineering and Management  
Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA

Deji Badiru is the Dean and senior academic officer for the Graduate School of Engineering and Management at the Air Force Institute of Technology (AFIT). He is responsible for planning, directing, and controlling all operations related to granting doctoral and master's degrees, professional continuing cyber education, and research and development programs. In his post-high-school days, Deji worked as a graphic artist for children television programs, as a writer and columnist for community newspapers, and as an accounts clerk. These are practical skills that he frequently uses, even today, in his administrative and professional duties.

Deji Badiru was previously Professor and Head of Systems Engineering and Management at AFIT, Professor and Department Head of Industrial & Information Engineering at the University of Tennessee in Knoxville, and Professor of Industrial Engineering and Dean of University College at the University of Oklahoma, Norman. He is a registered professional engineer (PE), a certified Project Management Professional (PMP), a Fellow of the Institute of Industrial Engineers, and a Fellow of the Nigerian Academy of Engineering. He holds BS in Industrial Engineering, MS in Mathematics, and MS in Industrial Engineering from Tennessee Technological University, and Ph.D. in Industrial Engineering



from the University of Central Florida. His areas of interest include mathematical modeling, systems efficiency analysis, and high-tech product development. He is the author of over 30 books, 35 book chapters, 75 technical journal articles, 115 conference proceedings and presentations. He also has published 30 magazine articles and 20 editorials and periodicals. He is a member of several professional associations and scholastic honor societies.

Deji Badiru has won several awards for his teaching, research, and professional accomplishments. He is the recipient of the 2009 Dayton Affiliate Society Council Award for Outstanding Scientists and Engineers in the Education category with a commendation from the 128th Senate of Ohio. He also won 2010 IIE Joint Publishers Book-of-the-Year Award from the Institute of Industrial Engineers. He also won 2010 ASEE John Imhoff Award for his global contributions to Industrial Engineering Education, the 2011 Federal Employee of the Year Award in the Managerial Category from the International Public Management Association, Wright Patterson Air Force Base, the 2012 Distinguished Engineering Alum Award from the University of Central Florida, and the 2012 Medallion Award from the Institute of Industrial Engineers for his global contributions in the advancement of the profession. In February 2013, he was selected as a finalist for the Jefferson Science Fellows (JSF) program by the US National Academy of Sciences and the US Department of State. Prof. Badiru was the leader of the AFIT team that won the 2013 Air Force Organizational Excellence Award for Air University C3 (Cost Conscious Culture). His most recent award is the 2015 National Public Service Award at the overall US Air Force level.

Deji Badiru has served as a consultant to several organizations around the world including Russia, Mexico, Taiwan, Nigeria, Ghana, and Canada. He has conducted customized training workshops for numerous organizations including Sony, AT&T, Seagate Technology, U.S. Air Force, Oklahoma Gas & Electric, Oklahoma Asphalt Pavement Association, Hitachi, Nigeria National Petroleum Corporation, and ExxonMobil. He holds a leadership certificate from the University Tennessee Leadership Institute. He has served as a Technical Project Reviewer, curriculum reviewer, and proposal reviewer for several organizations including The Third-World Network of Scientific Organizations, Italy, National Science Foundation, National Research Council, and the American Council on Education. He is on the editorial and review boards of several technical journals and book publishers. Deji has also served as an Industrial Development Consultant to the United Nations Development Program. He is also a program evaluator for ABET, the international engineering and technology accreditation body. In 2011, Prof. Badiru led a research team to develop analytical models for Systems Engineering Research Efficiency (SEER) for the Air Force acquisitions integration office at the Pentagon. He has led a multi-year composite manufacturing collaborative research between the Air Force Institute of Technology and Wyle Aerospace Group.

Deji Badiru has diverse areas of avocation. His professional accomplishments are coupled with his passion for writing about everyday events and interpersonal issues, especially those dealing with social responsibility. Outside of the academic realm, he writes motivational poems, editorials, and newspaper commentaries; as well as engaging in paintings and crafts. As a contribution to sparking the interest of kids in science and engineering, Deji runs the Physics of Soccer website ([www.physicsofsoccer.com](http://www.physicsofsoccer.com)). He is the founder of the Association of Military Industrial Engineers (AMIE). He also runs ABICS Publications, through which he publishes non-technical guide books for home, work, and leisure. A prolific researcher and author, Deji espouses the spirit of sharing knowledge freely and widely, which is the reason he offers self-published guide books to make his publications affordable and accessible to the general public.

#### Education

PhD, Industrial Engineering, University of Central Florida  
MS, Mathematics, Tennessee Technological University  
BS, MS, Industrial Engineering, Tennessee Tech University

#### Panelist – II



**Professor Hamid Parsaei, Ph.D., PE**  
Fellow, IISE, ASEE, SME, IEOM  
Professor, Department of Industrial and Systems Engineering  
Director, College of Engineering Accreditation and Assessment  
Texas A&M University  
College Station, Texas, USA  
IEOM President, 2021-2023; IEOM Vice President, 2019-2021

Dr. Hamid R. Parsaei is an internationally recognized leader in the field of manufacturing automation, leadership, engineering education, additive manufacturing, economic and financial decision making, and project management with more than three decades of experience in academia. He is awarded as a fellow IISE, ASEE, SME and IEOM.

Dr. Parsaei's leadership experience and accomplishments include serving as Professor and Associate Dean for Academic Affairs at Texas A&M University at Qatar (TAMUQ.) He also served as the Director of Outreach and Accreditation and the Interim Chair of the Mechanical Engineering at TAMUQ while holding the rank of Professor in the Department of Industrial and Systems Engineering at Texas A&M University in College Station, Texas. Prior

to joining Texas A&M University, Dr. Parsaei served as Professor and Chair of the Department of Industrial Engineering at University of Houston for 10 years and Director of Graduate Studies and Graduate Advisor for five years. He also served as Director of the Texas Manufacturing Assistance Center's Gulf Coast Region from March 2001 to September 2005.

Dr. Parsaei is highly regarded worldwide for his scholarship. He served as Area Editor, Methodology, and as an editorial board of The Engineering Economist from June 1990 until January 1995, and he was editor in chief of three international refereed archival journals. He currently serves as a member of the editorial boards and associate editor to over fifteen peer-refereed journals. He has been guest editor for several special issues of peer-reviewed archival journals, and has served as series editor to nine book series published by Wiley and Sons, CRC Press, Taylor and Francis, and several other publishing houses. His newest journal, Engineering Education Letters is a clear testament to Dr. Parsaei's dedication to engineering education.

Dr. Parsaei has been principal and co-principal investigator on projects funded by NSF, Qatar Foundation, the US Department of Homeland Security, Texas Department of Transportation, Houston Transtar, the National Institute of Standards and Technology and the National Institute of Safety and Health, among others, with total funding in excess of \$24 million. He has authored or co-authored 26 archival books and over 280 refereed publications that appear in archival journals and conference proceedings.

He has received several prestigious recognitions from IISE including, the Wellington Award (1993) from the Engineering Economy Division of the Institute for his original contributions to the field of engineering economics, Award of Merit in recognition of his service to the Engineering Economy

Division during 1991–1992, the 2006 UPS Excellence Award for innovative development of programs directed to the development of women, minorities and people with disabilities within the field of industrial engineering. He garnered the 2016 George L. Smith Award and in 2018, he was honored with the Fred C. Crane Award for meritorious service to the IISE.

Dr. Parsaei received his M.S. and Ph.D. degrees in industrial engineering from Western Michigan University and the University of Texas at Arlington, respectively. He is a registered professional engineer in the State of Texas and an ABET Engineering Accreditation Commissioner and Program Evaluator.

## Lean Six Sigma Panel

Thursday, June 15, 2023, 8:00 – 9:45 am – Room 2 (Onsite)

Panel Chair



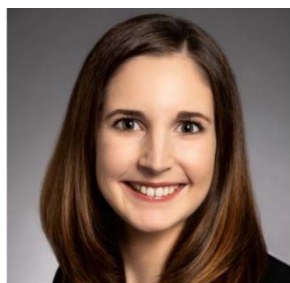
### Dr. Jamison Kovach

PMI Houston Endowed Professor in Project Management  
University of Houston, Texas, USA

Dr. Kovach is the PMI Houston Endowed Professor in Project Management at the University of Houston. She received her Ph.D. in Industrial Engineering from Clemson University. Her industrial experience includes more than five years as a product and process improvement engineer in the U.S. textile industry. Her current research investigates the use of methods for product and process innovation, expanding the use of these methods, and developing new improvement approaches in a wide range of industries/fields. In recognition of her work, Dr. Kovach was awarded the 2010 ASQ (formerly the American Society for Quality) Feigenbaum Medal. She is an Academician in the International Academy for Quality and an ASQ Fellow. Dr. Kovach currently serves as the Editor for Lean & Six Sigma Review, a quarterly ASQ publication, and she received the ASQ Six Sigma Forum Award for the Advancement of Six Sigma in 2019.

Panelists

Panelist – I



### Caitlin McVey MBA, RN, CPHQ, CLSSBB

Associate Vice President  
Memorial Hermann Institute for Nursing Excellence  
Houston, Texas

Caitlin McVey is the Associate Vice President of the Memorial Hermann Institute for Nursing Excellence. Among her professional assets are a strong clinical background in critical care nursing, a record of improving quality while controlling costs, and a focus on effective relationships across the healthcare community. She is a Certified Professional in Healthcare Quality and Certified Six Sigma Black Belt. Caitlin is currently enrolled as a PhD student at UT Cizik School of Nursing focusing on using technology and innovative models of care to advance nursing practice with improved clinical and operational outcomes.

Panelist – II



### Megan Moore, MBA, CMQ/OE, CSQP, CLSSGB

Director of Quality  
Ryerson, Sugarland, Texas

Megan Moore is the Director of Quality for Ryerson, a steel distributor and fabricator. In her almost 20 years of industry experience her background covers everything from sales to operations, LSS, and quality, leading her to become a manufacturing senior leader. In her current role, Megan is responsible for directing the strategic advancement of the overall quality program while simultaneously displaying quality as a competitive advantage. She provides leadership and expertise to ensure the development of people, processes, and products to continuously improve the internal and external customer experience. She has worked on numerous waste reduction and operational efficiency projects during her time at Ryerson. Some of these projects include barcode scanning, location startups and shutdowns, quality program certifications and transitions, systems development, integration, and roll-out, standardization programs, metric improvements, and performance improvement initiatives.

Megan has a passion for problem solving and applies this passion to continuous improvement, best practice identification, project management, process standardization, teaching, mentoring, and learning. She is self-motivated and results driven. She is an advocate for advancing the careers of those around her in the metals industry and is an active mentor and sponsor within her company. Megan has an undergraduate degree in Industrial Distribution from Texas A&M University and an MBA from the University of Massachusetts. As a firm believer in continuous learning and growth she is also a Certified Manager of Quality / Organizational Excellence, Certified Supplier Quality Professional, Certified Lean Six Sigma Green Belt, Certified ISO 9001:2015 Internal Auditor, and IATF 16949 Auditor.

Panelist – III



**AJ Harzke, DrPH, MPH, MDiv, LSSBB**

Assistant Professor, School of Public & Population Health  
Manager, Process Improvement, Correctional Managed Care  
University of Texas Medical Branch, Houston, Texas

Dr. AJ Harzke has worked as public health practitioner, researcher, and statistics consultant in correctional healthcare settings for more than 20 years. She received her doctorate from the University of Texas School of Public Health (Houston, Texas; 2007). From 2008 to the present, she has served dual roles as an Assistant Professor at the University of Texas School of Public and Population Health and a Senior Biostatistician/Process Improvement Manager in Correctional Managed Care (CMC), she conducts research as a principal investigator and collaborator, provides statistical consultation for students and post-doctoral residents and fellows conducting

correctional healthcare research, and co-leads and manages Lean Six Sigma (LSS) performance improvement initiatives in CMC. Since 2014, she has led, facilitated, or supported more than 60 LSS health clinic-based improvement projects, including several Green Belt Certification projects through a collaboration with the University of Houston School of Technology.

Panelist – IV

**Idris Olakunmi Yusuf, Msc, PMP**

IT Professional & Graduate Research Fellow  
Texas Southern University, Houston, Texas

Idris Yusuf is an IT professional and a certified project manager, PMP. He has over a decade of experience across many industries – software development, banking, consulting, and telecoms. He has two undergraduate degrees in Computer Science and Economics from Yaba College of Technology and the University of Ibadan Nigeria respectively. He also bagged an MSc (Info. Sys. Mgmt) with distinction from the University of Roehampton London. He has many industry-leading certifications, like ITIL, OCP, Oracle Certified Expert, OCE, and others to his credit. He is currently studying for another MSc in Computer Science at Texas Southern University with a research interest in Artificial Intelligence, Data Analytics, and Federated Learning. Idris is an ex-IBMer and has worked for other companies like International Turnkey Systems, ITS, Jaiz Bank PLC, Airtel, Ernst & Young Nigeria, NTEL, and JKK

among others where he managed large enterprise databases, and middleware solutions, and performed several other roles including IT operations lead. He is a co-founder of a number of growing IT firms in Nigeria – Gritty Minds Concepts Limited and Paysmosmo.com. To his credit, he has acted in various capacities in many transformational projects in the technology industry, working with peers across the globe to deliver successfully with excellent voice of customer feedback. He is an LSS enthusiast, an advocate of process improvements with a strong background in technology operations and management. He is a mentor to many budding IT associates and others through many initiatives which include “Empowerment thru Tech” training and food-for-the-poor. He also spends part of his free time visiting TDCJ (Texas Dept and Criminal Justice) correctional centers motivating and inspiring inmates. His hobbies include reading, traveling, and swimming.

## Diversity and Inclusion Panel sponsored by Ford Motor Company

Thursday, June 15, 2023, 2:00 – 3:45 pm – Room 2 (Onsite)

Panel Chair

**Professor Donald M. Reimer**

President, The Small Business Strategy Group, Detroit, Michigan, USA  
Adjunct Faculty – A. Leon Linton Department of Mechanical Engineering  
Lawrence Technological University, Southfield, Michigan, USA

Donald M. Reimer is an adjunct faculty at the A. Leon Linton Department of Mechanical Engineering in College of Engineering at Lawrence Tech in Southfield, Michigan. He coordinates the Certificate of Entrepreneurial Engineering Skills. Mr. Reimer holds a Bachelor of Science degree in Industrial Management from Lawrence Technological University and a Master of Arts degree in Political Science from University of Detroit/Mercy. He is a Certified Management Consultant with over 35 years of experience in working with closely-held businesses. He has taught courses in entrepreneurship, strategic management, corporate entrepreneurship and innovation for engineers. Mr. Reimer is a member of the Lawrence Tech Kern Campus Committee, Coordinator of the Lawrence Tech Innovation Encounter. He is faculty Advisor of the Collegiate Entrepreneurs' Organization. Mr. Reimer serves

as a Kern Fellow of The Kern Family Foundation, Co-Direct of the Coleman Fellows Program, member of the National Collegiate Entrepreneurs' Organization Faculty Advisory Council and is a member of the American Society of Engineering Education. He has operated his own consulting company – The Small Business Strategy Group for 23 years. He published numerous articles on small business, entrepreneurship and strategic thinking. He has received several awards and recognition by local, state and federal agencies for his work in entrepreneurship and minority business development. Mr. Reimer served as member of the Minority Economic Development Committee of New Detroit. Mr. Reimer is member of the Small Business Advisory Council of the Detroit Regional Chamber of Commerce. Mr. Reimer is a member of Advisory Board of the Milwaukee Junction Small Business Assistance Center. He is also a member of the Applied Innovation Alliance. Mr. Reimer serves as a KEEN Fellow for The Kern Family Foundation and is a member of United States Association of Small Business and Entrepreneurship.

Panel Speaker I



**Tanya Hill**  
Chief Executive Officer & Founder  
ForeverFresh, Detroit, Michigan, USA

Tanya Hill is the creator and founder of ForeverFresh- a line of disposable undergarments for adults and a children's line under the brand name ToddiFresh. The products are sold through national distributors across the United States. In addition to ForeverFresh, Hill is also a principal in AP United, a Joint Venture partnership with Paradies Lagardere at Detroit Metropolitan Airport. The venture owns and operates multiple local and national brands in both airport terminals that include The Economist, Cat Cora Taproom, Air Margaritaville, Chick-fil-A, PF Chang's, and soon-to-open Starbucks. Hill is president emeritus of the National Association of Women Business Owners Greater Detroit Chapter (NAWBO GDC) and is a board member of its foundation, NAWBO Excel. She served on NAWBO's national board for five years (2018–2022). Hill serves on several other boards: the Detroit Children's Choir, First Tee Greater Detroit (Board President), Oakland Schools Education Foundation, the Warriors Trust Fund, and is the board Chair of The Heat and Warmth Fund (Board President) and the Detroit Regional Chamber of Commerce.

Hill attended the University of Detroit. She is a graduate of the Minority Business Executive Program at Amos Tuck School, Dartmouth College, and Leadership Detroit Class XXIII. She has received numerous awards and recognition for her entrepreneurial spirit and accomplishments. One she is especially proud of is the prestigious European Disposable and Nonwoven Association award in Geneva Switzerland. Hill is passionate about helping others reach their potential, be it mentoring, being a connector, or advocate. She firmly believes that whatever you aspire to do in life is attainable with faith, perseverance, and the willingness to continue to learn – never being afraid to think outside the box. Hill lives life passionately with two credos-“Lift as you climb” and “Live to give”. A sought-after motivational speaker, Hill freely uses her knowledge and life lessons to inspire and mentor those around her.

#### Panel Speaker II



**Dr. Devinder Kumar Banwet FIE**  
Vice Chancellor Founding Retd  
University of Engineering & Management, Kolkata India  
Professor Emeritus, DMS, IIT Delhi (India)

Prof. Devinder Kumar Banwet is Vice Chancellor Founding Retd. of University of Engineering & Management, Kolkata India. He is an Emeritus Professor of DMS IIT Delhi in the area of Operations & Supply Chain Management, Industrial Systems Engineering, Infrastructure Project Systems Management, TQM, DSS, Operations Research Applications. Prof Banwet is a graduate Mechanical Engineer, with Master of Industrial Engineering and a PhD (Industrial Engg /Production Management from IIT Delhi. Previously he served as a Vice Chancellor of the University of Engineering and Management at Kolkata. He has made significant contributions in publications related to Operations Management. His areas of research interest include Operations Management, Supply Chain and Logistics, Services Management, Project Management, IT-enabled DSS, Industrial Systems Engineering, Total

Quality Management, Manufacturing Strategy, Technology Management, Materials Inventory Management, Facilities Planning, Operations Research Systems Modelling, Telecom Systems and Entrepreneurship Management. Prof Banwet has more than 40 years of academic teaching, research and administrative experience Prof Banwet has guided 35 + PhD projects; has many research publications in reputed journals in India and abroad, Has had prestigious assignments at Kuwait Institute for Scientific Research, University of Sorbonne at Paris, Asian Institute of Technology Bangkok; Awarded Best Engineer Award IE,India, PMI Distinguished Researcher Award, IEOM Award, Life Time Achievement Award of POMS India, ISTD India,, President of professional Societies Decision Science Institute of USA India Chapter,. Prof Banwet is on the Governing Board of many Professional Institutes of Technology, and Management, and usually Chairman of many NBA Nat Board of Accreditation team expert visits.

#### Panel Speaker III



**Lydia Gutierrez**  
President, Hacienda Mexican Foods  
Detroit, Michigan

Lydia Gutierrez serves as President and CEO of Hacienda Mexican Foods a manufacturer of Tortillas and tortilla chips located in Detroit, Michigan. HMF is a multimillion-dollar company co-founded by Lydia and her late husband in 1990. As President, Lydia is responsible for running all facets of her business. She has a proven track record with more than 30 years of experience in the food business. Over the years she has grown her manufacturing company from a two-person operation to employing more than 70 people. Lydia is an entrepreneur, she understands the food industry and the importance of compliance, supply chain operations, including, manufacturing, research and development, procurement, distribution, planning, transportation, inventory management, quality and more importantly the production floor. She has been at the forefront of Hispanic woman in manufacturing and received a lifetime achievement award from Michigan Food & Beverage Association and inducted to the Hall of Fame for the Tortilla Industry Association in 2020. She has served as the Board Chair to many Associations and numerous Executive Boards including, New Economy Initiative, Tortilla Industry Association, Food Policy Council

for the State of Michigan, Crime Stoppers, Detroit Economic Growth Corporation, Henry Ford Health Systems, New Detroit, Child's Hope, Academy of America School, Latino Family Services and Co-Chaired the “Woman In-Action” conference sponsored by the Society of Hispanic Professional Engineers. Lydia attended Lee University and is the daughter of immigrant parents.

## Global Engineering Education Forum – Panel

Thursday, June 15, 2023, 4:00 – 5:45 pm – Room 2 (Onsite)

#### Panel Chair



**Dr. Adedeji Badiru**  
Dean  
Graduate School of Engineering and Management  
Air Force Institute of Technology  
Wright-Patterson AFB  
Ohio, USA

Panel Speaker I



**Dr. Abu Masud, P.E.**  
Emeritus Professor  
Department of Industrial and Manufacturing Engineering  
Wichita State University  
Kansas, USA

Panel Speaker II

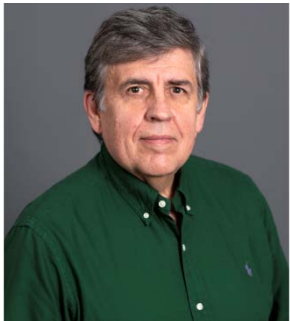


**Paul Perkins**  
President  
Amatrol, Inc.  
Jeffersonville, Indiana  
USA

Paul Perkins is president and co-founder of Amatrol, Inc., a Jeffersonville, Indiana based manufacturer of technical learning systems and online interactive multimedia software for colleges, industry and high schools. Perkins holds a B.S. Degree in Mechanical Engineering Summa Cum Laude from Georgia Institute of Technology, is the author of over 20 books on industrial controls and automation, and has designed numerous training systems for teaching engineering and technical skills. His community service activities include serving as Chair of the Indiana State

Workforce Innovation Council, past Chair of the National Governors Association State Workforce Board Chairs Association, and board member of many other national, state and local organization.

Panel Speaker III



**Dr. Christopher Cox, P.E.**  
Faculty, Construction Management, College of Engineering and Technology  
Western Carolina University, Cullowhee, North Carolina, USA

Christopher Cox, Ph.D., P.E., is currently with the Construction Management in the College of Engineering and Technology at Western Carolina University in Cullowhee North Carolina, USA. Prior to joining the faculty of the Kimmel School Dr. Cox spent 38 years in the energy industry. During his career he held a variety of roles in engineering, corporate planning and strategy, mergers and acquisitions, production operations, and project management. He has lived in the Middle East (United Arab Emirates, Qatar and Kuwait), North Africa (Egypt and Tunisia), Australia, and several US locations (Alaska, Illinois, and Texas). In addition to these residential locations, he worked in many other countries. Dr. Cox has a B.S. in Chemical Engineering from Tulane University, M.S. in Petroleum Engineering from the University of Houston, an MBA from Alaska Pacific University, and Ph.D. in Civil Engineering from Texas A&M University. He is a licensed Professional Engineer.

Panel Speaker IV



**Professor Hamid Parsaei, Ph.D., PE**

Fellow, IISE, ASEE, SME, IEOM

Professor, Department of Industrial and Systems Engineering

Director, College of Engineering Accreditation and Assessment

Texas A&amp;M University

College Station, Texas, USA

IEOM President, 2021-2023; IEOM Vice President, 2019-2021

### Submissions Received from Countries and Territories

1. Algeria	8. Egypt	16. Malaysia	24. Qatar	32. UAE
2. Australia	9. Ethiopia	17. Mexico	25. Saudi Arabia	33. UK
3. Bangladesh	10. France	18. Morocco	26. South Africa	34. USA
4. Bosnia and Herzegovina	11. India	19. Pakistan	27. South Korea	35. Vietnam
5. Brazil	12. Indonesia	20. Peru	28. Spain	
6. Canada	13. Italy	21. Philippines	29. Taiwan	
7. Colombia	14. Japan	22. Portugal	30. Thailand	
	15. Kuwait	23. Puerto Rico	31. Turkey	

## 14th International Conference on Industrial Engineering and Operations Management

February 12-14, 2024, Dubai, United Arab Emirates (UAE)

Venue: Hyatt Regency Dubai

Host: Khalifa University, Abu Dhabi

<http://ieomsociety.org/dubai2024/>

Conference Chair:

**Dr. Mohammed Omar**

Professor and Chair, Department of Industrial and Systems Engineering

Khalifa University, Abu Dhabi, UAE

# Conference Committee

## Conference Chair

Dr. Satish Bukkapatnam  
Rockwell International Professor and  
Director, TEES Institute for Manufacturing Systems  
Texas Engineering Experiment Station  
College Station, Texas, USA

## Conference Co-Chairs

Dr. Ahad Ali  
Associate Professor  
Director of Industrial Engineering Program  
A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering  
Lawrence Technological University  
Southfield, Michigan, USA

Dr. Gino Lim  
Professor & Chair  
R. Larry and Gerlene (Gerri) R. Snider Endowed Chair  
Department of Industrial Engineering  
University of Houston  
Texas, USA

Dr. Hamid R. Parsaei  
Professor of Industrial & Systems Engineering  
The Wm Michael Barnes '64 Department of Industrial & Systems Engineering  
Affiliated Professor, Multidisciplinary Engineering  
Director, College of Engineering Accreditation and Assessment  
Texas A&M University, College Station  
Texas, USA

## Industry Chair

Eric Ayanegui, CPMM, CRL  
Director Operations Engineering  
Cintas Corporation  
Houston, Texas, USA

## Program Chair

Professor Don Reimer  
Director of Membership and Chapter Development  
IEOM Society

## Panel Chairs

Women in Industry and Academia (WIIA) Panel

Dr. Johanna Trujillo Díaz  
Titular-II Professor at Business Administration  
Support of Vice-Rector for Research  
Fundación Internacional De La Rioja (UNIR)  
Bogotá, Colombia

Industry 4.0 Panel Chair

Dr. Hayder Zghair  
Assistant Professor of Industrial Engineering  
Director of Industrial Engineering Development  
College of Science and Engineering  
Southern Arkansas University, Magnolia, Arkansas, USA

Human Factors and Ergonomics – Maintenance and Reliability Panel Chair

Eric Ayanegui, Cintas Corporation

Global Supply Chain Management and Logistics Panel Chair

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

Data Analytics Panel Chair

Dr. Ying Lin  
Assistant Professor, Industrial Engineering Department  
Director, Smart Health & Intelligent Engineering Systems (SHINES) Lab  
University of Houston, Houston, Texas

Using Assessment to Improve Student Learning and Curriculum – Panel Chair

Dr. Abu Masud

Professor Emeritus, Department of Industrial and Manufacturing Engineering  
Wichita State University, Kansas, USA

Lean Six Sigma Panel Chair

Dr. Jamison Kovach  
PMI Houston Endowed Professor in Project Management  
University of Houston, Texas, USA

Diversity and Inclusion Panel sponsored by Ford Motor Company Panel Chair

Shelia Harden  
CEO, GSHA Quality Services, Ann Arbor, Michigan, USA

Global Engineering Education Forum – Panel Chair

Dr. Adedeji Badiru  
Dean, Graduate School of Engineering and Management  
Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA

Conference Secretariat

Dr. Taufiqul Islam, Operations Manager, IEOM Society International

## North American Academic Committee

Abdur Rahim, University of New Brunswick at Fredericton, Canada  
Abu Masud, Wichita State University, Kansas, USA  
Adedeji Badiru, Wright-Patterson AFB, Ohio, USA  
Ahmad Elshennawy, University of Central Florida, Orlando, FL, USA  
Ali ElKamel, University of Waterloo, Canada  
Alireza Ghasemi, Dalhousie University, Halifax, NS, Canada  
Alok K. Verma, Texas A&M Galveston, TX  
Amarjit Singh, University of Hawaii at Manoa, Honolulu, Hawaii  
AMM Nazmul Ahsan, Western Carolina University, Cullowhee, NC, USA  
Andy Pandian, Saginaw Valley State University, Saginaw Valley, Michigan  
Anwar Rahman, Central Connecticut State University (CCSU), USA  
Arjun K. Gupta, Bowling Green State University, Bowling Green, Ohio, USA  
Arun Nambiar, California State University – Fresno, USA  
Azadeh Maroufmashat, University of Waterloo, Canada  
Bashir Khoda, North Dakota State University, USA  
Bernardo Villarreal, Universidad de Monterrey, Mexico  
Bharat Kolluri, University of Hartford, Connecticut  
Celestine Antuen, North Carolina A&T State University, USA  
Cesar Acosta, University of Southern California, Los Angeles, California  
Charles Chen, Morrill Learning Center, San Jose, California  
CJ Chung, Lawrence Tech  
Daniel M. Ferguson, Purdue University, West Lafayette, Indiana  
David Güemes-Castorena, Research Department, Tecnológico de Monterrey  
Daw Alwerfalli, Lawrence Technological University, Michigan, USA  
Devashis Mitra, University of New Brunswick, Fredericton, Canada  
Devdas Shetty, University of the District of Columbia, Washington, DC, USA  
Doga Demirel, Florida Polytechnic University, Florida, USA  
Ehsan Teymourian, Rutgers University, USA  
Elizabeth O'Neill, SUNY Buffalo State College, Buffalo, NY, USA  
Eui Park, North Carolina A&T State University, USA  
Farooq Sheikh, State University of New York (SUNY), Geneseo, USA  
Farouq Alhourani, University of Tampa, Florida, USA  
Farshid Azadian, Embry-Riddle Aeronautical University, Daytona Beach, FL  
Fernando González Aleu, Engineering Department, UDEM  
Gahangir Hossain, Texas A&M University-Kingsville, Texas  
Ghorbanmohammad Komaki, Case Western Reserve University, Cleveland  
Hamid Parsaei, Texas A&M University (College Station)  
Hayder Zghair, Southern Arkansas University, USA  
Jacqueline Chestnut, North Carolina A&T State University, Greensboro, NC  
Jenny Diaz, University of Monterrey, Mexico  
Jim Mennie, FL Poly  
Jing Hou, FL Poly  
Joonyup Eun, Vanderbilt University, Nashville, Tennessee  
Jorge de Jesús Lozoya-Santos, Tecnológico de Monterrey  
Lee Wells, Western Michigan University, Kalamazoo MI, USA  
Leslie Monplaisir, Wayne State University, Detroit, USA  
Li Xu, Old Dominion University, USA  
Lihui Shi, Centerfield Corporation, Los Angeles, California, USA  
Loubna Benabbou, Université du Québec à Rimouski (UQAR) - Lévis Campus,  
Lévis, QC, Canada  
Luis Rabelo, University of Central Florida, Orlando, FL, USA  
Luis Rocha-Lona, Instituto Politécnico Nacional, Mexico City, Mexico  
Luz María Valdez de la Rosa, Universidad de Monterrey, Monterrey, Mexico  
M. Affan Badar, Indiana State University, Terre Haute, Indiana, USA  
M. El-Shark, University of South Alabama, Mobile, AL  
Mahdi Fathi, University of North Texas, Denton, Texas, USA  
Masud Rana, Delaware State University, USA  
Mohamed Awwad, California Polytechnic State University, San Luis Obispo

Mohammad Abdus Salam, Southern University, Baton Rouge, LA, USA  
 Mohammad Ashraf Hossain Sadi, University of Central Missouri, Kansas City  
 Mohammad Dehghani, Northeastern University, Boston, MA  
 Mohammad Dehghani, Northeastern University, Boston, Massachusetts  
 Mohammad Habibur Rahman, University of Wisconsin, Milwaukee  
 Mohammad Khasawneh, Binghamton University, NY (SUNY Binghamton)  
 Mohammad Marufuzzaman, Mississippi State University, USA  
 Mohammed Anwar Rahman, Central Connecticut State University  
 Molu Olumolade, Central Michigan University, Mt. Pleasant, Michigan  
 Mónica Blanco, Autonomous University of Nuevo León, México  
 Mónica Rodríguez, Automotive Cluster of Nuevo León, A.C. (CLAUT)  
 Muhammad Sohail Ahmed, Eastern Michigan University, Ypsilanti, MI, USA  
 Mukdam Kena, Ford Motor Company, Michigan  
 Mukondeleli Grace Kanakana, University of South Africa  
 Mukti Masud Rana, Delaware State University, USA  
 Muztoba A. Khan, Carroll University, Waukesha, Wisconsin, USA  
 Nadia Bhuiyan, Concordia University, Montreal, Quebec, Canada  
 Neil G. Murray Jr, ZF-TRW, Michigan, USA  
 Niamat Hossain, Arkansas State University  
 Omar Ashour, Penn State Behrend, Erie, PA  
 Qipeng (Phi) Zheng, University of Central Florida, Orlando, Florida, USA  
 Quazi K. Hassan, University of Calgary, Canada  
 Reinaldo Sanchez-Arias, Florida Polytechnic University, Florida, USA  
 Reza Akhavan, California State University, East Bay  
 Samira A. Rahimi, McGill University, Canada  
 Sanchez-Arias, FL Poly  
 Sarah Ali, Loyola University of Chicago, IL, USA  
 Seyed A. Niknam, Western New England University, Springfield, MA  
 Shahram Taj, Florida Polytechnic University, USA  
 Sikder M. Kamruzzaman, Ryerson University, Toronto, Canada  
 Soumaya Yacout, École Polytechnique de Montréal, Québec, Canada  
 Teresa Verduzco, Engineering Department, UDEM  
 Vahab Vahdat, Northeastern University, USA  
 Walid Abdul-Kader, University of Windsor, Canada  
 Wilkistar Otien, University of Wisconsin – Milwaukee

**North American Industry Committee**

Aaron Rubel, Airbus Americas, Inc., Mobile, Alabama, USA  
 Abdul Mannan, Social Security Office  
 Ahsanul Karim, Ford Motor Company, Michigan  
 Anwar Hossain, Daikin Applied, Minneapolis, Minnesota, USA  
 Foad Hosseinkhanli, Amor Health Services, Inc., Brownsville, Texas, USA  
 Hulas King, SIEMENS PLM (Retired), St. Louis Missouri, USA  
 Ishtiaq Hussain, General Motors (GM), Michigan, USA  
 Joseph Ogundu, Emerald Consulting Company, Michigan, USA  
 Kush Shah, S. Mgr. - Global Operational Excellence - General Motors  
 Md Tanbiruj Jaman, Supply Chain Planner, PepsiCo, Wichita, Kansas  
 Saso Krstovski, Ford Motor Company  
 Steve Sibrel, Senior Quality Manager at Harman International, Novi, MI, USA  
 Sushil K. Shetty Wilsonart LLC, Temple, Texas, USA  
 Tarun Mohan Lal, Mayo Clinic, USA

**Technical Committee**

Dr. Adnan Hassan, Universiti Teknologi Malaysia  
 Dr. Cherrafi Anass, ENSAM-Meknes, Moulay Ismail University, Morocco  
 Taher Azar Ahmad, Benha University, Egypt  
 Alimohammad AHMADVAND, University of Eyvanekey, Iran  
 Michel ALDANONDO, Ecole des Mine d'Albi, France  
 Bandar A. Alkhayyal, Prince Sultan University, Saudi Arabia  
 Ahmad Taher AZAR, Benha University, Egypt  
 Armand BABOLI, INSA Lyon, France  
 Trishit BANDYOPADHYAY, Xavier School of Management, India  
 Andrés Felipe BARCO, Universidad de San Buenaventura-Calí, Colombia  
 Samuel BASSETTO, Ecole Polytechnique, Canada  
 Mahdi BASTAN, University of Eyvanekey, Iran  
 Philipp BAUMANN, University of Bern, Switzerland  
 Cedrick BELER, Institut National Polytechnique de Toulouse – Ecole Nationale d'Ingénieurs de Tarbes, France  
 Eric BONJOUR, ENSGSI – University of Lorraine, France  
 Robert BOUTE, KU Leuven, Belgium  
 Xavier BRUSSET, SKEMA Business School, France  
 Patricia Alcantara CARDOSO, Universidade Federal do Espírito Santo, Brazil  
 Kah Hin CHAI, National University of Singapore, Singapore  
 Aurélie CHARLES, University of Lyon France, France  
 Elyn Solano CHARRIS, Universidad de La Sabana, Columbia  
 Anis CHELBI, University of Tunis, Tunisia  
 Aidin Delgoshahi, Industrial Engineering Department, Kharazmi University, Tehran, Iran  
 Christine DIMARTINELLI, IESEG School of Management, France  
 Jose Arturo Garza-Reyes, The University of Derby, UK  
 Hamed Shakouri GANJAVI, University of Tehran, Iran  
 Laurent ENESTE, Institut National Polytechnique de Toulouse – Ecole Nationale d'Ingénieurs de Tarbes, France  
 Ali GHARBI, ETS Montreal, Canada

Bernard GRABOT, Institut National Polytechnique de Toulouse – Ecole Nationale d'Ingénieurs de Tarbes, France  
 Elise GRUHIER, University of Bordeaux France, France  
 Bhaskar GARDAS, Veermata Jijabai Technological Institute, India  
 Vastag GYULA, Széchenyi István University, Hungary  
 Marc Haddad, Lebanese American University, Lebanon  
 Khaled HADJ HAMMOU, Institut National des Sciences Appliquées de Lyon, France  
 Ramzi HAMMAMI, ESC Rennes School of Business, France  
 Alaa HASSAN, University of Lorraine, France  
 Petri HELO, University of Vaasa, Finland  
 Lazhar HOMRI, Arts et Métiers ParisTech, France  
 Lars HVAM, Technical University of Denmark, Denmark  
 Emmanuel HYON, Sorbonne Université – LIP6, France  
 Peter JACOBSEN, Technical University of Denmark, Denmark  
 Daouda KAMISSOKO, IMT Mines Albi, France  
 Özge Karanfil, Koç Üniversitesi, Turkey  
 Laoucine KERBACHE, HEC Paris, France  
 Javad KHAMISABADI, Islamic Azad University, Iran  
 Reza Ramazani KHORSHID-DOUST, Amirkabir University of Technology, Iran  
 Nathalie KLEMENT, Arts et Métiers ParisTech, France  
 Anil Kumar, University of Derby, UK  
 Arun KUMAR, RMIT University, Australia  
 Vikas KUMAR, University of the West England, UK  
 Elmar KUTSCH, Cranfield University, UK  
 Samir LAMOURI, ENSAM Arts et Métiers ParisTech, France  
 Carman LEE, Hong Kong Polytechnic University, Hong Kong  
 Danping LIN, Shanghai Maritime University, China  
 Chnry Yaqiong LV, Wuhan University of Technology, China  
 Lahcen MIFDAL, Universiapolis Agadir, Morocco  
 Mehرداد MOHAMMADI, IMT Atlantique, France  
 Seyed Meysam MOUSAVI, Shahed University, Iran  
 Simon Peter Nadeem, University of Derby, UK  
 Balkrishna NARKHEDE, National Institute of Industrial Engineering, India  
 Banu OZKESER, KOLUMAN Industry Automotive, Turkey  
 Maurice PILLET, Université de Savoie Mont Blanc, France  
 Rakesh RAUT, National Institute of Industrial Engineering, India  
 Nidhal REGZ, University of Lorraine, France  
 Luis Rocha-Lona, Instituto Politécnico Nacional, Mexico  
 Turki SADOK, University of Lorraine, France  
 Jérémie SCHUTZ, University of Lorraine, France  
 Sara SHAFIEE, Technical University of Denmark, Denmark  
 Shakouri G. Hamed, University of Tehran, Iran  
 Dellagi SOFIENE, University of Lorraine, France  
 Reza TAVAKKOLI-MOGHADDAM, University of Tehran, Iran  
 Ayeley TCHANGANI, Institut National Polytechnique de Toulouse – Ecole Nationale d'Ingénieurs de Tarbes, France  
 Norbert TRAUTMANN, University of Bern, Switzerland  
 Jiri TUPA, University of West Bohemia, Czech Republic  
 Yazgi TUTUNCU, Izmir University of Economics, Turkey  
 Eric VILLENEUVE, Ecole Supérieure des Technologies Industrielles Avancées, France  
 Junqiang WANG, Northwestern Polytechnic University, China  
 Yue WANG, Hang Seng Management College, Hong Kong  
 Yong WU, Griffith University, Australia  
 Christoph WUNCK, Jade University of Applied Sciences, Germany  
 Esma YAHIA, Arts et Métiers ParisTech, France  
 Bingwen YAN, Cape Peninsula University of Technology, South Africa  
 Marc ZOLGHADRI, Ecole des Ingénieurs en Mécanique de Paris, France  
 Funlade Sunmola, University of Hertfordshire, Hatfield, UK  
 Ali MOSTAFAEIPOUR, Industrial Engineering Department, Yazd University, Iran

**International Committee**

Eldon Caldwell, University of Costa Rica  
 Mohammad Abdullah Shaikh, Deakin University, Australia  
 Bhaskar Bhandarkar, Indian Institution of Industrial Engineering (IIIE), Mumbai, India  
 Mohd Khairul Anuar bin Mohd Ariffin, Co-ordinator Master of Manufacturing System Engineering, Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, University Putra Malaysia (UPM), Selangor, Malaysia  
 Shekar Babu, AMRITA School of Business, AMRITA University, Bangalore, India  
 Khurshid Khan, Vice Chancellor, Abdul Wali Khan University Mardan (AWKUM), Mardan, Khyber Pakhtunkhwa, Pakistan  
 Mahdi Bashiri, Professor of Industrial Engineering, Shahed University, Tehran, Iran  
 MELLAK Abderrahmane, Boumerdes University – Algeria  
 Sumit Kumar Gupta, Dean of Science, Parishkar college of global Excellence Jaipur, India  
 Sharif, Indian Institute of Technology (IIT) Kanpur (India)



## Plenary Speakers

June 12, Tuesday, 2:00 – 2:40 am – Virtual Room 1 (Online)



**Foad H Khanli**

Director of Quality Assurance, Performance and Business Improvement  
Amor Health Services, Inc.

Brownsville, Texas, USA

Application of Hoshin Kanri to accelerate Lean Six Sigma implementation in Healthcare

Mr. Hosseinkhanli is Director of Quality Assurance, Performance and Business Improvement Amor Health Services, Inc. in Brownsville Texas USA. He was General Manager of Almana Trading in Doha Qatar Middle East and responsible for all aspects in creation and implementing of successful growth of new market development and turn- key operation for various products. Mr. Hosseinkhanli was involved with financial negotiation with national and international banking, corporation, private sources and trading organization. Volvo International Development Corporation, Gothenburg Sweden, Marketing Director For The Middle Eastern Countries, UAE, Saudi Arabia, Bahrain, Turkey and Iran. Negotiated and established exclusive franchise agreement and turn- key operation. Did market analysis and feasibility studies for Volvo International in the Middle Eastern countries and increase annual sales in excess of 55%. Chief Industrial Engineer, United Carr, manufacturer of plastic knobs for Automotive Industries, Knoxville Tennessee USA. His education background is: Master of Business Administration from IMMEDE Management Institute in Lausanne Switzerland majoring in financing. Bachelor of Science in Industrial and System Engineering from University of Rhode Island in Kingston Rhode Island USA. Certified Business Analyst from International profit Association in Buffalo Grove IL USA. Certified Six Sigma Green and Black Belt from Institute of Industrial Engineers. Extra Curriculum Activity: Senior Member of Institute of Industrial Engineers, Senior Member of ASQ and Senior Member of Swedish Method and Time Measurement Language: Fluent in English, Swedish, German, Turkish, Farsi and some Spanish.

June 13, Tuesday, 8:00 – 9:30 am – Meeting Room 1 (Onsite)

8:00 am – 8:30 am (Tuesday, June 13)



**Dr. Mohammad Ichsan, PMP, PMI-SP**

Assistant Professor

Faculty Member of Binus Business School (AACSB Accredited)

Undergraduate Program

Bina Nusantara University

Jakarta, Indonesia

Mohammad Ichsan is an Assistant Professor of Binus Business School. He has published some books and papers in the area of project management. He has over 20 years of experience in managing projects in multiple industries such as Information Technology, construction, telecommunication, and financial services. His current research domain is Project Management Office, Sustainable Project Management, Agile Project Management, and Strategic Project Management. His teaching area is project management, operations management, and supply chain as well as research methodology in the both undergraduate and graduate programs. Dr. Ichsan received his electrical engineering degree from Hochschule Darmstadt in Germany (Diplom Ingenieur) and his master's degree from the University of Indonesia in Project Management (Magister Teknik – Cum Laude), meanwhile, his Ph.D. is pursued from Bina Nusantara University majoring Strategic Management. Dr. Ichsan has also professional project management credentials such as Project Management Professional (PMP) and Project Management Institute – Scheduling Professional (PMI-SP) from Project Management Institute and Project Management Office – Certified Practitioner from PMO Global Alliance. He was appointed as Regional 15 Mentor PMI and a member of Project Management Institute Global and Indonesia Chapter.

8:30 am – 9:00 am (Tuesday, June 13)



**Dr. Muhammad Fauzan**

Director of Human Capital and Legal

PT Hutama Karya (Persero)

Indonesia

Muhammad Fauzan was born in Bengkalis on April 6th, 1973. He graduated with a Bachelor's Degree (S1) in Civil Engineering from the Sepuluh November Institute of Technology in 1998 and a Master's Degree (S2) in Financial Management from the University of Riau in 2009. Served as Director of Human Capital and Legal of PT Hutama Karya (Persero) based on the Minister of State-Owned Enterprises Decree No. SK-51/MBU/02/2021 regarding the Dismissal and Appointment of Members of the Board of Directors of the PT Hutama Karya (Persero) dated February 25th, 2021. Previously, he served on the Board of Directors of PT HK Realtindo (2014-2016), Head of Business Development and Investment Division of PT Hutama Karya (Persero) (2016-2018), and Executive Vice President of Corporate Secretary of PT Hutama Karya (Persero) (2018-2021).

9:00 am – 9:30 am (Tuesday, June 13)

**Nazmul Hossain**

Engineer at Axiscades Inc.

CFD Engineer at Caterpillar Cooling Performance Simulation team  
Houston, Texas, United States

Nazmul Hossain is a CFD Engineer currently working in the Cooling Performance Simulation team at Caterpillar's Large Power System Division. With a Master's degree in Computational Science from the University of Texas at El Paso (UTEP) and a Ph.D. in Mechanical Engineering from the University of Houston, he possesses a strong educational and research background in industrial and academic fluid dynamics related problems. Nazmul has also served as a lecturer at the University of Houston, teaching undergraduate courses such as fluid mechanics, thermodynamics, Element of Plant design, and introduction to CFD.

Nazmul has demonstrated his CFD expertise and problem-solving abilities through the successful completion of numerous projects focused on cooling performance optimization of large engines and engine components, and development of advanced power products. His specialization lies in multiphase flow modeling and simulations. Some notable projects include developing a common method to quantify solid particle bed performance, efficient fluidized bed design, as well as analyzing nano-particle suspensions in heat transfer fluids and novel Concentrating Solar Power (CSP) receiver design for CSP systems.

Nazmul has contributed to the field through publications on CSP technology and fluid-particle interactive bed performance analysis and optimization.

A CLEAN, SAFE  
BUSINESS IS ESSENTIAL.  
WE'RE READY™ TO HELP.



**CINTAS**  
READY FOR THE WORKDAY®

## 40<sup>th</sup> IEOM Global Engineering Education Global Engineering Education I

June 13, Tuesday, 2:00 – 3:45 pm – Meeting Room 1 (Onsite)

Session Chair: Anjum Ali, Ph.D.

2:00 pm – 2:30 pm (Tuesday, June 13)



### **Anjum Ali, Ph.D.**

(Retd.) Professor of Electrical Engineering, FAST-NU, Lahore, Pakistan  
Ex. Associate Professor of Computer Engineering, LUMS, Lahore, Pakistan  
Ex. Professor of Computer Science and Engineering

Dr. Anjum Ali completed his Ph.D. degree in August 1988 from the University of Alabama, Huntsville, Alabama, U.S.A. He has been teaching Electrical and Computer Engineering subjects since March 1978. His first teaching appointment, as a lecturer of Electrical Engineering, was at the University of Engineering and Technology (UET), Lahore, Pakistan, after winning gold medals in each of the last three years of his undergraduate engineering education. His teaching experience includes twelve years at Mercer University, Macon, Georgia, USA, and about nine years at three different universities in Saudi Arabia. At Mercer University (1988-1999), he was the lead faculty member who developed the Computer Engineering curriculum series, from the first undergraduate course in the area to various MS level electives.

He has also worked, as an associate professor, at the Lahore University of Management Sciences (LUMS), Lahore, Pakistan, from 1996 to 1998. During his stay at LUMS, he developed the computer engineering portion of the CS curriculum, and helped the university transition from the quarter system to the semester system. He served as the chairman of the Electronics Engineering and Instrumentation Department at the Hail Community College (now University of Hail), Hail, Saudi Arabia, from February 2000 to June 2002. During his stay there, he developed a four-year degree program in Electrical Engineering for the University of Hail.

Dr. Anjum Ali moved to Pakistan in July 2002, and joined Al-Khawarizmi Institute of Computer Science (KICS) at the University of Engineering and Technology, Lahore, as a professor in December 2002. During his stay at KICS, he initiated many research and development projects and won research grants. He has been a professor of Electrical Engineering at the National University of Computer and Emerging Sciences, (FAST-NU), Lahore, from May 2005 to May 2018. He was the Head of Electrical Engineering from March 2007 to September 2013, and during this time he developed multiple long-range policies and procedures for the university, which are still in place. He was also the Acting Director, Lahore Campus, at different occasions during his stay at FAST-NU, Lahore. Dr. Anjum Ali was the convener of the National HEC Computer Engineering curriculum development committee. The HEC committee (NCRC) developed and finalized the 2009 HEC Computer Engineering Curriculum for all Pakistani universities. Dr. Anjum Ali has taught many EE, CE and CS courses and supervised numerous graduate as well as undergraduate students during his 40 years of teaching career. He has over 30 conference and journal publications. He is also the founding editor of the FAST-NU Research Journal. His areas of current research interest include embedded control systems and computer architecture. After retirement from FAST-NU, Dr. Anjum Ali is leading a research and development company in Atlanta, GA, USA, as its president and CEO.

2:30 pm – 3:00 pm (Tuesday, June 13)



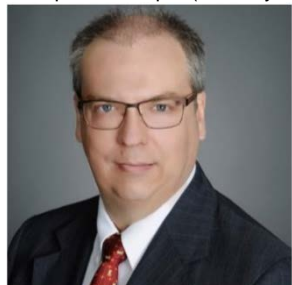
### **Dr. Devinder Kumar Banwet FIE**

Vice Chancellor Founding Retd  
University of Engineering & Management, Kolkata India  
Professor Emeritus, DMS ,IIT Delhi (India)

Prof. Devinder Kumar Banwet is Vice Chancellor Founding Retd. of University of Engineering & Management, Kolkata India. He is an Emeritus Professor of DMS IIT Delhi in the area of Operations & Supply Chain Management, Industrial Systems Engineering, Infrastructure Project Systems Management, TQM, DSS, Operations Research Applications, Prof Banwet is a graduate Mechanical Engineer, with Master of Industrial Engineering and a PhD (Industrial Engg /Production Management from IIT Delhi. Previously he served as a Vice Chancellor of the University of Engineering and Management at Kolkata. He has made significant contributions in publications related to Operations Management. His areas of research interest include Operations Management, Supply Chain and Logistics, Services Management, Project Management, IT-enabled

DSS, Industrial Systems Engineering, Total Quality Management, Manufacturing Strategy, Technology Management, Materials Inventory Management, Facilities Planning, Operations Research Systems Modelling, Telecom Systems and Entrepreneurship Management. Prof Banwet has more than 40 years of academic teaching, research and administrative experience Prof Banwet has guided 35 + PhD projects; has many research publications in reputed journals in India and abroad, Has had prestigious assignments at Kuwait Institute for Scientific Research, University of Sorbonne at Paris, Asian Institute of Technology Bangkok; Awarded Best Engineer Award IE, India, PMI Distinguished Researcher Award, IEOM Award, Life Time Achievement Award of POMS India, ISTD India, President of professional Societies Decision Science Institute of USA India Chapter, Prof Banwet is on the Governing Board of many Professional Institutes of Technology, and Management, and usually Chairman of many NBA Nat Board of Accreditation team expert visits.

3:00 pm – 3:30 pm (Tuesday, June 13)



### **Louis H. Iselin**

CTE/STEM Engineering and Robotics Instructor  
Cypress Park High School, Cypress, Texas, United States

Louis H. Iselin is a career and technical education (CTE) teacher at Cypress Park High School in the Cypress-Fairbanks Independent School District near Houston, Texas. He teaches vocational engineering courses and robotics, pulling from his experiences as a physicist, graduate engineer, and US patent attorney. Prior to returning to education in 2018, he spent over 20 years in patent prosecution and litigation support. His first position after graduate school was as an Assistant Professor of Physics at Bloomsburg University. Louis received MEng and PhD degrees in Nuclear Engineering Sciences from the University of Florida in Gainesville. His undergraduate, ABET-accredited degree is in Engineering Physics from The University of Tulsa in Tulsa,



Oklahoma. Louis earned a JD degree from the University of Houston Law Center. He is a Texas certified teacher in mathematics, physical science, and engineering for grades 6-12. Louis is an Oklahoma Engineer Intern and a Chartered Physicist (CPhys) and corporate member (MInstP) of the Institute of Physics. He is also a 37-year member of the Institute of Electrical and Electronics Engineers (IEEE).

3:30 pm – 4:00 pm (Tuesday, June 13)



**Soban Jalil**  
 Senior Program Manager  
 Wabtec Corporation  
 Strategic Advisor, PakLaunch  
 Founder and Principal Consultant at SJ Consulting Services

Soban is an execution and people focused global operations leader with 25+ years of experience across multiple industrial segments including Transportation, Marine, Power Generation, Energy and Transit. He held various leadership positions through his career at GE Transportation, GE Oil & Gas, Baker Hughes and now Wabtec Corporation in Engineering, Program Management and Supply Chain teams. He is currently leading North America Transit Passenger programs at Wabtec Corporation as Senior Program Manager. Before his current role, he was Global Quality Services and Engineering Leader at Baker Hughes, a GE Company, a position he held for six years. Earlier in his career, Soban gained extensive experience in launching and marketing of new products and services, customer engagement, strategic program management, business cost and process improvement, quality assurance and digital transformation with various business segments of General Electric Company (GE). Soban has been a thought-leader for 20+ years and led projects from concept to commercialization across multiple regions including Americas, Europe, Middle East and Asia Pacific. Soban holds a bachelor's degree in Electronic Engineering from GIK Institute, Pakistan, Master's in Electrical Engineering from Gannon University, Reliability and Risk Management Certification from University of Maryland and Executive MBA from Katz School of Business, University of Pittsburgh. He holds 2 patents and presented technical and policy related papers at various conferences and forums. He is a practicing ISO 9001 Quality Auditor, certified Lean Six Sigma practitioner and PMI certified Project Management Professional (PMP). Soban was one of the founding members and active leader of GE and Baker Hughes Asian Pacific American Forum (APAF), a Diversity and Inclusion Employee Resource Group (ERG). He was recognized and valued at CEO Diversity Council for his APAF leadership and community service initiatives. He was an active board member of Erie Asian Pacific American Association. He has led various initiatives in nonprofit and community organizations including GE Foundation and The Citizens Foundation (TCF). He is also active member of OPEN Entrepreneurship Forums in Silicon Valley and Houston area. Soban is currently advising PakLaunch, an entrepreneurship platform to connect global diaspora to startups in Pakistan across various sectors. He also volunteers time as Business mentor for Society of Asian Scientists and Engineers (SASE) and Sawayra, a non-profit focused on providing sustainable green solutions. He is also advising GIKI Alumni Association, a vibrant community of 7000+ members, as global coordinator and executive team member for the organization.

## Global Engineering Education II

4:00 – 5:45 pm – Meeting Room 1 (Onsite)

Session Chair: Anjum Ali, Ph.D.

### **ID 80 Analysis of the Technological Maturity Level of Industrial Engineering Students**

Daniela del Carmen Bacre-Guzmán, María de los Ángeles Martínez-Mercado, Azucena Minerva García-León and Nury Margarita Leal-Rendón  
 Professor, School of Chemical Science, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México

### **ID 208 You can't hide behind the screen forever; The necessity of Foundational Skills in STEM careers**

E Shirl Donaldson, University of Michigan Flint, United States

### **ID 131 Embedding Professional Development Courses in Curriculum**

Dr. Sabah Abro, Professor and Graduate Program Director, Department of Engineering Technology, Lawrence Tech University, Southfield, USA

### **ID 51 A Comparison of Students' Learning Experience in Undergraduate Engineering Programs Using Face-to-Face and Synchronous**

Albertus Retnanto, Ph.D., Professor, Petroleum Engineering, Texas A&M University at Qatar, Doha, Qatar  
 Hamid R. Parsaei, Ph.D., P.E., Professor, Industrial and Systems Engineering, Texas A&M University, College Station, TX, USA  
 Boback Parsaei, Vice President and Chief Technical Officer, Integrated Technology Systems, Inc., Houston, Texas, USA

## Plenary Speakers

### 10<sup>th</sup> IEOM Global Business Management and Global Project Management

#### Global Business Management and Global Project Management I

June 14, 2023 – 8:00 – 9:45 am - Room 1 (Onsite)

Session Chair:

8:00 – 8:20 am, June 14

**Ajairaj Selvaraj (PMP)®**

Project Engineer

JSW Steel

Houston, Texas, United States

8:20 – 8:40 am, June 14

**David Giraldo**

Principal Data Analytics Consultant

Simple BI Inc.

Houston, Texas, United States

8:40 – 9:00 am, June 14

9:00 – 9:20 am, June 14

9:20 – 9:40 am, June 14



## Continuous Innovation

At Eaton, we are continually pursuing new ideas with our current and future technologies to help customers meet their goals. Our valvetrain solutions such as cylinder deactivation and hollow engine valves that are engineered to deliver efficient performance while withstanding the extreme heat requirements. Our supercharger technologies for advanced boosting provide the instant throttle response and improved fuel efficiency customers desire. We are constantly innovating differentiated technologies to provide advanced solutions for the industry and our customers.

[www.eaton.com](http://www.eaton.com)



Powering Business Worldwide

# Plenary Speakers

## 39<sup>th</sup> IEOM Industry Solutions and Industry 4.0 - Plenary

### Industry Solutions I

2:00 – 3:45 pm – Meeting Room 1 (Onsite)

Session Chair: Ms. Kayla Buczkowski

2:00 pm – 2:30 pm (Wednesday, June 14)



#### Yanesh Naidoo

Owner, Executive Innovations Director & Member of the Board at Jendamark  
22' Africa Technology Company of the year  
Port Elizabeth, Eastern Cape, South Africa

2:30 pm – 3:00 pm (Wednesday, June 14)



#### Ms. Kayla Buczkowski

Applications Service Engineer  
A&D Technology  
4622 Runway Blvd  
Ann Arbor, MI 48108

Ms. Buczkowski is currently employed as an Applications Service Engineer with A&D Technology and is pursuing the dual Master's program of Engineering Management and Industrial Engineering at Lawrence Technological University as well as her Professional Engineering license in Mechanical Engineering. She graduated from Michigan Technological University in May 2018 with a Bachelor's of Science in Mechanical Engineering, minoring in Music Performance.

Working for A&D Technology, Ms. Buczkowski has become one of the company's experts in battery testing, engine testing, and hardware-in-the-loop testing. She integrates her company's software, iTest, at their office in Ann Arbor,

MI as well as at customer facilities around the globe. Currently, acting as one of the administrators of A&D Technology's service department and is the lead trainer in charge of training internal employees and customers on A&D products.

Ms. Buczkowski has spent four years working for A&D Technology, but also accumulated an additional two years of design and testing experience through internships and co-ops during her undergraduate studies. During her time attending Michigan Tech in Houghton, MI, Ms. Buczkowski performed with the Keweenaw Symphony Orchestra, serving as principal percussionist for four of her five years. As a final project for her Music Performance minor, she conducted a song with the Keweenaw Youth Symphony Orchestra. After graduation, she has maintained her appreciation for music performance and currently plays with the Dexter Community Orchestra.

3:00 pm – 3:30 pm (Wednesday, June 14)



#### Aaron Rubel, M.S.E.M.

Head of Aircraft Maintenance Programs Development  
Intellectual Property Focal Point  
Airbus Americas, Inc.  
Mobile, Alabama Engineering Center  
Mobile, AL 36615, USA

Aaron Rubel is Head of Aircraft Maintenance Programs Development at the Mobile, Alabama Engineering Center of Airbus Americas. He is a certified Lean Six Sigma Black Belt and has earned patented inventions. Aaron has over 30 years of combined professional aerospace and automotive experience in areas of engineering, design, risk analysis, problem solving, manufacturing, and leadership. Mr. Rubel earned a M.S. in Engineering Management from the University of Tennessee at Chattanooga (UTC), a B.S. in Engineering Technology from Lawrence Technological University (LTU), and an Associate of Applied Science from Macomb Community College. Mr. Rubel's honors include the Dr. Ron Cox Graduate Engineering Management Student Award given by UTC, and he was inducted into the LTU College of Engineering Hall of Fame. Service in the community is important to Aaron. He served on a Mobile (Alabama) Area Education Foundation strategic planning committee for science, technology, engineering, and mathematics (STEM), and for three years was the strategic planning committee chair and voting member on a local school board.



## Industry Solutions II – Lean Six Sigma

2:00 -3:45 pm – Meeting Room 1 (Onsite)

4:00 pm – 4:30 pm (Wednesday, June 14)



**Rachel Stanford**  
Center Quality Manager  
SLB, Houston, Texas, USA

Rachel Stanford is currently leading the Quality organization for the worldwide Bits & Drilling Tools manufacturing facilities at SLB, a global technology company in the energy industry. Rachel has been working for SLB for 15 years and has held positions in Operations, Engineering, Maintenance, and Quality, across the UK, Asia, and the US.

She started her career as a Field Engineer, working offshore in the South China Sea based out of Malaysia. This operations exposure gave Rachel a firsthand insight into how her products were used and allowed her to leverage this knowledge in her next position as Electronics Engineer to design better products. Rachel spent 2 years in a design role in England, before moving to Houston, Texas as a Reliability Engineer, focused on improving the performance of her products in the field. She was then promoted into Engineering Management, and in 2018 took

up the position of Maintenance Manager in Scotland, covering all of Europe. Rachel stepped away from the energy industry for one year to work as a Reliability Engineer at Amazon to obtain exposure in a new industry, before returning to SLB in her current role as global Quality Manager for the Bits & Drilling Tools Manufacturing centers worldwide.

Rachel is originally from Northern Ireland, and holds a Masters degree in Electrical and Electronics Engineering from Queen's University Belfast (2008). Rachel is an American Society for Quality Certified Reliability Engineer, and also holds the Project Management Professional certification from the Project Management Institute. She is Lean Green Belt certified. Rachel enjoys supporting young engineers in their career and is passionate about encouraging women into the Engineering field. She founded the "Rachel Stanford Scholarship for Emerging Leaders in Engineering and Computer Science" at Queen's University, a scholarship aimed at supporting and encouraging female students into STEM subjects.

4:30 pm – 5:00 pm (Wednesday, June 14)



**Jerel Scrutchin, MBA**  
Executive Consultant – Manufacturing  
SBTI  
Pearland, Texas, United States

5:00 pm – 5:30 pm (Wednesday, June 14)

**Abdul Rahman Saddiq**  
Senior Associate, Predictive Diagnostics  
EDP Renewables  
Houston, Texas, United States

# Plenary Speakers

## 19<sup>th</sup> IEOM Global Supply Chain and Logistics

### Global Supply Chain and Logistics I

June 15, 2:00 – 3:45 pm – Meeting Room 1 (Onsite)

2:00 pm – 2:20 pm (Thursday, June 15)



**Manohar S. Madan, PhD**  
Professor  
ITSCM Department  
University of Wisconsin-Whitewater  
Whitewater, WI – 53190

Manohar Madan is a Professor in the Information Technology and Supply Chain Management Department in the College of Business and Economics at the University of Wisconsin-Whitewater. He has a Ph.D. in Operations Management from the University of Tennessee, Knoxville, Tennessee. He has a Master's degree in Engr. Mgmt. from the University of Detroit, Detroit, Michigan. His teaching and research interests are in the areas of Operations Management, Supply Chain Management and Project Management. Manohar's research has been published in many professional journals such as the Journal of Operations Management, IIE Transactions, OMEGA – The Journal of Management Science, International Journal of Operations and Production Management, International

Journal of Production Research, International Journal of Production Economics and the Journal of Operational Research Society. He is certified as CPIM by APICS (now ASCM).

2:20 pm – 2:40 pm (Thursday, June 15)

#### ID 129 A firm-based perspective of the notion “Carbon Neutrality”: Role of Supply Chain Mapping

Muhammad Shujaat Mubarik, College of Business Management, Institute of Business Management, Karachi, Pakistan  
Sharfuddin Khan, Department of Industrial Systems Engineering, University of Regina, Canada

2:40 pm – 3:00 pm (Thursday, June 15)



**Mohammad Anwar Rahman, Ph.D.**  
Associate Professor  
Manufacturing and Construction Management  
Central Connecticut State University  
New Britain, CT, USA

Dr. Mohammad Anwar Rahman is a faculty at the Central Connecticut State University in Manufacturing and Construction Management. He has published papers in referred journals and presented results in conferences. His research focuses on logistics, supply chain management, stochastic process and designing quality procedure. Dr. Rahman conducted several research projects with Mississippi Dept. of Education (MDE) and US Dept. of Transportation (USDOT). He has various certifications including Lean Six Sigma Green Belt (Purdue University),

Lean Principles (Purdue University), Demonstrated Master Logistician (The International Society of Logistics), Malcolm Baldrige Quality Award Examiner (Louisiana Quality Foundation), and Certified Transportation & Logistics (American Society of Transport & Logistics). Dr. Rahman is affiliated with ISERC, DSI, AST&L and IEOM.

3:00 pm – 3:20 pm (Thursday, June 15)

3:20 pm – 3:40 pm (Thursday, June 15)

## 9th North American Conference on Industrial Engineering and Operations Management

Washington, DC, USA, June 4-6, 2024

Host: University of the District of Columbia, Washington, DC

Venue: UDC Campus, 4200 Connecticut Ave NW

### Conference Chair

**Dr. Devdas Shetty**

Dean, School of Engineering and Applied Sciences and Professor of Mechanical Engineering  
University of the District of Columbia, Washington, DC, USA

# Parallel Sessions

All Times are Texas Time (USA Central Time)

## Monday, June 12, 2023

	Room 1 - Virtual	Room 2 - Virtual	Room 3 - Virtual	Room 4 - Virtual	Room 5 - Virtual	Room 6 - Virtual	Room 7 - Virtual
8:00 am	Undergraduate Student Paper Competition Sponsored by Siemens	Supply Chain and Logistics Competition	Graduate Student Paper Competition sponsored by Eaton	Human Factors and Ergonomics Competition sponsored by CINTAS	Masters and Doctoral Thesis Competitions	Senior Design Project Competition sponsored by Tooling Tech Group	Business Management
10:00 am	Undergraduate Student Paper Competition Sponsored by Siemens	High School STEM Poster Competition	Lean Six Sigma Competition sponsored by Tooling Tech Group	Simulation Competition	Undergraduate Research Competition sponsored by Daikin Applied	Business Management	Automation and Control
12:00 pm	Data Analytics and Decision Sciences	Supply Chain Management	Industry 4.0	Artificial Intelligence	Manufacturing	Automation and Control	
2:00 pm	Plenary: <b>Foad H Khanli</b> , Director of Quality Assurance, Performance and Business Improvement, Amor Health Services, Inc., Brownsville, Texas, USA						
6:00 pm	IEOM Global Council Meeting						

## Tuesday, June 13, 2023

	Room 1 - Ballroom	Room 2 Onsite (Panels)	Room 3 Onsite	Room 4 - Virtual	Room 5 - Virtual	Room 6 - Virtual
8:00	<b>Plenary Speakers</b>	<b>Women in Industry and Academia (WIIA) Panel</b>	Onsite Competitions	Sustainability	Business Management	Quality
10:00	Welcome Address – Dr. Hamid Parsaei, Professor in Industrial and Systems Engineering, Texas A&M University College Station					
10:20	Keynote I: Dr. Satish Bukkapatnam, Professor, Industrial & Systems Engineering, Rockwell International Professor, College of Engineering and Director, TEES Institute for Manufacturing Systems, Texas A&M University, College Station, Texas, USA					
11:00	Keynote II: Dr. Vivek Anand, Vice President & Head of Technology, Deloitte Consulting, Houston, TX, USA					
11:40	Keynote III: Mark A. Bolen, VP of Quality, Engineering & Fleet, Cintas Corporation, Lebanon, Ohio, United States					
12:20	Keynote IV:					
1:00	Buffet Lunch					
2:00	Global Engineering Education I	Industry 4.0 Panel	Operations Research	Supply Chain Management		
4:00	Global Engineering Education II	Human Factors and Ergonomics Panel Maintenance and Reliability	<b>Six Sigma Certification Workshop</b>	Technical Presentations		

## Wednesday, June 14, 2023

	Room 1 - Ballroom	Room 2 - Onsite (Panels)	Room 3 - Onsite	Room 4 - Virtual	Room 5 - Virtual	Room 6 - Virtual
8:00	Global Business Management and Global Project Management	Global Supply Chain and Logistics Panel	Operations Research	Production Planning and Management	Energy	Education and Research
10:00	Conference Chair Remarks					
10:20	Keynote V: Dr. Gino Lim, R. Larry and Gerlene (Gerri) R. Snider Endowed Chair and Professor & Chair, Department of Industrial Engineering, University of Houston – University Park, Houston, Texas, USA					
11:00	Keynote VI: José Rivera, Chief Admin Quality Officer, MD Anderson Cancer Center, Houston, Texas, United States					
11:40	Keynote VII: Dr. Robert Swearingen, Head of Strategic Sourcing and Supply Chain Management, Siemens GCI, Texas, USA					
12:20	Keynote VIII: Dr. Luis Rabelo, Professor, Department of Industrial Engineering & Management Systems, University of Central Florida, Orlando, USA					
1:00	Buffet Lunch					
2:00	Industry Solutions and Industry 4.0 I	Data Analytics Panel	Manufacturing	Productivity		
4:00	Industry Solutions and Industry 4.0 II	Using Assessment to Improve Student Learning and Curriculum – Panel	Optimization	Technical Presentations		

## Thursday, June 15, 2023

	Room 1 - Ballroom Onsite	Room 2 - Onsite (Panels)	Room 3 - Onsite	Room 4 - Virtual	Room 5 - Virtual	Room 6 - Virtual
8:00	<b>SCM Workshop</b> Supply Chain 4.0 - the next-generation supply chain practices	Lean Six Sigma Panel	Manufacturing	Engineering Management	Operations Management	Productivity
10:00	Conference Chair Remarks					
10:20	Keynote IX: Dr. Magdy Akladios, Department Chair of Physical and Applied Sciences and Professor of Occupational Safety and Health with specializations in industrial hygiene or safety, College of Science and Engineering, University of Houston-Clear Lake, Texas, USA					
11:00	Keynote X: Suresh Vaidyanathan, Chief Engineer & General Manager, Refining Business Improvement, Phillips 66, Westchase, Houston, Texas					
11:40	Keynote XI: Mr. Bruce Webb, Chief Pilot, Director of Aviation Education and Community Outreach, Airbus Helicopters, Inc., Prairie, Texas, USA					
12:20	Keynote XII: Paul Perkins, President, Anatrol, Inc., Jeffersonville, Indiana, USA					
1:00	Buffet Lunch					
2:00	Global Supply Chain and Logistics I	Diversity and Inclusion Panel sponsored by Ford Motor Company	Industry 4.0 and Industry Solutions	Technical Presentations		
4:00	<b>Innovation and Entrepreneurship Workshop</b>	Global Engineering Education Forum – Panel	Technical Presentations	Energy and Management		

**Awards Ceremony and Dinner Buffet**  
7:00 – 10:00 pm, June 15, 2023 – Hilton Hotel University of Houston



# June 12, 2023 (Monday)

## June 12, 2023 (Monday) - Session: 8:00 – 9:45 am

8:00 am – 11:45 am, MONDAY

Virtual Room 1

### Undergraduate Student Paper Competition Sponsored by Siemens

Session Chair: Dr. Mizanur Rahman, Associate Editor, IEOM Society

#### ID 236 2D to 3D Scale Modeling

Ulan Dakeev, Associate Professor, Sam Houston State University, Huntsville, TX, USA

Erin Trejo, Student, majoring in Engineering Design & Technology, Sam Houston State University, Huntsville, TX, USA

#### ID 290 Application of Balanced Scorecard Method in Measuring Halal Frozen Food Supply Chain Performance

Rifqah Sansinova, Bachelor Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

Iftitah Salsabila Lukman Siregar, Bachelor Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara Medan, Sumatera Utara, Indonesia

Bernike Putri Sembiring, Bachelor Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

Batrisyia Atikah, Bachelor Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

Dini Wahyuni, Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

#### ID 302 Development of 2 In 1 Back Support Tool Using the Quality Function Deployment Method

Arnold Benedict Chris, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara Medan, Sumatera Utara, Indonesia

Christopher Davin, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

Favian Lorenzo Hendrawan, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara Medan, Sumatera Utara, Indonesia

Fredy Johnson, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

Darril Tiovan, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

#### ID 45 Noise and Vibration Analysis of Permanent Magnet Synchronous Motor by Stator Slot/Rotor Poles

Bui Minh Dinh, School of Electrical and Electronic Engineering, Hanoi University of Science and Technology (HUST), Vietnam

#### ID 326 Optimal Resilience-Based Locations for Restoration Facilities of Interdependent Infrastructure Networks Under Uncertainty of Disruptions

Omar Kseibi, Mohamed Alshayeb, Ibrahim Magdy and Yasser Almoghathawi, Department of Industrial and Systems Engineering, The Interdisciplinary Research Center for Smart Mobility and Logistics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

#### ID 325 Optimal Restoration Plan for Works Crews of Disrupted Interdependent Infrastructure Networks under Uncertainty

Mohamed Alshayeb, Omar Kseibi, Ibrahim Magdy and Yasser Almoghathawi, Department of Industrial and Systems Engineering, The Interdisciplinary Research Center for Smart Mobility and Logistics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

#### ID 47 Outer Rotor Design of Permanent Assisted Synchronous Reluctance Motor for Electromagnetic Characteristic Improvement

Bui Minh Dinh, School of Electrical Engineering, Hanoi University of Science and Technology, Vietnam

#### ID 198 Smart Factories -An Important Component of Industry 4.0

Saujanya Dave, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India  
Devang Desai, Anuj Shah and Aditya Savalia, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University Gandhinagar, Gujarat, India

M.B. Kiran, Associate Professor, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

#### ID 375 Defect Detection in Solar Photovoltaic Systems Using Unmanned Aerial Vehicles and Machine Learning

Althea Miquela, Dhiraj Bagul and Ahmed Aziz Ezzat, Rutgers, The State University of New Jersey, Piscataway, NJ, 08854, United States

#### ID 368 The importance of the work area design to have a good ergonomics and production

Jaime Omar Delgadillo Del Angel and Rogelio Portillo Rosales, Industrial Systems Technologies Engineering Faculty Universidad Politécnica de San Luis Potosí, San Luis Potosí, San Luis Potosí 78369 México

#### ID 369 Design of Experiments: Finding a balance between Quality and Safety

Jacqueline García Vaca and Rogelio Portillo Rosales, Universidad Politécnica de San Luis Potosí San Luis Potosí, San Luis Potosí, 78369, Mexico

#### ID 371 Implementation of Lean manufacturing: The Impact of Gemba Walks in the Continuous Improvement of PEASA Plant 02

David Omar López Hernández and Rogelio Portillo Rosales, Industrial and Systems Technologies Engineering Faculty, Universidad Politécnica de San Luis Potosí, San Luis Potosí, San Luis Potosí 78369, México

8:00 – 9:45 am, MONDAY, June 12

Virtual Room 2

## Supply Chain and Logistics Competition

**Session Chair:** Dr. Taufiq Islam, Operations Manager, IEOM Society

**ID 342 A Framework for Reverse Engineering Process for an Electronic Manufacturing Company: A Case Study**

Basel Sultan and Daryl Santos, Thomas J. Watson College of Engineering and Applied Science, The State University of New York at Binghamton  
Binghamton, NY 13902, USA

Michael Hsieh, Foxconn Industrial Internet, Houston, TX 77064, United States

**ID 320 A Python-Based Tool for Load Formation and Route Optimization with Heterogeneous Truck Cost and Capacity Constraints: A Case Study of a Heavy Equipment Manufacturing Company**

Amin Zameel N, Department of Mechanical Engineering, National Institute of Technology Calicut, Calicut, 673 601, Kerala, India

**ID 294 Machine Learning Applications for enhancing the Supply Chain Productivity- A Review**

Deep Bhalodiya, Department of Mechanical Engineering, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

**ID 3 Proposing a new promising constraint to the single stage capacitated warehouse location problem (SSCWLP)**

RRK Sharma, Department of IME, IIT Kanpur 208016, India

Ajay jha, Department of Operations Management, Jaipuria Institute of Management, Lucknow, 226010, India

Priyank Dubey, Kanpur Divisional Office, Indian Oil Corporation Ltd, Kanpur 208001, India

KK Lai, President, CYUT Taiwan

8:00 – 9:45 am, MONDAY, June 12

Virtual Room 3

## Graduate Student Paper Competition sponsored by Eaton

**Session Chair:** Nusrat Islam, Assistant Editor, IEOM Society

**ID 84 A Feasibility Study of Carbon Capture and Storage in the United States**

Louis Noel, Master of Engineering Management and Leadership, Rice Center for Engineering Leadership, Rice University, Houston, Texas, USA

Erick Danyi, P.E., Professional Master of Chemical Engineering, Department of Chemical Engineering, Rice University, Houston, Texas, USA

Edgar Avalos-Gauna, Ph. D., Faculty Lecturer, Researcher, Rice Center for Engineering Leadership, Department of Statistics, Rice University  
Houston, Texas, USA

**ID 247 A Policy for the Conservation of Bara Katra in the Old Dhaka Industrial Area**

Rabaya Nusrath Niva, Faculty of Engineering, Department of Architecture, Premier University, Chittagong, Bangladesh

M. Arch Student, Department of Architecture, Bangladesh University of Engineering and Technology, Dhaka 1000, Bangladesh

**ID 318 A Review on Inspection Cost Minimization by Optimal Number Inspectors in Apparel Manufacturing**

Shibbir Ahmad, Mechanical Engineering Department, Dhaka University of Engineering & Technology, Gazipur, Bangladesh

**ID 343 Design of a semi-automatic coconut scrapper**

Supervisor, Ali Mamedov, College of Engineering and Technology, American University of the Middle East, Kuwait

Sultan AL-Hajri, Fahad AL-Dhlaiee, Abdulamjeed Sultan and Hussain AL-Shammari, College of Engineering and Technology, American University of the Middle East, Kuwait

**ID 210 Design on an Innovative Bike Sharing Vehicle with Helmet Sanitation System**

Giulio Galiè, Giorgia Venditti, Marco Freddi, Curzio Pagliari, Edoardo Pignatelli and Leonardo Frizziero, Alma Mater Studiorum – Università di Bologna, Viale Risorgimento 2, 40136, Bologna, BO, Italy

**ID 200 Development of an Innovative Family Car Prototype through the use of IDES method**

Giacomo Mascitelli, Master's degree Student, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna, Bologna, Italy

Curzio Pagliari, Giulio Galiè, and Edoardo Pignatelli, Ph.D. Students, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna, Bologna, BO 40136, Italy

Leonardo Frizziero, Senior Assistant Professor, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna, Bologna, Italy

**ID 213 E-Delphi Prioritization of Capital Structure Determinants in Small and Medium Size Business in Puerto Rico**

Karen Albor Medina, Graduate Student of Industrial Engineering, University of Puerto Rico, Mayagüez, Puerto Rico

Mayra I. Méndez Piñero PhD., Professor of Industrial Engineering, University of Puerto Rico, Mayagüez, Puerto Rico

**ID 202 Enhancing Operational Efficiency: A Study on Lean Manufacturing Implementation in Small and Medium-sized Enterprises**

Hossein Soltani and Pawan Bhandari, Department of Manufacturing Engineering Technology, Minnesota State University, Mankato, MN 56001, United States

8:00 – 9:45 am, MONDAY, June 12

Virtual Room 4

## Human Factors and Ergonomics Competition sponsored by CINTAS

**Session Chair:** Tahera Parven, Assistant Editor, IEOM Society

**ID 197 Correlational Analysis of Physical and Cognitive Workload Factors to Musculoskeletal Discomfort Experienced by Machine Operators in Semi-automated Hollowblock Manufacturing Sites**

Roland Emerson Mabuting, Dominic F. Dastas, Sean Joseph Z. Rabe, Dr. James Louie R. Meneses and Engr. Luzviminda D. Sinapilo, College of Engineering, Manuel S. Enverga University Foundation, Lucena City, Quezon, Philippines

**ID 194 Ergonomic Design of Driver's Workstation for Modern Jeepney of ABC Transport Service and Multi-Purpose Cooperative**  
Jullian Jessica P. Libre, Justine R. Modomo, Karl Justin N. Bariga, Dr. James Louie R. Meneses and Engr. Jerico R. Amago, College of Engineering Manuel S. Enverga University Foundation, Lucena City, Quezon, Philippines

**ID 317 Analysis of Human Error in the Halal Supply Chain of Kemplang Crackers**  
Sari Wahyuni, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia  
Mohammad Azmi Fadli, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara Medan, Sumatera Utara, Indonesia  
Novia Maharani, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia  
Putri Amiroh Lubis, Undergraduate Student at Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia  
Dini Wahyuni, Department of Industrial Engineering, Faculty of Engineering, University of Sumatera Utara, Medan, Sumatera Utara, Indonesia

**ID 124 Flight Attendant Injury Prevention Via the Use of VR and Motion Tracking Techniques While Pushing and Pulling the Service Trolley**  
Ethan Swierski, Maria Arenas and Xiaoxu Ji, Biomedical Engineering Department, Gannon University, Erie, PA, 16541, United States

**ID 268 Impact of Work Demand and Job Autonomy on Employee Sustainable Performance with Digital Leadership as Moderating Variable: A Proposed Framework**  
Eko Yulianto, Triaji Prio Pratomo, Zulkifli Zein and Lalu Supardin, Doctoral Students, Faculty of Business and Economics, Islamic University of Indonesia (UII), Yogyakarta, Indonesia

**8:00 – 9:45 am, MONDAY, June 12**

**Masters and Doctoral Competitions**

**Virtual Room 5**

Session Chair: Dr. Nazrul Islam, Associate Editor, IEOM Society International

## Doctoral Dissertation Competition

**ID 98 A Study on The Application Feasibility in The Steel Industry of Existing Maturity Models of Assessing Industry 4.0 Readiness**

Alexandre Pimentel Sampaio, PhD Program of Department of Economics, Management, Industrial Engineering and Tourism, University of Aveiro, Aveiro, Portugal  
Ana Maria Pinto de Moura, GOVCOPP, University of Aveiro, Aveiro, Portugal  
Ricardo Henriques Leal, Director of Innovation Agency (AGIR), University of Federal Fluminense (UFF), Niterói, Brazil

**ID 286 Enhancing Sustainable Competitiveness through Application of Kaizen Philosophy Practices in Ethiopian Manufacturing Industries**

Haftu Hailu, Hailekiros Sibhato and Kinfe Tsegay, Industrial Engineering Department, Ethiopian Institute of Technology-Mekelle (EiT-M), Mekelle University, Mekelle, Tigray, Ethiopia

## Masters Thesis Competition

**ID 190 A Spatial Analyze Approach for Determining the Best Possible Locations of Police Stations in Azaz**

M.Radwan Mouket, Department of Industrial Engineering, Gaziantep University, Gaziantep, Turkey  
Alptekin Durmuşoğlu, Department of Industrial Engineering, Gaziantep University, Gaziantep, Turkey

**ID 63 Deep Reinforcement Learning in Optimal Policy Design for Maintenance and Outsourcing of Manufacturing Systems**

Hao Wang, Department of Systems Science and Industrial Engineering, Binghamton University, 2023, United States  
Dr. Changqing Cheng, Faculty Advisor, Department of Systems Science and Industrial Engineering, Binghamton University, United States

**ID 5 Impact of Workload Balancing on the Sustainability of Processes in a Manufacturing Company**

Arturo Realysvázquez-Vargas, Perla María Larrañaga, Karina Cecilia Arredondo-Soto, Guadalupe Hernández-Escobedo and Amalia Carmina Salinas-Hernández, Department of Industrial Engineering, Tecnológico Nacional de México/Instituto Tecnológico de Tijuana, Tijuana, Baja California, Mexico

**ID 137 Spare Parts Sales Demand Forecasting Model using Seasonal Autoregressive Integrated Moving Average**

Wahyu Wibowo Putro and Arian Dhini, Industrial Engineering Department, Faculty of Engineering, University of Indonesia, Depok, West Java, Indonesia

**8:00 – 9:45 am, MONDAY, June 12**

**Virtual Room 6**

## Senior Design Project Competition sponsored by Tooling Tech Group

Session Chair: Aqib Islam, Assistant Editor, IEOM Society

**ID 324 "LRMTW: A Goal Programming-Based Reactive Model for Sustainable and Resilient Supply Chains in the Aftermath of Disasters"**



Abdullah, King Fahd University of Petroleum and Minerals, Saudi Arabia

**ID 323 "Optimizing Supply Chain Resilience and Green Delivery Operations through a Proactive Risk-Aware Model: LRMTW"**

Abdullah, King Fahd University of Petroleum and Minerals, Saudi Arabia

**ID 304 Design and Manufacturing of Front/Rear Jack for Formula Student Competition**

Zainb Alshammari, Dalal Alrashidi, Lamyaa Alharbi, Shahad Malek and Muneerah Shehab, College of Engineering and Technology, American University of the Middle East, Kuwait

**ID 127 Improving Outbound Logistics in A Food Factory**

Lara Alzain, Bashayer Alkhamisi and Aldana Basuni, Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, Jeddah – Saudi Arabia

Dr. Ammar Y. Alqahtani, Associate Professor at Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, Jeddah – Saudi Arabia

**COVID-19 Analytics Competition**

**ID 243 Time-delayed correlation of two time series through class-based forecasting: the Covid 19 case in Puerto Rico**

Nanette R Xu-Cuevas, (UPRM, Industrial Engineering), Puerto Rico  
Cristian D Rosario-Marcen, (UPRM, Biology/Microbiology), Puerto Rico  
Lemuel R Rios Santiago, (UPRM, Industrial Engineering), Puerto Rico  
Mauricio Cabrera Ríos, PhD., (UPRM, Industrial Engineering), Puerto Rico  
Clara Eugenia Isaza, PhD (UPRM, Biology), Puerto Rico

**ID 373 Dynamic Design of Water Flow Management in Lebak Swamp Land, Pesisir Selatan District, West Sumatra During the Covid-19 Period**

Yenita and Agustinus Purna Irawan, Faculty of Engineering, Universitas Tarumanagara, Letjen S. Parman No. 1, West Jakarta, Indonesia

**ID 421 Post Covid-19 Complication Detection By using ml review paper**

Syed Mominin Islam Tamim, Md Nadim Hasan and Md Tafsikul Islam Tanzid, American International University Bangladesh, Dhaka, Bangladesh

**8:00 – 9:45 am, MONDAY, June 12**

**Business Management**

**Virtual Room 7**

**Session Chair: Andri D. Setiawan, Industrial Engineering Department, Universitas of Indonesia, Kampus UI, Depok, Indonesia**

**ID 345 Hyper-Segmentation Lapser MyTelkomsel Apps Using K-Means Clustering to Increase Data Package Purchases in Area 3 - East Java, Central Java - DIY, Bali Nusa Tenggara**

Windy Herlin Ali, A Student of Faculty of Economics and Business, Telkom University, Faculty of Economics and Business, Telkom University Bandung, Indonesia

Maya Ariyanti, An Associate Lecturer of Digital Business Strategy Studies, Faculty of Economy & Business, Telkom University, Bandung, Indonesia

**ID 346 Business Management and Business Engineering of The Internet of Things (IoT), Cybersecurity, and Additive Manufacturing**

Khristian Edi Nugroho SOEBANDRIJA, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, Indonesia

**ID 357 Selection of Solar Panels Based on Brand Using Fuzzy AHP – TOPSIS Method**

Ignatius Malvin Francia, Industrial Engineering, Universitas Indonesia, Salemba, Indonesia  
Dr. Ir. Andri Dwi Setiawan, M. Sc, Industrial Engineering, Universitas Indonesia, Salemba, Indonesia

**ID 358 Drivers and Barriers to Circular Economy in Indonesian Palm Oil**

Widyaningsih Sura, Industrial Engineering, Universitas Indonesia, Depok, Indonesia  
Romadhani Ardi, Industrial Engineering, Universitas Indonesia, Depok, Indonesia

**ID 356 Reverse Logistics Strategy for Electronic Waste Infrastructure in Indonesia**

Sangdaffa Adetyantama, Industrial Engineering, Universitas Indonesia, Depok, Indonesia  
Romadhani Ardi, Industrial Engineering, Universitas Indonesia, Depok, Indonesia

**ID 348 Big Data Analytics and Cloud Computing on Industrial Management, Information Engineering and Data Science**

Khristian Edi Nugroho SOEBANDRIJA, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, Indonesia

**ID 352 Analysis of Production Scheduling and Line Balancing for Polycarbonate Lens Production**

Cansa Julisa Muhammad Yusuf and Andri D. Setiawan, Industrial Engineering Department, Faculty of Engineering, Universitas of Indonesia, Kampus UI, Depok 16424, Indonesia

**June 12, 2023 (Monday) - Session: 10:00 – 11:45 am**

**10:00 – 11:45 am, MONDAY**

**Continuing Session**

**Virtual Room 1**

**Undergraduate Student Paper Competition Sponsored by Siemens**

10:00 – 11:45 am, MONDAY, June 12

Virtual Room 2

## High School STEM Poster Competition

**Session Chair:** Nusrat Islam, Assistant Editor, IEOM Society

**ID 162 A Study on the Impact of Computer Games using Artificial Intelligence Technology** Benny Choi and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea  
Jeongwon Kim, Student, Department of Economics, College of Economics, Nihon University, 3-2 Kanda-Misakicho, 1-chome, Chiyoda-ku, Tokyo, Japan

**ID 160 A Study on Whether Artificial Intelligence can have Artificial Emotions** Lee Ji Yun and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea  
Jeongwon Kim, Student, Department of Economics, College of Economics, Nihon University, 3-2 Kanda-Misakicho, 1-chome, Chiyoda-ku, Tokyo, Japan

**ID 159 Convolutional Neural Network Architectures Analysis for Image Captioning** Jun Seung Woo and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea

**ID 275 Acute Myeloid Leukemia** Shrinidhi Kulkarni, International Academy East, United States

**ID 161 Future Prospects of Governance and Democracy Using Artificial Intelligence** Jung Ji-Seok and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea  
Jeongwon Kim, Student, Department of Economics, College of Economics, Nihon University, 3-2 Kanda-Misakicho, 1-chome, Chiyoda-ku, Tokyo, Japan

**ID 158 Research on the Future Distribution Industry using Artificial Intelligence** Kim See You and Shin Dong Ho, Student and Professor, MY PAUL SCHOOL, 12-11, Dowontongmi-gil, Cheongcheon-myeon, Goesan-gun, Chungcheongbuk-do, Republic of Korea  
Jeongwon Kim, Student, Department of Economics, College of Economics, Nihon University, 3-2 Kanda-Misakicho, 1-chome, Chiyoda-ku, Tokyo, Japan

**ID 207 Just be tobacco free** Rishi Kalikant Jha, High School student, Dadra Nagar Haveli & Daman Diu, India

10:00 – 11:45 am, MONDAY, June 12

Virtual Room 3

## Lean Six Sigma Competition sponsored by Tooling Tech Group

**Session Chair:** Tahera Parven, Assistant Editor, IEOM Society

**ID 134 Application of lean manufacturing to increase productivity in the finishing area in an industrial rubber company** Daniela Milagros La Rosa – Castañeda and Edwar Marcelo Castillo – Carbajal, Bachelor of Industrial Engineering, Faculty of Engineering and Architecture, Universidad de Lima, Lima, Lima, Perú  
Ávalos Ortecho Edilberto Miguel, Professor, Faculty of Engineering and Architecture, Universidad de Lima, Lima, Lima, Perú

**ID 292 Applying Lean Thinking to Improve Processes in the Trucking Industry** Abhiram Reddy Ramasahayam, Kuldeep Agarwal and Naim Islam, Department of Automotive and Manufacturing Engineering Technology Minnesota State University, Mankato, MN 56001, United States

**ID 155 Improvement Proposal to Standardize and Increase the Production of a Spinning Company Through Lean Manufacturing** Juan Carlos Chiroque Seminario and Sergio Crosato Oyarce, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Perú  
Ávalos - Ortecho Edilberto Miguel, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Perú

**ID 234 Application of Lean Manufacturing and TOC to increase productivity in a company in the hermetic windows sector** Erik Andrade Rozas, Giancarlo Robello Ponce and Edilberto Miguel Avalos-Ortecho, Facultad de Ingeniería y Arquitectura, Universidad de Lima, Lima, Perú

**ID 276 Reducing Mobile Phone Repair Cycle Time at A Telecommunications Company Using Lean Six Sigma** Catarina Carvalho, Master's Student in Management of Services and Technology, Iscte – Instituto Universitário de Lisboa, Lisbon, Portugal  
Jamison V. Kovach, PMI Houston Endowed Professor in Project Management, University of Houston, Houston, TX, USA  
Sofia Kalakou, Business Research Unit (BRU-ISCTE), Iscte – Instituto Universitário de Lisboa, Lisbon, Portugal

10:00 – 11:45 am, MONDAY, June 12

Virtual Room 4

## Simulation Competition

**Session Chair:** Aqib Islam, Assistant Editor, IEOM Society

**ID 65 Proposal to Improve the Reusable Urban Waste Management System in Santiago De Surco, Lima, Peru to Increase the Utilization of the District's Treatment Plant**

Sebastián Alejandro Fernández Villafán, Lorena Alejandra Torres Bravo and Maria Ezilda Cabrera Grados, Industrial Engineering, Faculty of Engineering and Architecture, University of Lima, Lima, Peru

**ID 303 Analyzing the Operational Parameters of a Single Walled Carbon Nanotube Field Effect Transistor (SWCNT-FET)**

S M Shakil and Muhammad S. Ullah, Department of Electrical and Computer Engineering, Florida Polytechnic University, Lakeland, Florida, USA

**ID 76 Developing and Validating Mathematical Model for Electricity System Transition Planning**

Varun Jyothiprakash, P Balachandra and Abhishek Das, Department of Management Studies, Indian Institute of Science, Bengaluru -560012, India  
Samridh Sharma, Inter-Disciplinary Centre for Energy Research, Indian Institute of Science, Bengaluru– 560012, India

**ID 141 Heuristic-based Simulation Modeling for Traveling Salesman Problem with Time Limit Constraints**

Mojahid F. Saeed Osman, Department of Industrial and Manufacturing Engineering, North Dakota State University, Fargo, North Dakota, USA

**ID 273 Reliability Issues in Current MOSFET and Beyond Silicon Technology**

S M Shakil and Muhammad S. Ullah, Department of Electrical and Computer Engineering, Florida Polytechnic University, Lakeland, Florida, USA

**ID 316 The development of neural Network based rainfall-runoff model for Kashmir Pakistan**

Madiha Mazhar, Dept. of Chemistry and chemical Engineering, Lahore University of Management Sciences, Lahore, Pakistan

10:00 – 11:45 am, MONDAY, June 12

Virtual Room 5

## Undergraduate Research Competition sponsored by Daikin Applied

**Session Chair:** Dr. Nazrul Islam, Associate Editor, IEOM Society

**ID 251 Identification of Ergonomic Risk Factors and Safety Concerns in Metal Fabrication Industries**

S.M. Hasanuddin, Student, Methodist College of Engineering and Technology, Hyderabad, India  
Qutubuddin S.M., Associate Professor, P.D.A. College of Engineering, Kalaburagi, India  
Ayesha Fatima, Student, Stanley College of Engineering and Technology for Women, Hyderabad, India

**ID 327 Components Importance Measures for Interdependent Infrastructure Network**

Ibrahim Magdy, Omar Kseibi, Mohamed Alshayeb and Yasser Almoghathawi, Department of Industrial and Systems Engineering, The Interdisciplinary Research Center for Smart Mobility and Logistics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

**ID 322 Exam Scheduling Conflict Optimization**

Ali Almaslami, Industrial Engineering Department, King Fahd University of Petroleum and Minerals, Saudi Arabia  
Mohammad Alsaad, Industrial Engineering Department, King Fahd University of Petroleum and Minerals, Saudi Arabia  
Abdullah Alqarne, Industrial Engineering Department, King Fahd University of Petroleum and Minerals, Saudi Arabia

**ID 83 Injector Hat Redesign and Manufacturing, Optimizing the Design of a Supercharger Injector Hat**

Nicholas T. White, Nicholas DuPont, Michael Walter, Johannis Brown, Edwin Diaz, Soesoe Aye, Mohammed Huda and Daris Monroy Castillo, Department of Mechanical Engineering Technology, Buffalo State University, Buffalo, NY, USA  
Joshua Van Lew, Department of Electrical Engineering Technology, Smart Grid, Buffalo State University, Buffalo, NY, USA  
Sterling J. Jones and Steven Phengsomphane, Department of Industrial Engineering Technology, Buffalo State University, Buffalo, NY, USA

**ID 376 The Impact of Communication and Trust in Leadership on Workers' Compensation: A Case Study of Suka Ramai Coffee Shop in Tanjung Pinang City**

Soraya Agustina Situmorang, Management Department, BINUS Business Scholl Undergraduate Program, Bina Nusantara University, Jakarta, Indonesia  
Yellen, BINUS Business Scholl Undergraduate Program Student, Bina Nusantara University, Jakarta, Indonesia

10:00 – 11:45 am, MONDAY, June 12

Business Management

Virtual Room 6

**Session Chair:** Huifen Chen, Chung-Yuan University, Taoyuan City, Taiwan

**ID 278 Indian Management: New Routes to Corporate Culture**

Nilanka, Universal Business School, Karjat, India

**ID 240 Developing an Entrepreneurial Small Business' Strategic Plan by Shortened Systematic Strategic Planning (SSP)**

HAKAN TED University, Turkey

**ID 205 The impact of external business environment on the performance of business organisations and the moderating role of internal organisational resources**

Koketso Rampyapedi and Olufemi Adetunji, Department of Industrial and Systems Engineering, University of Pretoria, Pretoria 0002, South Africa

**ID 105 Data Driven Worker Routing for Irrigation Monitoring**



Sara Masoud, Assistant Professor, Industrial and Systems Engineering, Wayne State University, Detroit, Michigan, 48201, USA

Young-Jun Son, James J. Solberg Head and Ransburg Professor, Industrial Engineering, Purdue University, West Lafayette, IN 47907, USA

**ID 285 A Cross-Sectional Study on Anger Expression Among Students in University of Cyberjaya, Malaysia**

Nur Aimi Nadiyah Binti Rosdan, Student, School of Medicine, University of Cyberjaya (UoC), Cyberjaya, Malaysia

Kirsharupini Gopalakrishnan, Abu Huzaifah Bin Muhamad Sharman, Kenny Anak Paschal and Dr. Muhammad Radhi Ahmad, School of Medicine University of Cyberjaya (UoC), Cyberjaya, Malaysia

**ID 60 Prediction of COVID-19 Cases with ARIMA Models**

Huifen Chen, Department of Industrial and Systems Engineering, Chung-Yuan University, Taoyuan City, Taiwan

**10:00 – 11:45 am, MONDAY, June 12**

**Automation and Control**

**Virtual Room 7**

**Session Chair:** Aamar Shabir, Department of Electrical and Computer Engineering, Florida Polytechnic University, Lakeland, Florida, USA

**ID 347 Defense Management Science on Artificial Intelligence and Autonomous Robot**

Khristian Edi Nugroho SOEBANDRIJA, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, Indonesia

**ID 250 Underwater Surveillance Autonomous Boat**

Atanu Debnath, Department of Electrical Engineering, Lamar University, Beaumont, Texas, USA

NA Nithe and MN Uddin, Department of Electrical and Electronic Engineering, Northern University Bangladesh, Banani, Dhaka-1213, Bangladesh

Emir Neziric, Department of Mechanical Engineering, Dzemal Bijedic University Mostar, Bosnia and Herzegovina

**ID 277 An attempt of Sustain future by means of Green Economy**

Aftab Alam, Mohsina Hayat and Syed Mohd Jamal Mahmood, SOMGD Goenka University, India

**ID 218 An MCDM Approach to Smart Contract Adoption in Indian Electronic Industry**

Imnatila Pongen and Pritee Ray, Department of Operations Management, Indian Institute of Management Ranchi, Jharkhand-834008, India

**ID 319 Design of MR Damper for Automobile suspension with Finite Element method**

Aamar Shabir, Department of Electrical and Computer Engineering, Florida Polytechnic University, Lakeland, Florida, USA

Umar Irshad, Muhammad Shoaib and Huzaifa Abeer, Department of Electrical and Computer Engineering, NFC Institute of Engineering and Technology, Multan, Pakistan

---

**June 12, 2023 (Monday) - Session: 12:00 – 2:00 pm**

---

**12:00 – 1:45 pm, MONDAY, June 12**

**Data Analytics and Decision Sciences**

**Virtual Room 1**

**Session Chair:** Xiaoxu Ji, Biomedical Engineering Department, Gannon University, Erie, PA, United States

**ID 331 Data Analytics to discover what kind of people are more prone to have Alzheimer's disease?**

Rosa Aracelli Centeno Sánchez, Business Process Manager at Cleaning and Beauty Products, Founder of Cleaning and Beauty Products, BeauPharm, and VousConseil, Senior Process Architect at RENIEC, Peru

María Luisa Centeno Sánchez, Chemical Pharmacist at Cleaning and Beauty Products, Founder of Cleaning and Beauty Products, Beau Pharm  
Milagros Huachillo Alvarado, Business Process Manager at BeauPharm, Founder of BeauPharm, and VousConseil, Senior Process Architect at RENIEC, Peru

**ID 82 Historical Basket Analysis of Maintenance Material Requests: Optimizing Delivery and Stocking of Parts using Association Rules**

Leonardo Gabriel Hernández Landa\*, Argelia Vargas Moreno, René Jair Garza Rojas and Ana Karen Chavez Arechiga, Department of Industrial engineer and management, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México

**ID 291 Predicting Steel Plate Fault Detection by Metaheuristic-Optimized Multi-Level Classification Machine Learning**

Jui-Sheng Chou, Chair Professor and Dean for General Affairs, National Taiwan University of Science and Technology, Taipei, Taiwan

Trang Thi Phuong Pham, Graduate Research Assistant, National Taiwan University of Science and Technology, Taipei, Taiwan

**ID 130 Design of Assessment of Customer Order Acceptance Using Multiple Criteria Decision Analysis Method in Companies Using Make-To-Order Systems**

Andi Nugraha and Maya A. Puspasari, Department of Industrial Engineering, University of Indonesia, Depok, Jawa barat, Indonesia

**ID 110 Subcontractor Selection Criteria Development on Supply Chain Management in Engineering Procurement Construction Company**

Made Dimas Agung Perwira and Arian Dhini, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia

**ID 239 Developing an Entrepreneurial Small Business' Strategic Plan by Shortened Systematic Strategic Planning (SSP)**

Dr. Hakan Butuner, Associate Professor, Executive MBA Program Director, TED University, Turkey

**12:00 – 1:45 pm, MONDAY, June 12**

**Supply Chain Management**

**Virtual Room 2**

**Session Chair:** Imnatila Pongen, Department of Operations Management, Indian Institute of Management Ranchi, Jharkhand, India

**ID 69 A Review of Agri-food Supply Chain Management: Case of Small Farmers**

Sara Amar, Industrial Management Department, Liwa College of Technology, Abu Dhabi, United Arab Emirates

Youssef Boulaksil, Operations Management and Logistics, College of Business and Economics, United Arab Emirates, Al Ain, United Arab Emirates

**ID 289 An evaluation of the performance of a safe insulin supply chain through the AHP-TOPSIS model**

Mona Haji, Logistics and Supply Chain Management Department, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 132 An integrated decision-making approach for prioritizing the suppliers**

Ajaya kumar V R, M-Tech Student and Instructor grade I (SCT college of Engineering), College of Engineering Trivandrum, India  
Vineetha S Das and Kavilal E G, Professor in Department of Mechanical Engineering, College of Engineering Trivandrum, India  
Assistant professor Department of Mechanical Engineering, SCT college of engineering Trivandrum, India

**ID 288 Drugs and Food Anti-counterfeiting Technologies Combating Counterfeiting: A Systematic Review**

Mona Haji, Logistics and Supply Chain Management Department, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 147 Supply Chain Optimization for Cement Manufacturing Industry to Maximize Contribution and Minimize Cost**

Vishwadeep Devanand Daware, Department of Manufacturing Engineering and Industrial Management, COEP Technological University, Pune, India  
Dr. M. N. Shaikh, Assistant Professor, Department of Manufacturing Engineering and Industrial Management, COEP Technological University, Pune, India

**ID 102 Optimization of purchasing processing time**

Hayet ben hamida, Liwa College of Technology, Abu Dhabi, United Arab Emirates

**ID 145 Optimizing a Transportation System Using Metaheuristics Approaches (EGD/GA/ACO): A Forest Vehicle Routing Case Study**

Hossein Havaeji, Mechanical Engineering Department, École de technologie supérieure, Montreal (Quebec) H3C1K3, Canada  
Thien-My Dao, Mechanical Engineering Department, École de technologie supérieure, Montreal (Quebec) H3C1K3, Canada  
Tony Wong, Department of Systems Engineering, École de technologie supérieure, Montreal (Quebec) H3C1K3, Canada

**12:00 – 1:45 pm, MONDAY, June 12**

**Industry 4.0**

**Virtual Room 3**

Session Chair: Farzana Islam, West Virginia University, Morgantown, West Virginia, USA

**ID 244 A Comprehensive Study on The Significance of Enthalpy and Entropy Diagram in Analyzing Thermodynamic System**

Dev Kothiya, Preet Rupapara, Kruti Dharsandiya, Khushi Surti and Prince Pansuriya, Department of Computer Science and Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India  
M.B. Kiran, Associate Professor, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, India

**ID 245 A Comprehensive Study on The Significance of Enthalpy and Entropy Diagram in Analyzing Thermodynamic System**

Dev Kothiya, Preet Rupapara, Kruti Dharsandiya, Khushi Surti and Prince Pansuriya, Department of Computer Science and Engineering School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India  
M.B. Kiran, Associate Professor, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, India

**ID 329 A Review on Existing Studies on Thermal Simulation and Future of LNG Based IC Engine**

Bhavan Malhotra, Mechanical engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

**ID 330 Review on environmental impacts of diesel and LNG based and IC Engine**

Karm Patel, B. Tech Mechanical Engineering, School Of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

**ID 100 Applications of Industry 4.0 in Supply Chain Management: A Systematic Literature Review**

Arvin Shadravan and Hamid R. Parsaei, Wm Michael Barnes '64 Department of Industrial & Systems Engineering, Texas A&M University College Station, Texas, USA

**ID 219 Applications of Federated Learning in Manufacturing: Identifying the Challenges and Exploring the Future Directions with Industry 4.0 and 5.0 Visions**

Farzana Islam, Ahmed Shoyeb Raihan and Imtiaz Ahmed, Department of Industrial and Management Systems Engineering, West Virginia University Morgantown, West Virginia, USA

**12:00 – 1:45 pm, MONDAY, June 12**

**Artificial Intelligence**

**Virtual Room 4**

Session Chair: Susan Seidensticker, University of Texas Medical Branch, Galveston, Texas, USA

**ID 101 A Machine Learning (ML) Approach to Micro- Isothermal Calorimetry (MIC) as a Function of Microbial Growth in Fresh and Processed Foods**

Imran, Florida International University, United States

**ID 279 Applications of Artificial Intelligence Algorithms in Wind Speed: Jeddah AlJazeera Case Study**

Raghad Alkhamis and Nuha Aloud, Industrial Engineering Department, College of Engineering, Princess Nourah Bint Abdulrahman University, Riyadh, Saudi Arabia  
Ali AlArjani, Industrial Engineering Department, College of Engineering, Prince Sattam Bin Abdulaziz University, AlKharij, Saudi Arabia

**ID 41 Deep Learning Model-based Reinforcement Learning for the Drone-based Delivery Systems**

Ali Arishi, Ph.D. candidate, Department of Industrial, Systems, & Manufacturing Engineering, Wichita State University, Wichita, USA  
Krishna Krishnan, Professor, Department of Industrial, Systems, & Manufacturing Engineering, Wichita State University, Wichita, USA

**ID 125 System Modification Using an Artificial Intelligence Hybrid Algorithm to Minimize Power Losses in the Transmission System**

Mlungisi Ntombela and Musasa Kabeya, Durban University of Technology, Durban, South Africa

**ID 216 Embedding Social Determinants of Health into Ambulatory Clinic Standard Work**

Susan Seidensticker, University of Texas Medical Branch, Director, Community & Population Health, Galveston, Texas, USA  
Rebecca Castro, University of Texas Medical Branch, Manager, Ambulatory Social Work, Galveston, Texas, USA

**12:00 – 1:45 pm, MONDAY, June 12**

**Manufacturing**

**Virtual Room 5**

**Session Chair:** Aamar Shabir, Department of Electrical and Computer Engineering, Florida Polytechnic University, Lakeland, Florida, USA

**ID 180 Distributed Generator Placement and Sizing for Power Transmission Network Modification Using Artificial Intelligent Algorithm**

Mlungisi Ntombela and Musasa Kabeya, Durban University of Technology, Durban, South Africa

**ID 52 Designing QCD JIGs Risk Mitigation Strategies in Electronics Manufacturing Companies by Combining House of Risk (HOR) and Lean Manufacturing Tools Methods**

M Khoirul Khuluk and T Yuri M Zagloel, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Salemba, Indonesia

**ID 138 The Heuristic Methods for Scheduling Production with Unrelated Parallel Machine, and Job- and Machine-Sequence-Dependent Setup Time**

Prasal Soeum, School of Manufacturing Systems and Mechanical Engineering (MSME), Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand

Pham Duc Tai, School of Manufacturing Systems and Mechanical Engineering (MSME), Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand

Jirachai Buddhakulsomsiri, School of Manufacturing Systems and Mechanical Engineering (MSME), Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand

**ID 295 Visual Inspection system using image sensor in manufacturing Industry**

Nisarg Ishvarbhai Patel, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

Dr.M.B. Kiran, Associate Professor, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

**ID 271 A Robust Hybrid ANFIS-Wavelet Approach for Pattern Recognition**

Adil Akaaboune, School of Business and Administration, Al Akhawayn University, Ifrane, Morocco

**12:00 – 1:45 pm, MONDAY, June 12**

**Automation and Control**

**Virtual Room 6**

**Session Chair:** S M Shakil, Department of Electrical and Computer Engineering, Florida Polytechnic University, Lakeland, Florida, USA

**ID 416 Impact of Heat-Treatment on Wear Behaviour of Stainless Steel Printed using Laser Powder Fusion Bed**

Pooja Angolkar, Research Scholar, Department of Mechanical Engineering, JNTU Hyderabad, India

M. Manzoor Hussain, Professor in Mechanical Engineering and Registrar, Jawaharlal Nehru Technological University, Hyderabad, India

**ID 296 Automatic Process Control Valves in Floating Dry Docks**

Soham Kewalramani, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

M. B. Kiran, Associate Professor, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

**ID 281 Machine Control using Sequenced Output Generation Supervised by Machine Learning**

Hamid, University of Windsor, Canada

**June 12, 2023 (Monday) - Session: 2:00 – 3:00 pm**

**2:00 – 3:00 pm, MONDAY, June 12**

**Plenary Speaker**

**Virtual Room 1**

Foad H Khanli

Director of Quality Assurance, Performance and Business Improvement

Amor Health Services, Inc.

Brownsville, Texas, USA

Application of Hoshin Kanri to accelerate Lean Six Sigma implementation in Healthcare

**June 13, 2023 (Tuesday)**



---

## June 13, 2023 (Tuesday) - Session: 8:00 – 9:45 am

---

**8:00 – 9:45 am, TUESDAY, June 13****Plenary Speakers****Onsite Room 1**

8:30 am – 8:30 am (Tuesday, June 13)

Dr. Mohammad Ichsan, PMP, PMI-SP  
 Assistant Professor  
 Faculty Member of Binus Business School (AACSB Accredited)  
 Undergraduate Program  
 Bina Nusantara University  
 Jakarta, Indonesia

8:30 am – 9:00 am (Tuesday, June 13)

Dr. Muhammad Fauzan  
 Director of Human Capital and Legal  
 PT Hutama Karya (Persero)  
 Indonesia

9:00 am – 9:30 am (Tuesday, June 13)

Nazmul Hossain  
 Engineer at Axiscades Inc.  
 CFD Engineer at Caterpillar Cooling Performance Simulation team  
 Houston, Texas, United States

**8:00 – 9:45 am, TUESDAY, June 13****Onsite Room 2**

### Women in Industry and Academia (WIIA) Panel

Panel Chair

Dr. Johanna Trujillo Díaz  
 Titular-II Professor at Business Administration  
 Support of Vice-Rector for Research  
 Fundación Internacional De La Rioja (UNIR)  
 Bogotá, Colombia

Panelists

**8:00 – 9:45 am, TUESDAY, June 13****Onsite Competition Presentations****Onsite Room 3****UNDERGRADUATE STUDENT PAPER COMPETITION****ID 284 Improvement of the Internal Audit Planning System in an IT Company through Predictive Analytics**

Patricio Alejandro Zamora Navarro, Rafael Alejandro Ruiz Miller, Roberto Serna Zuazua, José D. Morcillo, Ph.D., Escuela de Ingeniería y Tecnologías, Universidad de Monterrey, México

**UNDERGRADUATE RESEARCH COMPETITION****ID 367 Motion and Time Study for Increasing Efficiency, Productivity, and Safety for an Unloading Facility**

Matthew Lovelady, Nickolas Tramel and Tanner Funderburk, Industrial Engineering Technology Graduates, Department of Engineering Technology  
 Northwestern State University, Natchitoches, LA 71497, USA

Md. Shahriar J. Hossain, Interim Department Head and Assistant Professor, Department of Engineering Technology, Northwestern State University,  
 Natchitoches, LA 71497, USA

Nabin Sapkota, Associate Professor, Department of Engineering Technology, Northwestern State University, Natchitoches, LA 71497, USA

**HIGH SCHOOL STEM POSTER COMPETITION****ID 232 The Gendered World of Advertising: A Microeconomic Review**

Alina Zhong, Stanford Online High School, Redwood City, CA 94063, USA

**8:00 – 9:45 am, TUESDAY, June 13****Sustainability****Virtual Room 4**

**Session Chair:** Khristian Edi Nugroho SOEBANDRIJA, Industrial Engineering Department, Bina Nusantara University, Jakarta, Indonesia

**ID 189 Carbon Capture and Sequestration in The Energy Transition**

Moses Jeremiah Barasa Kabeyi, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

Oludolapo Akanni Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

**ID 252 Factors Affecting the Consumers' Willingness to Pay for Sustainable Fashion Products (Study Case: Natural Dyed Batik)**

Almira Zana Pratama, Master Program of Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta, Indonesia

Eko Liquiddanu, Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta, Indonesia

Eko Pujiyanto, Industrial Engineering Department, Faculty of Engineering, Universitas Sebelas Maret, Surakarta, Indonesia

**ID 187 Indicators of Sustainable Energy and Electricity**

Moses Jeremiah Barasa Kabeyi, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

Oludolapo Akanni.Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

**ID 185 Smart Energy Systems and Use of Energy Plan as an Energy and Power Generation Planning Tool**

Moses Jeremiah Barasa Kabeyi, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

Oludolapo Akanni.Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

**ID 249 Sustainable Urban Development: A sustainability study of the Dhaka megacity**

Kamal and Md Karib Uddin, CEO and Managing Director, Al-Kabid Steel King and Furniture Ltd. and Karib International, Bangladesh

Khan Mohammad Elyas, Sentence Planning Officer, GIZ Bangladesh, Dhaka, Bangladesh

**ID 146 Implementation of Lean Manufacturing to Reduce Production Cycle Times and CO2 Emission in Gate to Gate Life Cycle Assessment in the Biodegradable Plastic Industry**

Muthia Khadijah, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Depok, Indonesia

**ID 349 Industry 4.0 and its Management vis-à-vis Horizontal and Vertical System Integration**

Khristian Edi Nugroho SOEBANDRIJA, Industrial Engineering Department, Faculty of Engineering, Bina Nusantara University, Jakarta, Indonesia

**8:00 – 9:45 am, TUESDAY, June 13**

**Business Management**

**Virtual Room 5**

**Session Chair:** Gülçin Büyüközkan, Industrial Engineering Department, Galatasaray University, Ortaköy, Istanbul, Turkey

**ID 50 Building a Model for the Detection of Fraudulent Accounting Using Textual Information from the MD&A Section of Japanese Companies**

Keisuke Miyago, Natsuki Sato, Ayuko Komura and Hirohisa Hirai, Department of Industrial Engineering and Management, Kanagawa University Kanagawa, Japan

**ID 49 Impact of Working Capital Management on Future Profitability in Japanese Companies**

Koshiro Shiba, Ayuko Komura and Hirohisa Hirai, Department of Industrial Engineering and Management, Kanagawa University, Kanagawa, Japan

**ID 114 Islamic Economics as an Alternative Economy in Facing the Global Economic Recession**

Mustafa, Universitas Pamulang & Universitas Muhammadiyah Tangerang, Indonesia

**ID 305 The Effect of Customer Preference Dimensions on User Growth in Lombok Island Mobile Network Service Industry**

Ananta Pratama Chrisna Putra, A Student of Faculty of Economics and Business, Telkom University, Faculty of Economics and Business Telkom University, Bandung, Indonesia

Rina Djunita Pasaribu, An Associate Lecturer of Digital Business Strategy Studies, Faculty of Economy & Business, Telkom University Bandung, Indonesia

**ID 62 The Impact of the Explanatory Variable Patterns and Learning Techniques Used on the Real Estate Price Estimation Models in Japan**

Tsubasa Isogai, Ayuko Komura and Hirohisa Hirai, Department of Industrial Engineering and Management, Kanagawa University, Kanagawa, Japan

**ID 61 The Impact of the Information of Management Forecast Achievement on Japanese Investors' Decision-Making**

Kaori Ojima, Ayuko Komura and Hirohisa Hirai, Department of Industrial Engineering and Management, Kanagawa University, Kanagawa, Japan

**ID 153 Autonomy Selection in Self-Driving Vehicles by an Integrated Spherical Fuzzy TODIM**

Gülçin Büyüközkan, Industrial Engineering Department, Galatasaray University, Ortaköy, Istanbul, Turkey

Fethullah Göçer, Industrial Engineering Department, Kahramanmaraş Sütçü İmam University, Onikişubat, Kahramanmaraş, Turkey

**8:00 – 9:45 am, TUESDAY, June 13**

**Quality**

**Virtual Room 6**

**Session Chair:** Mohd Zamri Mohd Nor, Universiti Teknologi Malaysia (UTM), 81310 Johor Bahru, Johor, Malaysia

**ID 211 Fundamentals of Quality Concept: Literature Review**

Zaizoune Marouane and Khadiri Hassan, Laboratory of Industrial Technology, Faculty of Sciences and Technology, University Sidi Mohamed Ben Abdellah, Fes, Morocco

Herrou Brahim, Superior School of Technology, University Sidi Mohamed Ben Abdellah, Fes, Morocco

Sekkat Souhail, National Superior School of Arts and Crafts, University Moulay Ismail, Meknes, Morocco

**ID 113 Transforming for Sustainability: Total Quality Management and Industry 4.0 Integration with a Dynamic Capability View**

Ahmed Baha Eddine Aichouni, PhD Researcher, CEMMPRE, Mechanical Engineering Department, University of Coimbra, Coimbra, Portugal  
Cristovão Silva, and Luís Miguel D. F. Ferreira, Professor, CEMMPRE, Mechanical Engineering Department, University of Coimbra, Coimbra, Portugal

**ID 54 Advanced Statistical Modeling of Severe and Fatal Road Injuries Due to Built Environment Factors**

Sharaf AlKheder, Full Professor of Civil Engineering, Civil Engineering Department, College of Engineering and Petroleum, Kuwait University, P.O. Box-5969, 13060, Safat, Kuwait

**ID 139 Performance Analysis of Wind Energy Conversion Systems Integrating the Doubly Fed Induction Generator and the Permanent Magnet Synchronous Generator**

Welcome Khulekani Ntuli and Musasa Kabeya, Department of Electrical Power Engineering, Durban University of Technology, South Africa  
Gulshan Sharma, Department of Electrical and Electronics Engineering, University of Johannesburg, South Africa

**ID 29 Goal Programming Approach for Waterway Transportation System**

Akinlo, Durban University of Technology, South Africa

**ID 212 The Challenges of Women Sports Leaders in Morocco 'Theoretical Approach'**

Khadija MALIKI and Fairouz NAJI, Laboratory of Studies and Research in Economic Sciences and Management (LERSEM), National School of Commerce and Management El Jadida, University of Chouaib Doukkali El Jadida, Morocco

**ID 184 Life Cycle Assessment on an Aluminum Patrolling Ship in Malaysia**

Mohd Zamri Mohd Nor, Md Mizanur Rahman, Aminuddin Saat, Hasan Mohd Faizal and Mazlan Abdul Wahid, Faculty of Mechanical Engineering Universiti Teknologi Malaysia (UTM), 81310 Johor Bahru, Johor, Malaysia

**ID 332 Design of a measurement instrument for the software utility validation using the Resource-Constrained Multi-Project Scheduling Problem (RCMPSP)**

Johanna, Fundación Universitaria Internacional de la Rioja, Colombia

---

## June 13, 2023 (Tuesday) - Session: 10:00 am – 1:00 pm – Onsite Room 1

---

### Keynote Speakers

10:00 Welcome Address:

**Professor Hamid Parsaei, Ph.D., PE, Fellow, IISE, ASEE, SME, IEOM**

Professor, Department of Industrial and Systems Engineering  
Director, College of Engineering Accreditation and Assessment  
Texas A&M University, College Station, Texas, USA  
IEOM President, 2021-2023; IEOM Vice President, 2019-2021

10:20 Keynote I (Day 1 Opening Keynote):

**Dr. Satish Bukkapatnam**

Professor, Industrial & Systems Engineering, Rockwell International Professor, College of Engineering and Director, TEES Institute for Manufacturing Systems, Texas A&M University, College Station, Texas, USA

11:00 Keynote II:

**Vivek Anand, PhD**

Vice President & Head of Technology, Deloitte Consulting, Houston, TX, USA

11:40 Keynote III:

**Mark A. Bolen**

VP of Quality, Engineering & Fleet, Cintas Corporation, Lebanon, Ohio, United States

12:20 Keynote IV:

1:00 Buffet Lunch

---

## June 13, 2023 (Tuesday) - Session: 2:00 – 3:45 pm

---

**2:00 – 3:45 pm, TUESDAY, June 13**

**Global Engineering Education I**

**Onsite Room 1**

Session Chair: Anjum Ali, Ph.D.



2:00 pm - 2:30 pm (Tuesday, June 13)

Anjum Ali, Ph.D.  
(Retd.) Professor of Electrical Engineering, FAST-NU, Lahore, Pakistan  
Ex. Associate Professor of Computer Engineering, LUMS, Lahore, Pakistan  
Ex. Professor of Computer Science and Engineering

2:30 pm - 3:00 pm (Tuesday, June 13)

Dr. Devinder Kumar Banwet FIE  
Vice Chancellor Founding Retd  
University of Engineering & Management  
Kolkata India  
Professor Emeritus, DMS, IIT Delhi (India)

3:00 pm - 3:30 pm (Tuesday, June 13)

Louis H. Iselin  
CTE/STEM Engineering and Robotics Instructor  
Cypress Park High School  
Cypress, Texas, United States

3:30 pm – 4:00 pm (Tuesday, June 13)

Soban Jalil  
Senior Program Manager  
Wabtec Corporation  
Houston, Texas, United States

**2:00 – 3:45 pm, TUESDAY, June 13**

**Onsite Room 2**

## Industry 4.0 Panel

Panel Chair

Dr. Hayder Zghair  
Assistant Professor of Industrial Engineering  
Director of Industrial Engineering Development  
College of Science and Engineering  
Southern Arkansas University  
Magnolia, Arkansas, USA

Panelists

Panelist – I

Dr. Tom Jones  
Continuous Improvement Industrial Engineer  
Department of Operational Excellence  
Leonardo DRS  
Melbourne, Florida, United States

Panelist – II

Alper Senol  
Professor- Supply Chain Management  
Miami Dade College  
Miami, Florida, United States

Panelist – III

Dr. Galia Novakova Nedeltcheva  
Scientific Researcher  
ICT & Digital Transformation  
Polytechnical University of Milan  
Italy

Panelist – IV

Dr. Doga Demirel  
Assistant Professor of Computer Science  
Director of Virtual Reality, Interactive Simulation, and Biomedical (VRISB) Lab  
Florida Polytechnic University  
Lakeland, Florida, USA

**2:00 – 3:45 pm, TUESDAY****Operations Research****Onsite Room 3****Session Chair:** Dr Radha Gupta, Professor and Head, Dept. of Mathematics, Dayananda Sagar College of Engineering Bangalore, India**ID 196 Mitigating Organizational and Operational Impediments to Innovation: An Integrated Systems Approach**Melinda L. Tourangeau, RVJ Institute, New Hampshire, United States  
Adedeji B. Badiru, Air Force Institute of Technology, Dayton, Ohio, United States**ID 182 Alternative Objective Function in Planning and Scheduling**

Zibo Lin, Genesis Agbo, Jessica Florencia, Salome Pantsulaya, Tamunodiyepiriye Bestman and Odile Bellenguez, IMT Atlantique Nantes France, France

**ID 112 Three waves of COVID-19 in India-An Autoregression Model**Radha Gupta, Professor and Head, Department of Mathematics, Dayananda Sagar College of Engineering, Bangalore, Karnataka, India  
Nethravathi N, Research Scholar, Department of Mathematics, Dayananda Sagar College of Engineering, Bangalore, Karnataka, India  
Kokila Ramesh, Assistant Professor, Department of Mathematics, Faculty of Engineering and Technology, Jain University, Bangalore, Karnataka, India**ID 300 Web-based Metaheuristic-Optimized Machine Learning System for Engineering Informatics**Jui-Sheng Chou, Chair Professor and Dean for General Affairs, National Taiwan University of Science and Technology, Taipei, Taiwan  
Jeffisa Delaosa Kosasih, Graduate Research Assistant, National Taiwan University of Science and Technology, Taipei, Taiwan**ID 28 Framework for Developing Interactive Dashboards and Evaluating Their Usage Effectiveness: A Case Study**Farah Altarazi and Daryl Santos, Systems Science and Industrial Engineering Department, The State University of New York at Binghamton  
New York, USA  
Albert Tomchesson, Foxconn Industrial Internet, Houston, TX, USA**ID 144 Supply Chain Agility and Organization Performance: A Resource Based View**Syed Imran Zaman, School of Economics and Management, Southwest Jiaotong University, Chengdu, China and Department of Business Administration, Jinnah University for Women, Karachi, Pakistan  
Sharfuddin Ahmed Khan, Industrial Systems Engineering, University of Regina, Regina, Canada  
Sherbaz Khan, Department of Supply Chain and Logistics, Institute of Business Management, Karachi, Pakistan**2:00 – 3:45 pm, TUESDAY, June 13****Supply Chain Management****Virtual Room 4****Session Chair:** Pouneh Arbabiun, University of Nottingham Business School, University of Nottingham, Nottingham, United Kingdom**ID 287 Role of Technology in the Performance Measure of Insulin Cold Chains**

Mona Haji, Logistics and Supply Chain Management Department, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 25 The Risk Management for Infant Formula Milk Supply Chain based on AHP Model for Risk Mitigation and Maximize the Safety**

Mona Haji, Logistics and Supply Chain Management Department, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 341 The Role of Supply Chain Management in Improving Food Quality, Drug Safety, and Public Health**

Mona Haji, Logistics and Supply Chain Management Department, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 215 Advancing Humanitarian Logistics Design through Linguistic Decision-Making based Quality Function Deployment**Gülçin Büyükoğkan, Professor, Department of Industrial Engineering, Galatasaray University, Ortaköy, Istanbul, Turkey  
Deniz Uztürk, Department of Management, Business Research Center, Galatasaray University, Ortaköy, Istanbul, Turkey**ID 27 Reverse Logistics as a Way to a Sustainable Transformation in Organizations: A Literature Review**Marquina Giovanni, Bachelor, Industrial Engineering, University of Lima, Lima, Perú  
Vargas Alejandro, Bachelor, Industrial Engineering, University of Lima, Lima, Perú**ID 56 Transitioning Towards Ecological Approaches in Supply Chain Management: A Delphi Study**

Pouneh Arbabiun, Anne Touboulis and Anshuman Chutani, University of Nottingham Business School, University of Nottingham, Nottingham, United Kingdom

**June 13, 2023 (Tuesday) - Session: 4:00 – 5:45 pm****4:00 – 5:45 pm, TUESDAY, June 13****Engineering Education****Onsite Room 1****Global Engineering Education II****ID 80 Analysis of the Technological Maturity Level of Industrial Engineering Students**Daniela del Carmen Bacre-Guzmán, María de los Angeles Martínez-Mercado, Azucena Minerva García-León and Nury Margarita Leal-Rendón  
Professor, School of Chemical Science, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México**ID 208 You can't hide behind the screen forever; The necessity of Foundational Skills in STEM careers**

E Shirl Donaldson, University of Michigan Flint, United States

**ID 131 Embedding Professional Development Courses in Curriculum**

Dr. Sabah Abro, Professor and Graduate Program Director, Department of Engineering Technology, Lawrence Technological University, Southfield, United States

**ID 51 A Comparison of Students' Learning Experience in Undergraduate Engineering Programs Using Face-to-Face and Synchronous**  
 Albertus Retnanto, Ph.D., Professor, Petroleum Engineering, Texas A&M University at Qatar, Doha, Qatar  
 Hamid R. Parsaei, Ph.D., P.E., Professor, Industrial and Systems Engineering, Texas A&M University, College Station, TX, USA  
 Boback Parsaei, Vice President and Chief Technical Officer, Integrated Technology Systems, Inc., Houston, Texas, USA

**4:00 – 5:45 pm, TUESDAY, June 13**

**Onsite Room 2**

## **Human Factors and Ergonomics Panel - Maintenance and Reliability**

Panel Chair

Eric Ayanegui, CPMM, CRL  
 Director Operations Engineering  
 Cintas Corporation  
 Houston, Texas, USA

**4:00 – 7:00 pm, TUESDAY**

**Onsite Room 3**

## **Six Sigma Certification Workshop** **Speaker: Dr. Ahad Ali, LTU, MI**

**4:00 – 5:45pm, TUESDAY, June 13**

**Technical Presentations**

**Virtual Room 4**

**Session Chair: Mohamed A. Awwad, California Polytechnic State University, San Luis Obispo, 93407, California, USA**

**ID 321 Enhancing Disaster Management through Effective Warehouse Location Selection using Linguistic Decision Making: An Integrated Approach**

Gülçin Büyükoçkan, Professor, Department of Industrial Engineering, Galatasaray University, Ortaköy, Istanbul, Turkey  
 Deniz Uztürk, Department of Management, Galatasaray University, Ortaköy, Istanbul, Turkey

**ID 149 Strategic Analysis of Digital Technologies in the Healthcare Sector through the Application of Multiple Preference Relations Combined SWOT Analysis**

Gülçin Büyükoçkan and Öykü Ilıcak, Department of Industrial Engineering, Faculty of Technology and Engineering, Galatasaray University, Istanbul, Turkey

**ID 235 A Study on Alternative Learning for Materials Engineering Students**

Erika Szalodobagy and Mohamed A. Awwad, Department of Industrial and Manufacturing Engineering, California Polytechnic State University San Luis Obispo, 93407, California, USA

**ID 423 An Initial Exploration of Patterns of Variation in Healthcare Provider Reimbursement Rates from a Massive New Dataset**

Jim Dewey and Susan LeFrancois, Florida Polytechnic University, 4700 Research Way, Lakeland, Florida 33805, USA

## **June 14, 2023 (Wednesday)**

**June 14, 2023 (Wednesday) - Session: 8:00 – 9:30 am**

**8:00 – 9:40 am, WEDNESDAY, June 14**

**Onsite Room 1**

## **Global Business Management and Global Project Management**

8:00 – 8:20 am, June 14

Ajairaj Selvaraj (PMP)®  
 Project Engineer  
 JSW Steel  
 Houston, Texas, United States

8:20 – 8:40 am, June 14

David Giraldo  
 Principal Data Analytics Consultant  
 Simple BI Inc.  
 Houston, Texas, United States



8:40 – 9:00 am, June 14

**8:00 – 9:40 am, WEDNESDAY, June 14****Onsite Room 2****Global Supply Chain and Logistics Panel****Panel Chair**

Shahram Taj, Ph.D.  
 Chair and Professor, Department of Data Science & Business Analytics  
 Chair, Department of Computer Science  
 Florida Polytechnic University  
 Lakeland, Florida, USA

**Panelists****Panelist – I**

Michael Ehsani (MBA, DBA)  
 Global Quality Director  
 Arcadis  
 Houston, Texas, USA

**Panelist – II**

Dr. Milad Talebzadehosseini  
 Visiting Assistant Professor  
 Department of Data Science and Business Analytics  
 Florida Polytechnic University  
 Lakeland, Florida, USA

**Panelist – III**

Dr. Mohamad Nayebpour  
 Visiting Assistant Professor  
 Marilyn Davies College of Business  
 University of Houston–Downtown (UHD)  
 320 N Main St, Houston, TX 77002, USA

**Panelist – IV**

Manohar S. Madan, PhD  
 Professor  
 ITSCM Department  
 University of Wisconsin-Whitewater  
 Whitewater, WI – 53190

**8:00 – 9:45 am, WEDNESDAY, June 14****Operations Research****Onsite Room 3**

Session Chair: Balachandra Patil, Department of Management Studies, Indian Institute of Science, Bengaluru -560012, India

**ID 2 A New Formulation of Quadratic Assignment Problem (QAP)**

RRK Sharma, Department of IME IIT Kanpur, 208016, India  
 Ebisa D Wollega, School of Engineering, Colorado State University Pueblo, Pueblo, CO 81001, USA

**ID 238 Multicriteria Usability Evaluation of Websites Offering Road Freight Transport**

Carlos Ermani Fries and Fernanda Christmann, Department of Industrial and Systems Engineering, Federal University of Santa Catarina, Florianópolis, SC Brazil

**ID 237 A Multi-Criteria Evaluation Model of the Usability of Websites Offering Road Cargo Freight**

Carlos Ermani Fries and Fernanda Christmann, Department of Industrial and Systems Engineering, Federal University of Santa Catarina, Florianópolis, SC Brazil

**ID 6 A New Approach for solving Simple Plant Location Problem (SPLP)**

R.R.K. Sharma, Industrial & Management Engineering, IIT Kanpur, India  
 Ajay Jha, Jaipuria Institute of Management, Lucknow, India  
 Abhay Pratap Singh, Industrial & Management Engineering, IIT Kanpur, U.P., India

**ID 77 Modelling Electricity System Transition – a Comparison of Two Supply-mix Scenarios**

Varun Jyothiprakash, P Balachandra and Abhishek Das, Department of Management Studies, Indian Institute of Science, Bengaluru -560012, India  
 Samridh Sharma, Inter-Disciplinary Centre for Energy Research, Indian Institute of Science, Bengaluru– 560012, India

**ID 106 Investigating the Role of Geriatrics Pharmacies in the Healthcare Supply Chain**

Marawan Mostafa, Ahmed Elmasry and Sara Elzarka, International Transport & Logistics Institute, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

**8:00 – 9:45 am, WEDNESDAY, June 14****Production Planning and Management****Virtual Room 4****Session Chair:** María de los Ángeles Martínez-Mercado, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, NL, México**ID 248 A Comparison of the Weighted Product (WP), Simple Additive Weighting (SAW), and Technique for Order Preference by Similarity to the Ideal Solution (TOPSIS) Approaches for Optimization Product Distribution**

Roy Fandy Gultom, Industrial Engineering Masters Study Program, University of Indonesia, Indonesia

**ID 72 Planning of Supplier Selection in Multisource Strategy Using Delphi, AHP, and TOPSIS**

Aga Ferdiansyah and Dendi P. Ishak, Industrial Engineering Department, Engineering Faculty, University of Indonesia, Jakarta, Indonesia

**ID 297 Quality Analysis on PVC Extrusion Machine**

Ritesh Gajjar, Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar, India  
Dr. M.B Kiran, Department of Mechanical Engineering, Pandit Deendayal Energy University, Gandhinagar, India

**ID 203 Aligning Manufacturing Flow Control Techniques with the product-process matrix: A review for research**

Olufemi Adetunji, Department of Industrial and Systems Engineering, University of Pretoria, Pretoria 0002, South Africa

**ID 58 Application of Material Requirement Planning (MRP) and Mixed Integer Linear Programming (MILP) Methods and Reverse Logistics in Realizing Material Shortage Prevention in the Gold Jewelry Industry**

Sekar Nadiyah and T Yuri M Zagloel, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Salemba 10430, Indonesia

**ID 179 Fifth Generation Wireless Network Usage in the Operations of the Food Industry: Barriers and Benefits**

Adetola Adeniyi, Master's candidate, cidb Centre of Excellence, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa  
Clinton Aigbavboa, Professor, cidb Centre of Excellence, Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa

**ID 183 Impact of Poor Feasibility Analysis and COVID19 on the Outcome of Extension of Production Plant**

Hafiz Anwar Ul Haq, Deputy Director at National Institute of Banking and Finance, State Bank of Pakistan, Pitrus Bukhari Road, Sector H-8/1 Islamabad, Pakistan  
Muhammad Bilal Qureshi, Manager Imports and Exports, Nimir Group of Industries, 122-B New Muslim Tow, Lahore, Pakistan  
Mansoor Ahmad, Mechanical Engineer/Project Manager, Z.I. Engineering PC., 10 Fifth Street, Suite 303, Valley Stream, NY 11581, United States

**ID 78 Study of the Overall Equipment Effectiveness of a Cutting Process through a Digital Format**

María de los Ángeles Martínez-Mercado, Azucena Minerva García-León, Daniela del Carmen Bacre-Guzmán and Elva Patricia Puente-Aguilar  
Professor, School of Chemical Science, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México

**8:00 – 9:45 am, WEDNESDAY, June 14****Energy****Virtual Room 5****Session Chair:** Atanu Debnath, Department of Electrical Engineering, Lamar University, Beaumont, Texas, USA**ID 339 Developing Competency Standard for Solar PV Off Grid Capacity Building in Indonesia**

Adie Erar Yusuf, CBDC, University of Bina Nusantara, Jl. Anggrek Raya Npo. 41 Kebon Jeruk Jakarta 11480, Indonesia  
Naniek Rahmawati, GIZ Consulting, Kantor Perwakilan GIZ di Indonesia Menara BCA, Level 46 Jl. M.H. Thamrin No. 1 Jakarta 10310 Indonesia

**ID 282 Importance of nano particles in phase change materials as heat transfer fluid for solar heat absorption**

Sudheesh Chandran, Noorul Islam Center for Higher Education (NICHE), India

**ID 99 Performance Analysis of Solar PV System using Cascaded H-bridge Sub-multilevel Inverter**

Mukhtiar Ahmed Mahar, Professor of Electrical Engineering, Faculty of Electrical, Electronics and Computer Engineering, Mehran University of Engineering and Technology, Jamshoro, Pakistan  
Abdul Sattar Larik, Professor of Electrical Engineering, Faculty of Electrical, Electronics and Computer Engineering, Mehran University of Engineering and Technology, Jamshoro, Pakistan  
Aneeqa Sattar, Student of Master's in Electrical Power, Faculty of Electrical, Electronics and Computer Engineering, Mehran University of Engineering and Technology, Jamshoro, Pakistan

**ID 246 Performance Evaluation of a Solar Chimney at the Presence of Cold Inflow**

Md. Mizanur Rahman and Farhan Mahbub, Mechatronics Engineering Department, World University of Bangladesh (WUB), Avenue 6 & Lake Drive Road, Sector: 17/H, Uttara, Dhaka – 1230, Bangladesh  
and Mohammad Mashud, Mechanical Engineering Department, Khulna University of Engineering and Technology (KUET), Khulna, Bangladesh

**ID 192 Present and Future Commercial Applications of Carbon Nanotubes: A Review**

Madiha Mazhar, Dept. of Chemistry and chemical Engineering, Lahore University of Management Sciences, Lahore, Pakistan

**ID 75 Factors Affecting the User Acceptance of Electric Motorcycle in Indonesia Using Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)**

Made Nindya Kirana, Farizal and Rahmat Nurcahyo, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia Depok, Jawa Barat, Indonesia

**ID 74 Implementation of Energy Management Strategy in Terminal 2 Soekarno Hatta International Airport - Jakarta**

Bonang Ananta and Farizal, Department of Industrial Engineering, Universitas Indonesia, Salemba, Jakarta, Indonesia

**ID 328 Current Scenario of Solar Home Systems and Future Utilization in Bangladesh**

Atanu Debnath, Department of Electrical Engineering, Lamar University, Beaumont, Texas, USA

NA Nithe and MN Uddin, Department of Electrical and Electronic Engineering, Northern University Bangladesh, Banani, Dhaka-1213, Bangladesh

Emir Neziric, Department of Mechanical Engineering, Dzemal Bijedic University Mostar, Bosnia and Herzegovina

**8:00 – 9:45 am, WEDNESDAY, June 14****Education and Research****Virtual Room 6****Session Chair: Pankaj Chandna, Mechanical Engineering Department, National Institute of Technology Kurukshetra, Haryana, India****ID 57 Behaviorally Anchored Rating Scales: An Application for Teacher Evaluation in a Holistic Higher Education Scenario**

Antony Michael Raj Lourdhuraj, Professor and Principal, Loyola ICAM College of Engineering and Technology, Loyola Campus, Nungambakkam, Chennai – 600034, India

**ID 293 Geometric modeling and Fluid Flow simulation of IC Engine- A Review**

Kalpit Patel, (19BME057), Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

**ID 193 Happy Campus: How to make Universities a Better Place to Work and Study in INDIA**

Dr. G P Dinesh, Professor, VSK University, Ballari, India

Dr. DivyaBharathi, Associate Professor, BITM, Ballari, India

**ID 301 Optimized Hybrid System for Financial Time-Series Prediction**

Jui-Sheng Chou, Chair Professor and Dean for General Affairs, National Taiwan University of Science and Technology, Taipei, Taiwan

Thi-Kha Nguyen, Faculty of Engineering and Agriculture, The University of Danang - Campus in Kontum Kontum, Vietnam

**ID 46 Supplier Performance Measurement and Evaluation System for Flexible Packaging Industry with Integration of DEMATEL Method and Analytical Network Process**

Bonita and T Yuri M Zagloel, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Salemba 10430, Indonesia

**ID 81 Optimization of FSP Parameters for Surface Properties of Al/TiC Composite Using Taguchi-Grey-Relational-Analysis**

Pankaj Chandna, Professor, Mechanical Engineering Department, National Institute of Technology Kurukshetra, Haryana 136119, India

Raman Chouhan and Pawan Bishnoi, Research Scholar, Mechanical Engineering Department, National Institute of Technology Kurukshetra, Haryana 136119, India

**June 14, 2023 (Wednesday) - Session: 10:00 am – 1:00 pm****Keynote Speakers**

10:20 Keynote V:

**Dr. Gino Lim**

R. Larry and Gerlene (Gerri) R. Snider Endowed Chair and Professor &amp; Chair, Department of Industrial Engineering, University of Houston – University Park, Houston, Texas, USA

11:00 Keynote VI:

**José Rivera**

Chief Admin Quality Officer, MD Anderson Cancer Center, Houston, Texas, United States

11:40 Keynote VII:

**Dr. Robert Swearingen**

Head of Strategic Sourcing and Supply Chain Management, Siemens GCI, Texas, USA

12:20 Keynote VIII:

**Dr. Luis Rabelo**

Professor, Department of Industrial Engineering &amp; Management Systems, University of Central Florida, Orlando, FL, USA

1:00 Buffet Lunch

**June 14, 2023 (Wednesday) - Session: 2:00 – 3:45 pm**



---

**2:00 – 3:45, WEDNESDAY, June 14****Onsite Room 1**

---

**Industry Solutions and Industry 4.0 I**

Session Chair: Ms. Kayla Buczkowski

2:00 pm – 2:20 pm (Wednesday, June 14)

Yanesh Naidoo

Owner, Executive Innovations Director & Member of the Board at Jendemark  
22' Africa Technology Company of the year  
Port Elizabeth, Eastern Cape, South Africa

2:20 pm – 2:40 pm (Wednesday, June 14)

Ms. Kayla Buczkowski  
Applications Service Engineer  
A&D Technology  
4622 Runway Blvd  
Ann Arbor, MI 48108

**ID 115 A Lean Six Sigma Evaluation to Improve a Manufacturing Validation Process**

Kayla J. Buczkowski, Applications Service Engineer at A&D Technology and Masters of Engineering Management and Masters of Industrial Engineering, Candidate of the College of Engineering, Lawrence Technological University, Southfield, MI 48075, USA

2:40 pm – 3:00 pm (Wednesday, June 14)

Aaron Rubel, M.S.E.M.  
Head of Aircraft Maintenance Programs Development  
Intellectual Property Focal Point  
Airbus Americas, Inc.  
Mobile, Alabama Engineering Center  
Mobile, AL 36615, USA

3:00 pm – 3:40 pm (Wednesday, June 14)

---

**2:00 – 3:45, WEDNESDAY, June 14****Onsite Room 2**

---

**Data Analytics Panel****Panel Chair**

Dr. Ying Lin  
Assistant Professor  
Industrial Engineering Department  
Director, Smart Health & Intelligent Engineering Systems (SHINES) Lab  
University of Houston  
Houston, Texas, USA

**Panelists****Panelist – I**

Assaf Gottlieb, PhD  
Assistant Professor  
UTHealth School of Biomedical Informatics (SBMI)  
Houston Texas Medical Center  
Houston, TX 77030

**Panelist – II**

Dr. Meng Li  
Associate Professor, Bauer Fellow  
SCM PhD Coordinator  
C.T. Bauer College of Business  
University of Houston  
Houston, Texas, USA

**Panelist – III**

Dr. Rei Sanchez-Arias  
Assistant Professor of Data Science  
Assistant Chair of the Department of Data Science and Business Analytics  
Florida Polytechnic University

Lakeland, Florida, USA

Panelist – IV

Dr. Hrayr Aprahamian  
Assistant Professor, Industrial & Systems Engineering  
Wm Michael Barnes '64 Department of Industrial & Systems Engineering  
Texas A&M University  
College Station, Texas, USA

**2:00 – 3:45, WEDNESDAY, June 14**

**Manufacturing**

**Onsite Room 3**

**Session Chair:** Farizal, University of Indonesia

**ID 42 Analysis of Partial least squares -structural equation modeling (PLS-SEM) in archival, big data, and data mining research- a growing phenomena**

Anass, Nelson Mandela University, South Africa

**ID 154 Visualizing a Local Food Bank's Chronic Health Disease Population**

Mikaya Hamilton, Steven Jiang and Lauren Davis, Department of Industrial and Systems Engineering, North Carolina Agricultural and Technical State University, 1601 E Market St., Greensboro, NC 27411, United States

**ID 126 Rethinking PERT-Beta Distribution: A Systematic Evaluation of PERT RNG Models in Project Risk Simulation**

Byung-Cheol "BC" Kim, Associate Professor in Project and Supply Chain Management, Black School of Business at Penn State Behrend, Erie, Pennsylvania, USA

**ID 148 Role of Green Supply Chain Practices in Improving Firm's Sustainability and Performance**

Sherbaz Khan, Department of Supply Chain and Logistics, Institute of Business Management, Karachi, Sindh 75190, Pakistan

M. Affan Badar, Bailey College of Engineering and Technology, Indiana State University, Terre Haute, IN 47809, USA

Sharfuddin Ahmed Khan, Industrial Systems Engineering, University of Regina, Regina, SK S4S 0A2, Canada

Syed Imran Zaman, Department of Business Administration, Jinnah University for Women, Karachi, Sindh 74600, Pakistan

**ID 40 Online 2 + 2 + 2 Technology Programs for Upward Mobility**

Raj Desai, Chair, McCoy School of Engineering, Midwestern State University, Wichita Falls, Texas, USA

**ID 191 Turret Punch Time Estimate for Sheet Metal Parts using Machine Learning Approach**

Yean-Tzuo (Andrew) Hwang, Assistant Professor, Department of Mechanical Engineering, National Yang Ming Chiao Tung University, Hsinchu, Taiwan

Ting-Yi Zhang, and Hung-Chun Hsu, Graduate Students, Department of Mechanical Engineering, National Yang Ming Chiao Tung University Hsinchu, Taiwan

**ID 241 Centralized and Decentralized Organizational Structure: The Impact on Employee Satisfaction and Performance**

Aaron Rubel, Fellow, IEOM Society International, Southfield, Michigan 48076, USA

Department of Engineering Management & Systems Engineering, Old Dominion University, Norfolk, VA 23529, USA

**2:00 – 3:45, WEDNESDAY, June 14**

**Productivity**

**Virtual Room 4**

**Session Chair:** S. Bharath Sankar, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, Karnataka, India

**ID 103 Noise Pollution in Townhouse Communities**

Adnan Nadeem, Department of Civil Engineering, National University of Computer & Emerging Sciences (NUCES), FAST Lahore Campus, Pakistan

Saman Shahid, Department of Sciences & Humanities, National University of Computer & Emerging Sciences (NUCES), FAST Lahore Campus, Pakistan

Shahid Ali, Department of Civil Engineering, National University of Computer & Emerging Sciences (NUCES), FAST Lahore Campus, Pakistan

**ID 111 A Hybrid NSGA-II Approach to Resolve a Bi-Objective Multi-Period Assembly Inbound Inventory Routing Problem**

Satya Prakash and Indrajit Mukherjee, Shailesh J. Mehta School of Management, Indian Institute of Technology, Bombay-400076, India

**ID 79 Application of The Abc Methodology to Reduce the Delay of Sales Orders in A Company Warehouse in Barranca City**

Joe, Universidad de Lima, Peru

**ID 22 Artificial Neural Network (ANN) Assisted Simulated Annealing Algorithm for Dynamic Scheduling of Burn-in Ovens with Machine Eligibility Restriction**

Dhaval Pujara and Muthu Mathirajan, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, Karnataka 560012, India

**ID 204 From the foundational theories to the prospects of the DDMRP: A review and research agenda**

Olufemi Adetunji, Department of Industrial and Systems Engineering, University of Pretoria, Pretoria 0002, South Africa

**ID 255 Internal Logistics Improvement of Automotive Parts in an Assembly Plant**

Patipath Maneerath, Master of Engineering Program in Industrial Engineering Chulalongkorn University, Bangkok 10330, Thailand

**ID 71 Modelling the impact of data from scouting robots on fresh food supply chains**

Shantha Lakshmi Belavadi Nagaraja Swamy, Research Officer, Essex Business School, University of Essex, Southend Campus, Southend-on-Sea SS1 1LW, UK

**ID 23 A Pareto Analysis of Critical Success Factors of Lean Production System**

S. Bharath Sankar and Muthu Mathirajan, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, Karnataka, India

---

**June 14, 2023 (Wednesday) - Session: 4:00 – 5:45 pm**

---

**4:00 – 5:45, WEDNESDAY, June 14****Onsite Room 1**

---

**Industry Solutions and Industry 4.0 II**

---

**Session Chair: Abdul Rahman Saddiq**

4:00 pm – 4:20 pm (Wednesday, June 14)

Rachel Stanford  
Center Quality Manager  
SLB  
Houston, Texas, USA

4:20 pm – 4:40 pm (Wednesday, June 14)

Jerel Scrutchin, MBA  
Executive Consultant – Manufacturing  
SBTI  
Pearland, Texas, United States

4:40 pm – 5:00 pm (Wednesday, June 14)

Abdul Rahman Saddiq  
Senior Associate, Predictive Diagnostics  
EDP Renewables  
Houston, Texas, United States

5:00 pm – 5:20 pm (Wednesday, June 14)

5:20 pm – 5:40 pm (Wednesday, June 14)

---

**4:00 – 5:45, WEDNESDAY, June 14****Onsite Room 2**

---

**Using Assessment to Improve Student Learning and Curriculum – Panel**

---

Panel Chair

Professor Abu Masud, Ph.D., P.E.  
Professor Emeritus  
Department of Industrial and Manufacturing Engineering  
Wichita State University  
Kansas, USA

Panelists:

Panelist – I

Dr. Adedeji Badiru  
Dean  
Graduate School of Engineering and Management  
Air Force Institute of Technology  
Wright-Patterson AFB  
Ohio, USA

Panelist – II

Professor Hamid Parsaei, Ph.D., PE  
Fellow, IISE, ASEE, SME, IEOM  
Professor, Department of Industrial and Systems Engineering  
Director, College of Engineering Accreditation and Assessment  
Texas A&M University  
College Station, Texas, USA  
IEOM President, 2021-2023; IEOM Vice President, 2019-2021

Panelist – III

Panelist – IV

**4:00 – 5:45, WEDNESDAY, June 14****Optimization****Onsite Room 3****Session Chair: Hernando Garzón Saenz, Fundacion Universitaria Tecnológico Comfenalco, Cartagena de Indias, Colombia****ID 355 Workflow Improvements and Workplace Redesign for an Office Space**

Alexander Makarewicz and Mason Pitts, Industrial Engineering Technology Graduates, Department of Engineering Technology, Northwestern State University, Natchitoches, LA 71497, USA

Md. Shahriar J. Hossain, Interim Department Head and Assistant Professor, Department of Engineering Technology, Northwestern State University, Natchitoches, LA 71497, USA

**ID 374 Health and Safety Audit to Identify Possible Risk Findings Within the Company Nissin Manufactura De Mexico S.A De C.V**

Josué Abraham and Sánchez Portillo, Universidad Politécnica de San Luis Potosí, Mexico

**ID 350 Product Quality - end to end quality control for consumer electronics**

Rohan Viswanath, Google Inc., United States

**ID 152 Conceptualization of the Servuccion in Outpatient Care in Level 3 Health Companies under Lean Healthcare approach: Case Study**

Hernando Garzón Saenz, CIPTEC Research Group - Faculty of Engineering - Industrial Engineering Program - Technology in Industrial Production Fundacion Universitaria Tecnológico Comfenalco, Cartagena de Indias, Colombia

Andrés Redchuk, ETSII. Department of Computer Sciences. University Rey Juan Carlos. Madrid. Spain

Director of Operational Excellence and Process Improvement Institute. School of Engineer., University of Lomas de Zamora. Argentina

José Manuel Solana Garzón, CIPTEC Research Group- Faculty of Engineering - Industrial Engineering Program - Technology in Industrial Production, Fundacion Universitaria Tecnológico Comfenalco, Cartagena de Indias - Colombia

Gustavo Adolfo Ortiz Piedrahita, CIPTEC Research Group- Faculty of Engineering - Industrial Engineering Program - Technology in Industrial Production, Fundacion Universitaria Tecnológico Comfenalco, Cartagena de Indias – Colombia

**4:00 – 5:45, WEDNESDAY, June 14****Technical Presentations****Online Room 4****Session Chair: Alessandro Crivellaro Martins, Federal University of Paraná, Curitiba, Paraná, CEP: 80210-170, Brazil****ID 272 3D printing in construction, mixture characteristics, strength, and thermal performance-Review**

Amaal Al Shenawa and Poonam Mahadev Karoti, Construction Management Department, College of Architecture and Construction Management Kennesaw State University, Marietta, GA, United States

**ID 231 Path optimization of multi-tool drilling using genetic algorithm**

Mohamed B Elnoor, Department of Electrical and Computer Engineering, University of Maryland, College Park, MD 20742, USA

**ID 135 The Cutting Stock Problem with Diameter Conversion in the Construction Industry**

Deniz Altinpulluk and Nur Banu Altinpulluk, Department of Industrial and Systems Engineering, Wayne State University, Detroit, MI 48201, USA

Haldun Sural, Department of Industrial Engineering, Middle East Technical University, Universiteler Mahallesi, Cankaya, Ankara, Turkey

**ID 370 A Case Study on The Implementation of a Cultural Transformation Program Based on Soft Skills in Industry 4.0 Applied to an Intralogistics Automation Company**

Alessandro Crivellaro Martins, Master's Degree Student in Management of Organizations, Leadership and Decision, Federal University of Paraná, Curitiba, Paraná, CEP: 80210-170, Brazil

**ID 372 Data Analytics to discover what kind of people are more prone to have Alzheimer's disease?**

Rosa Aracelli Centeno Sánchez, Business Process Manager at Cleaning and Beauty Products, Founder of Cleaning and Beauty Products, BeauPharm, and VousConseil, Senior Process Architect at RENIEC, Peru

María Luisa Centeno Sánchez, Chemical Pharmacist at Cleaning and Beauty Products, Founder of Cleaning and Beauty Products, BeauPharm, and VousConseil, Senior Process Architect at RENIEC, Peru

Milagros Huachillo Alvarado, Business Process Manager at BeauPharm, Founder of BeauPharm, and VousConseil, Senior Process Architect at RENIEC, Peru

**ID 233 A Logistics Planning Tool for E-Waste Collection: Streamlining Sustainability and Efficiency**

Md Mamunur Rahman, University of Wisconsin-Platteville, 1 University Plaza, Platteville, WI 53818, USA

Ruby Nguyen and Damon Hartley, Idaho National Laboratory, 1955 N Fremont Ave, Idaho Falls, ID 83415, USA

Sophie Williams, University of Florida, Gainesville, FL 32611, USA

## June 15, 2023 (Thursday)

**June 15, 2023 (Thursday) - Session: 8:00 – 9:45 am****8:00 – 9:45, THURSDAY, June 15****Onsite Room 1**

### SCM Workshop

### Supply Chain 4.0 - the next-generation supply chain practices



## Mohammad Anwar Rahman, Ph.D.

Associate Professor, Manufacturing and Construction Management  
Central Connecticut State University, New Britain, CT, USA

8:00 – 9:45, THURSDAY, June 15

Onsite Room 2

### Lean Six Sigma Panel

#### Panel Chair

Dr. Jamison Kovach  
PMI Houston Endowed Professor in Project Management  
University of Houston  
Texas, USA

#### Panelists

##### Panelist – I

Caitlin McVey MBA, RN, CPHQ, CLSSBB  
Associate Vice President  
Memorial Hermann Institute for Nursing Excellence  
Houston, Texas

##### Panelist – II

Megan Moore, MBA, CMQ/OE, CSQP, CLSSGB  
Director of Quality  
Ryerson  
Sugarland, Texas

##### Panelist – III

AJ Harzke, DrPH, MPH, MDiv, LSSBB  
Assistant Professor, School of Public & Population Health  
Manager, Process Improvement, Correctional Managed Care  
University of Texas Medical Branch  
Houston, Texas

##### Panelist – IV

Idris Olakunmi Yusuf, Msc, PMP  
IT Professional & Graduate Research Fellow  
Texas Southern University  
Houston, Texas

8:00 – 9:45, THURSDAY, June 15

Manufacturing

Onsite Room 3

**Session Chair:** Hedaia Abdullah, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

**ID 217 Affordable Autonomous Vehicles for Deployment After Disastrous Events** Shannon Abolmaali and Erick C. Jones, Jr., Industrial, Manufacturing, and Systems Engineering, The University of Texas at Arlington, USA  
Erick C. Jones, Sr., Dean, College of Engineering, The University of Nevada, Reno, Nevada, USA

**ID 298 Loading-Unloading Simulation Model for System of Manufacturing**  
Hayder Zghair, Department of Engineering and Physics, Southern Arkansas University, 100 E University, Magnolia, Arkansas, 71753, USA

**ID 21 Analysis of Hemp Reinforced Composites**  
Som R. Soni, AdTech Systems Research Inc., 1342 North Fairfield Road, Beavercreek, Ohio 45432, USA  
Subramania I. Sritharan and Craig Schluttenhofer, Agricultural Research and Development Program (ARDP), College of Engineering, Science, Technology and Agriculture, Central State University, 1400 Brush Row Road, Wilberforce, OH, United States

**ID 181 A statistical approach to reduce the manufacturing process qualification cost and sample size**  
Angad, Google Inc, United States

**ID 48 Reducing Inbound and Outbound Logistics Process Cycle Time Using Lean Six Sigma**  
Ana Branco, Master's Student in Management of Services and Technology, Iscte – Instituto Universitário de Lisboa, Lisbon, Portugal  
Jamison V. Kovach, PMI Houston Endowed Professor in Project Management, University of Houston, Houston, TX, USA  
Ana Lúcia Martins, Business Research Unit (BRU-ISCTE), Iscte – Instituto Universitário de Lisboa, Lisbon, Portugal

**ID 108 Improving Pediatric Intensive Care Unit Risk Management Using Failure Mode and Effect Analysis**  
Hedaia Abdullah, Sahar Elbarky, Maha Morsi and Sara Elzarka, International Transport & Logistics Institute, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

**8:00 – 10:00, THURSDAY, June 15****Engineering Management****Virtual Room 4**

**Session Chair:** Guilherme Francisco Frederico, Federal University of Paraná, UFPR School of Management, PR, Curitiba, Brazil

**ID 140 Business Process Reengineering for Regulatory on Radioactive Waste Management in Indonesia**

Rizal Palapa, Novandra Rhezza Pratama and Rahmat Nurcahyo, Industrial Engineering Department, Faculty of Engineering, University of Indonesia Depok, Indonesia

**ID 66 Creating Knowledge Management Strategy for Increasing MRO Employee Industry Capability**

Haikal Rastinggi and Novandra Rhezza Pratama, Department of Industrial Engineering, University of Indonesia, Salemba, Indonesia

**ID 55 Knowledge management as a competitive advantage in SMEs: a theoretical exploration**

Oscar Alejandro Vásquez-Bernal and Woody Figueroa Peinado, School of Basic Sciences, Technology, and Engineering, Universidad Nacional Abierta y a Distancia UNAD, Bogotá D.C., Colombia

William Eduardo Mosquera Laverde, Faculty of Administrative and Economic Sciences, Universidad Cooperativa de Colombia, Bogotá D.C, Colombia

**ID 199 Product Development for Sustainable of Garment Product - A literature review**

Suhartini, Department of Industrial and Systems Engineering, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember Surabaya, Indonesia

Mokh. Suf, Department of Industrial and Systems Engineering, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember Surabaya, Indonesia

Udisubakti Ciptomulyono, Department of Industrial and Systems Engineering, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember Surabaya, Indonesia

Erwin Widodo, Department of Industrial and Systems Engineering, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember Surabaya, Indonesia

**ID 280 Inventory Cost Management Analysis Using Order Quantity Planning on Cold Rolled Coil Product in Indonesia and Thailand: Digital Price Setting**

Martino Wibowo, Postgraduate Program, Faculty of Economics, Universitas Terbuka, South Tangerang, Indonesia

Damrongsak Hattasat, School of Business, Rajamangala university of Technology Suvarnabhumi, Phra Nakhon Si Ayyuthaya, Thailand

Sompong Chuaynugul, International College, National Institute Development Administration (ICO-NIDA), Bangkok Krungthep Mahanakhorn, Thailand

Faizul Mubarak, Postgraduate Program, Faculty of Economics, Universitas Terbuka, South Tangerang, Indonesia

**ID 59 The Development of a Dual-channel Warehouse and Inventory Management Model with Stochastic Demand and Return Products in Sports Retailer**

Multazam Bagus Harto and Dendi P. Ishak, Industrial Engineering Department, Faculty of Engineering, University of Indonesia, Depok, Jawa Barat, Indonesia

**ID 142 An Efficient Simulated Annealing Algorithm for the Joint Order Batching and Picker Routing Problem in Manual Order Picking Systems**

Felicia Nathania and Komarudin, Department of Industrial Engineering, Universitas Indonesia, Depok, West Java 16424, Indonesia

**ID 351 Barriers to Agile Project Management Implementation: Findings from a Systematic Literature Review**

Edson Oliveira Martins, Master Student in the Department of School of Management, Federal University of Paraná, UFPR School of Management, PR, Curitiba, Brazil

Guilherme Francisco Frederico, Professor in the Department of School of Management, Federal University of Paraná, UFPR School of Management, PR, Curitiba, Brazil

**8:00 – 10:20, THURSDAY, June 15****Operations Management****Virtual Room 5**

**Session Chair:** Mohammad Agung Saryatmo, Universitas Tarumanagara, Jakarta, Indonesia

**ID 128 Sustainable Waste Management System Selection Using AHP-PROMETHEE: Case Study in Yogyakarta**

Rafida Salwa Wijayanti and Andri D. Setiawan, Department of Industrial Engineering, University of Indonesia, Depok, Indonesia

**ID 107 Airport Electricity Consumption Demand Forecasting Model using Seasonal Autoregressive Integrated Moving Average**

Afwan Heru Cahya and Zulkarnain, Industrial Engineering Department, Faculty of Engineering, University of Indonesia, Depok, West Java, Indonesia

**ID 44 Forecasting Model for Pharmaceutical Returned Products**

Sarah Yohana and T Yuri M Zagloel, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Salemba 10430, Indonesia

**ID 214 Performance Measurement of Supply Chain Activities Using the Scor 12.0 Approach in The Cosmetic Industry in Indonesia**

Andikaputra, University of Indonesia, Indonesia

**ID 53 Availability Optimization of the Crawler Crane Using Approach Reliability Engineering at Logistic Shore Base Company in Indonesia**

Tiara Shinta Raharkandi and Dendi P. Ishak, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Salemba 10430, Indonesia

**ID 64 Determining Optimum Maintenance Interval of Critical Equipment in Geothermal Power Plant Based on Reliability Value and Cost Ratio**

Diva Erenst Nataprawira and Zulkarnain, Department of Industrial Engineering, Universitas Indonesia, Jawa Barat, Indonesia

**ID 136 Change Management on Government Institution: Study Case Online Single Submission**

Alwin Ponco Nugroho, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, Indonesia

**ID 109 Production Quality Improvement of Duplex Carton Packaging for AA Products Using the Six Sigma and Seven New Quality Tools Methods**

Mohammad Agung Saryatmo, Helena Juliana Kristina and Raditya Pradana Putra, Department of Industrial Engineering, Universitas Tarumanagara Jakarta, Indonesia

**8:00 – 10:20, THURSDAY, June 15**

**Productivity**

**Virtual Room 6**

**Session Chair: Adhitya Mangala, Department of Industrial Engineering, Faculty of Engineering, University of Indonesia, Indonesia**

**ID 67 The Relational Mix of The Innovative New Ventures: Social Network Analysis of The Indian Tech-Startups**

Anusha Sabhahit (She/her), Senior research scholar, Department of Management Studies, Indian Institute of Science, Bangalore, 560 012, India  
Bala Subrahmanya M H, Professor, Department of Management Studies, Indian Institute of Science, Bangalore, 560 012 India

**ID 230 Topological Optimization For a 3D Printed Motorbike Frame**

Edoardo Pignatelli, Giulio Carlini, Marco Freddi, Giulio Galiè and Leonardo Frizziero, Department of Industrial Engineering, University of Bologna Bologna, BO 40136, Italy

**ID 270 Using Machine Learning to Risk Prediction as Safety Risk Management Implementation in Aircraft Maintenance Industry**

Nur Laily Haryanti and Komarudin, Department of Industrial Engineering, Faculty of Engineering, University of Indonesia, Depok, West Java, Indonesia

**ID 73 Designing on Demand Job Application for Online Employment Company in Indonesia**

Putri Aysha Qalbi and Novandra Rhezza Pratama, Department of Industrial Engineering, University of Indonesia, Salemba, Indonesia

**ID 201 Analysis of Factors Influencing the Usage of Online Food Delivery Applications Based on UTAUT2 Model**

Aditya Prayudhi and Zulkarnain, Industrial Engineering Department, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia

**ID 143 Container Terminal Performance in Indonesia Using Data Envelopment Analysis**

Bhima Nur Santiko and Armand Omar Moeis, Industrial Engineering Department, Faculty of Engineering, University of Indonesia, Depok, Indonesia

**ID 151 Evaluation of Digital Transformation Success Factors in Air Cargo Industry using IFCM Approach**

Gülçin Büyüközkan and Orhan Feyzioğlu, Professor Doctor, Professor Doctor, Industrial Engineering Department, Galatasaray University, 34349, Istanbul, Turkey  
Celal Alpay Havle, Assistant Professor Doctor, Professional Flight Program, Özyeğin University, 34794, Istanbul, Turkey

**ID 68 Cargo Allocation Model by Mixed Integer Linear Programming Approach to Minimize Demurrage Ship Cost**

Adhitya Mangala, Maya A. Puspasari and Nora Nisrina, Department of Industrial Engineering, Faculty of Engineering, University of Indonesia, Indonesia

**June 15, 2023 (Thursday) - Session: 10:00 am – 1:00 pm – Onsite Room 1**

**Keynote Speakers**

10:00 Conference Chair Remarks

10:20 Keynote IX (Day 3 Opening Keynote):

**Dr. Magdy Akladios**

Department Chair of Physical and Applied Sciences and Professor of Occupational Safety and Health with specializations in industrial hygiene or safety, College of Science and Engineering, University of Houston-Clear Lake, Texas, USA

11:00 Keynote X:

**Suresh Vaidyanathan**

Chief Engineer & General Manager, Refining Business Improvement, Phillips 66, Westchase, Houston, Texas

11:40 Keynote XI:

**Mr. Bruce Webb**

Chief Pilot, Director of Aviation Education and Community Outreach, Airbus Helicopters, Inc.,  
Prairie, Texas, USA

12:20 Keynote XII:

**Paul Perkins**

President, Amatrol, Inc., Jeffersonville, Indiana, USA

1:00 Buffet Lunch

---

## June 15, 2023 (Thursday) - Session: 2:00 – 3:45 pm

---

**2:00 – 2:45, THURSDAY, June 15**

**Onsite Room 1**

### Global Supply Chain and Logistics I

---

Session Chair: Mohammad Anwar Rahman, Ph.D.

2:00 pm – 2:20 pm (Thursday, June 15)

Manohar S. Madan, PhD  
Professor  
ITSCM Department  
University of Wisconsin-Whitewater  
Whitewater, WI – 53190

2:20 pm – 2:40 pm (Thursday, June 15)

**ID 129 A firm-based perspective of the notion “Carbon Neutrality”: Role of Supply Chain Mapping**

Muhammad Shujaat Mubarak, College of Business Management, Institute of Business Management, Karachi, Pakistan  
Sharfuddin Khan, Department of Industrial Systems Engineering, University of Regina, Canada

2:40 pm – 3:00 pm (Thursday, June 15)

Mohammad Anwar Rahman, Ph.D.  
Associate Professor  
Manufacturing and Construction Management  
Central Connecticut State University  
New Britain, CT, USA

3:00 pm – 3:20 pm (Thursday, June 15)

**2:00 – 2:45, THURSDAY, June 15**

**Onsite Room 2**

### Diversity and Inclusion Panel sponsored by Ford Motor Company

---

**Panel Chair**

Professor Donald M. Reimer  
President, The Small Business Strategy Group, Detroit, Michigan, USA  
Adjunct Faculty – A. Leon Linton Department of Mechanical Engineering  
Lawrence Technological University, Southfield, Michigan, USA  
Director, Membership and Chapter Development, IEOM Society

**Panel Speaker I**

Tanya Hill  
Chief Executive Officer & Founder



ForeverFresh  
Detroit, Michigan, USA

#### Panel Speaker II

Dr. Devinder Kumar Banwet FIE  
Vice Chancellor Founding Retd  
University of Engineering & Management  
Kolkata India  
Professor Emeritus, DMS, IIT Delhi (India)

#### Panel Speaker III

Lydia Gutierrez  
President  
Hacienda Mexican Foods  
Detroit, Michigan

### 2:00 – 2:45, THURSDAY, June 15

### Industry 4.0 and Industry Solutions

### Onsite Room 3

Session Chair: Thiru, University of Texas at Dallas, United States

#### ID 269 Optimization of Calibration Certificate Storage and Reference

Kayla Buczkowski, Applications Service Engineer at A&D Technology, Masters of Engineering Management and Masters of Industrial, Engineering Candidate of the College of Engineering, Lawrence Technological University, Southfield, MI 48075, USA

#### ID 70 Strategic Implementation of Industry 4.0 in Manufacturing Enterprises located in Emerging Economies: A Resource Utilization Perspective

Kaverinathan (Kevin) Dhanapal, Ph.D. Student, Center for Supply Chain Entrepreneurship, Department of Management, College of Business New Mexico State University, Las Cruces, NM, United States

#### ID 156 Evaluating the Efficiency and Learning Outcomes of a Technical Kardex Format in Industrial Training

Azucena Minerva García-León, Iván Guillermo González-Palomo and Carolina Solís-Peña, Professor, School of Chemical Science, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, Nuevo León, México

#### ID 157 Enterprise Service Management Cybersecurity Threats: Exploring Cloud Configuration Management Database (CMDB) Implementation Within Community Colleges

Fredrick Dande, PhD Student, PH. D in Technology Management, Indiana State University; College of Technology, 200 North Seventh Street Terre Haute, Indiana, USA

Dr. Xiaolong Li, Department of Electronics and Computer Engineering Technology, Indiana State University, Bailey College of Engineering & Technology, 200 North Seventh Street Terre Haute, Indiana, USA

#### ID 8 Cybersecurity in Online Learning Environment

Thiru, University of Texas at Dallas, United States

### 2:00 – 3:45, THURSDAY, June 15

### Technical Presentations

### Virtual Room 4

Session Chair: Henry Ncube, University of Johannesburg, Department of Quality and Operations Management, South Africa.

#### ID 1 A MILP Model for Optimal Sizing of a Concentrating Solar Power Plant with Thermal Energy Storage

Ahmed M. Ghaithan, Assistant Professor, Construction Engineering & Management, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia

#### ID 133 Conceptual Product Development through Parametric Optimization: A Case Study on the Design of an Ophthalmic Instrument

Kristin Bartlett, PhD Candidate, Engineering Technology, Purdue University, West Lafayette, IN 47906, USA

Alex Young, Instructor, Ophthalmology, Harvard Medical School, Boston, MA 02115, USA

Jorge D. Camba, Associate Professor, Engineering Technology, Purdue University, West Lafayette, IN 47906, USA

#### ID 254 Safety Improvement Through Training using incident reports

David C. Evans and Kuldeep Agarwal, Department of Automotive and Manufacturing Engineering Technology, Minnesota State University Mankato Mankato, MN 56001, USA

#### ID 43 Entrepreneurship Education Research: A Literature Review of Highly Cited Papers

Eren Ozgen, College of Business, Florida State University, Panama City, Florida 32405-1099 USA

#### ID 209 The Inaugural Faculty - Who starts a new college during a pandemic?

E Shirl, University of Michigan Flint, United States

#### ID 195 Decision Engineering and the Digital Twin of an Acquisition Program a Cumulative Case Study

Stephen Waugh, DBA, Timothy Davis, PhD, Matthew Tillman, PhD, Justin Shoger, M.S., PhD (candidate), JHU/APL, Lexington Park, MD 20653, USA

**ID 420 ESKOM Coal Stockpile Verification Parameters: A Case Study of a Junior Coal Mining Company**

Henry Ncube, University of Johannesburg, Department of Quality and Operations Management, South Africa.

Anup Pradhan, University of Johannesburg, Department of Quality and Operations Management, South Africa

Takalani Nemarumane, University of Johannesburg, Department of Quality and Operations Management, South Africa

---

**June 15, 2023 (Thursday) - Session: 4:00 – 5:45 pm**

---

**4:00 – 5:45, THURSDAY, June 15**

**Onsite Room 1**

## **Innovation and Entrepreneurship Workshop**

**Speaker: Professor Don Reimer, Adjunct Professor, LTU**

**4:00 – 5:45, THURSDAY, June 15**

**Onsite Room 2**

## **Global Engineering Education Forum – Panel**

Panel Chair

Dr. Adedeji Badiru  
Dean  
Graduate School of Engineering and Management  
Air Force Institute of Technology  
Wright-Patterson AFB  
Ohio, USA

Panel Speaker I

Dr. Abu Masud, P.E.  
Emeritus Professor  
Department of Industrial and Manufacturing Engineering  
Wichita State University  
Kansas, USA

Panel Speaker II

Paul Perkins  
President  
Amatrol, Inc.  
Jeffersonville, Indiana  
USA

Panel Speaker III

Dr. Christopher Cox, P.E.  
Faculty, Construction Management  
College of Engineering and Technology  
Western Carolina University  
Cullowhee, North Carolina, USA

Panel Speaker IV

Professor Hamid Parsaei, Ph.D., PE  
Fellow, IISE, ASEE, SME, IEOM  
Professor, Department of Industrial and Systems Engineering  
Director, College of Engineering Accreditation and Assessment  
Texas A&M University  
College Station, Texas, USA  
IEOM President, 2021-2023; IEOM Vice President, 2019-2021

**4:00 – 5:45, THURSDAY, June 15**

**Technical Presentations**

**Onsite Room 3**

**Session Chair: Mohammad Rahman, Central Connecticut State University, New Britain, CT 06053, USA**

---

**ID 359 Probabilistic Project Management Based on Earned Value Management**

Lady Vanessa Rangel, Industrial Engineering Department, Universidad del Valle, Cali, Colombia  
Cristina Isabel Aguilar, Industrial Engineering Department, Universidad del Valle, Cali, Colombia

**ID 24 Learning-Curve Applications for Emerging Products and Services**

Mohammad Rahman and Daniel Kirby, School of Engineering, Science, and Technology, Central Connecticut State University, New Britain, CT 06053, USA

**ID 418 Applications of Industry 4.0 in Supply Chain Management: A Systematic Literature Review**

Arvin Shadravan and Hamid R. Parsaei, Wm Michael Barnes '64 Department of Industrial & Systems Engineering, Texas A&M University, College Station, Texas, USA

**4:00 – 5:45, THURSDAY, June 15****Energy and Management****Online Room 4****Session Chair: Dr. Esteban Alexis Soto Vera, Southeast Missouri State University, Cape Girardeau, MO, USA****ID 186 Dimensions of Energy Sustainability Measurement**

Moses Jeremiah Barasa Kabeyi, Industrial Engineering Department, Durban University of Technology, Durban, South Africa  
Oludolapo Akanni.Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

**ID 188 Hydrogen Production and Application in The Energy Transition**

Moses Jeremiah. Barasa Kabeyi, Industrial Engineering Department, Durban University of Technology, Durban, South Africa  
Oludolapo Akanni.Olanrewaju, Industrial Engineering Department, Durban University of Technology, Durban, South Africa

**ID 206 Technical and Economic Efficiency in Photovoltaic Battery Systems**

Meriem Andam, Jamila El Alami and Younes Louartassi, Laboratory for System Analysis, Information Processing, and Integrated Management (LASTIMI), High School of Technology-Salé, Mohammed V University in Rabat, Morocco  
Rabie Zine, School of Science and Engineering, Al Akhawayn University in Ifrane, Morocco

**ID 353 Emission Reduction by Massive Integration of Solar Plants in the US Grid**

Dr. Esteban Alexis Soto Vera, Department of Engineering and Technology, Southeast Missouri State University, Cape Girardeau, MO, USA  
Gnanaprakash Athmanathan, Department of Industrial Engineering, Purdue University, West Lafayette, Indiana, USA  
Brandon Yonnie, Department of Industrial Engineering, Navajo Technical University, Crownpoint, New Mexico, USA  
Amy LeGrande, Department of General Engineering, Simpson University, Redding, California, USA  
Andrea Hernandez and Alexander Vizcarrondo Ortega, Department of Industrial Engineering, University of Puerto Rico at Mayaguez, Puerto Rico, Mayagüez, USA  
Dr. Lisa Bosman, Purdue Polytechnic Institute, Purdue University, West Lafayette, Indiana, USA

**ID 354 Applying Economic and Technical Indexesto Compare Net-metering and P2P Systems**

Dr. Esteban Alexis Soto Vera, Department of Engineering and Technology, Southeast Missouri State University, Cape Girardeau, MO, USA  
Gnanaprakash Athmanathan, Department of Industrial Engineering, Purdue University, West Lafayette, Indiana, USA  
Amy LeGrande, Department of General Engineering, Simpson University, Redding, California, USA  
Brandon Yonnie, Department of Industrial Engineering, Navajo Technical University, Crownpoint, New Mexico, USA  
Alexander Vizcarrondo Ortega and Andrea Hernandez, Department of Industrial Engineering, University of Puerto Rico at Mayaguez, Puerto Rico, Mayagüez, USA  
Dr. Lisa Bosman, Purdue Polytechnic Institute, Purdue University, West Lafayette, Indiana, USA

**June 15, 2023 (Thursday) - Session: 7:00 – 10:00 pm****Conference Awards Ceremony and Dinner****IEOM Submisison, Review and Registration System is Supported by:**

<https://x-cd.com/>

X-CD Technologies has been supporting the association and conference industry since 1995.

X-CD software modules are proprietary and developed in-house which gives the flexibility to make customized changes to meet all of X-CD's clients' unique needs.



# International Journal of Industrial Engineering and Operations Management



Emerald Publishing Services

## Local University Visits

### IEOM Student Chapter at Western Michigan University, Kalamazoo, MI, USA

#### Faculty Advisors

**Dr. Lee Wells**

Associate Professor  
Industrial and Entrepreneurial Engineering &  
Engineering Management  
Western Michigan University  
Kalamazoo MI, USA

**Dr. Jim Burns**

Assistant Professor  
Industrial and Entrepreneurial Engineering &  
Engineering Management  
Western Michigan University  
Kalamazoo MI, USA

University and Department Website:

<https://wmich.edu/>

<https://wmich.edu/ieem/>

Department Chair/Head: Dr. Azim Houshyar

**Chapter Officers**

President: Ahmad Al Majali  
Vice President: Kathryn Christopher  
Secretary: Moneshwaran Kannan  
Treasurer: Paritosh Shinde  
Director of Social Media: Nikhil Bankar  
Director of Program/Activities: Vaibhav Vispute  
Director of Membership: Abhishek Sonone  
Director of Operations: Hrishikesh Lathi

**Planned Activities:**

Bell's Brewery Tour  
Pfizer Tour  
Lean Six Sigma Certification  
Lawrence Tech Chapter Visit





## IEOM Student Chapter at Loyola University of Chicago, IL, USA

### Faculty Advisor

Dr. Sarah Ali  
Clinical assistant Professor  
Engineering, Math and Honors Departments  
Chicago, Illinois, USA

### Chapter Officers

- President: Dhruv Patel
- Vice President: Lauren David
- Treasurer: Nicholas Yakonsk
- Director of Membership: Ben Dobbins
- Director of Communication: Alek Kacorzzyk

### Members:

- Jack Raikar
- Ben Dobbins
- Alek Kacorzzyku
- Jhon Tenorio
- Lauren David
- Simon, Sornat
- Nicholas Yakonski



## IEOM Student Chapter at Buffalo State College, Buffalo, New York, USA

### Faculty Advisor

Dr. Elizabeth O'Neill  
Assistant Professor  
Engineering Technology  
SUNY Buffalo State College  
Buffalo, NY, USA

### Chapter Officers

- President – Nick White
- Vice President – Sterling Jones
- Secretary – Steven Phengsamplane
- Treasurer – David Pignone

### Members

- Daschal Abbasso
- Siam Hassain

### Activities

- Plant visits
- Research project with additive manufacturing in the works
- Speakers from industry





## **IEOM Student Chapter at Department of Data Science and Business Analytics, Florida Polytechnic University, USA**

### **Faculty Advisors**

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

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

Florida Polytechnic University: <https://floridapoly.edu/>

### **Chapter Officers**

President: Yordanos Jewani  
Vice President: Gus Lipkin  
Secretary: Dhrishya Sureshbab Menon  
Treasurer: Jake Greenberg  
Director of Social Media: Rominna Carvajal  
Director of Program/Activities: Shawn McClymont  
Director of Membership: Amar Shabir

### **Chapter Members**

Susmitha Chereddy  
Susmitha Reddy Gopavaram

## **IEOM Student Chapter at Indiana State University, Terre Haute, Indiana, USA**

### **Faculty Advisor**

M. Affan Badar, PhD  
Professor and Interim PhD Technology Management Director  
Bailey College of Engineering and Technology  
Indiana State University  
Terre Haute, Indiana, USA

University or Department Website: [www.indstate.edu](http://www.indstate.edu)

### **Chapter Officers**

President: Hamad Alsubhi  
Secretary: Jonathan Walston  
Treasurer: Jonathan Walston  
Director of Program/Activities: Todd Lemon  
Director of Membership: Todd Lemon

## IEOM Student Chapter at Southern Arkansas University, Magnolia, Arkansas

### Faculty Advisor

Dr. Hayder Zghair  
Assistant Professor  
Department of Engineering & Physics  
Southern Arkansas University  
Magnolia, Arkansas, USA

### Technical Advisor

Mr. Jeffrey Sumner  
Department of Engineering & Physics  
Southern Arkansas University  
Magnolia, Arkansas, USA

### Chapter Officers

President: Adam Simmons  
Director of Social Media: Makayla Plummer  
Director of Membership: Charlie Matthews

**University Website:** [www.saumag.edu](http://www.saumag.edu)

### Student Chapter Members

Jamal Anderson  
Tori Bates  
Daniel Brian  
Brooklin Brown  
Jayme Correa  
John-Thomas Daigle  
Colton Dewoody  
Logan Flowers  
Matthew Griffe  
Jon Hern  
Noah Luper  
Charlie Matthews  
Riley Moore

Cuashaundra Owens  
Logan Pamplin  
Makayla Plummer  
Elijah Reddick  
Gabriel Reyna Garcia  
Dayne Schick Tanz  
Adam Simmons  
Aimee Spells  
Colton Thomas  
Maximus Vecchiet  
Benton Williams  
Aaron M Floyd



## IEOM Student Chapter at Lawrence Technological University Southfield, Michigan, USA

### Chapter Advisors

Dr. Ahad Ali  
Professor Don Reimer

### Chapter Officers: 2022 – 2023

President: Sai Abhijith Medavarapu  
Vice President: Sushil Dev Kumar Shivkumar  
General Secretary: Nauman Abdul Muqeeth  
Treasurer: Bharani Beenamapally  
Director Social Media: Gunuguthi Harshavardhan Goud  
Director of Program/Activities: Anjan Kumar Kolluri  
Director of Membership: Sriram Kumar Maddu  
Director of Communications: M Jayanth  
Director of coordination: Ajaz Ahmed Khan

### Student Volunteers:

Chaturya Gadde  
Sai Chand Gogishetty  
Gouri Reddy  
Ankitha Prava  
SVS Karthik  
Arjun Nallachery  
Feroz Mohamed  
Vyoma Teja Sajja  
Sahithi Algaskhanpet  
Sibin Mathew  
Rohith Rapol  
Ahmad Mahir Faysal



# IEOM Student Chapters around World

<b>Algeria</b>			72. Nawab Shah Alam Khan College of Engineering and Technology (NSAKCET), Hyderabad, India	142. Universidad del Cono Sur de las Américas		
1. Adrar University				<b>Peru</b>		
<b>Australia</b>			73. Global Institute Of Eng and Technology, Hyderabad	143. National Univ of San Antonio Abad, Cusco		
2. Queensland University of Tech., Brisbane			74. VNR Vignana Jyothi Institute of Eng and Technology	144. Universidad de Lima (ULima)		
3. UNSW-Canberra			75. Siddhartha Institute of Engineering & Technology	145. Universidad Peruana de Ciencias Aplicadas (UPC)		
<b>Bahrain</b>			76. Osmania University – The University College of Eng	146. Universidad Ricardo Palma (URP)		
4. University of Bahrain			77. VJTI Mumbai – Veermata Jijabai Technologic. Institute	147. Pontificia Universidad Católica del Perú (PUCP)		
<b>Bangladesh</b>			78. BML Munjal University, Gurugram, India	148. Universidad Privada del Norte (UPN)		
5. Ahsanullah University of Sci & Tech (AUST)			79. AKTU University, Kanpur, India	149. Universidad Continental (UContinental)		
6. Bangladesh Institute of Management (BIM)			80. Mufakkhamjah College of Eng. and Tech, Hyderabad	150. Universidad de Ingeniería y Tecnología (UTEC)		
7. Bangladesh University of Textiles (BUTEX)			<b>Indonesia</b>			
8. BUET			81. Atma Jaya Catholic University	151. Universidad Nacional de Ingeniería (UNI)		
9. CUET			82. Bina Nusantara University (Binus), Indonesia	152. University of San Martín de Porres (USMP)		
10. Daffodil International University (DIU)			83. Institut Teknologi Bandung	<b>Philippines</b>		
11. DUET, Gazipur			84. Institut Teknologi Sepuluh Nopember (ITS)	153. Bulacan State University, Malolos City, Bulacan	154. LPU Laguna	
12. European University of Bangladesh			85. Sampoerna University, Jakarta	155. Mapua University		
13. International Islamic University of Chittagong			86. Shipbuilding Institute of Polytechnic Surabaya	156. De La Salle University (DLSU) Manila	157. Adamson University	
14. Islamic University of Technology (IUT)			87. Tarumanagara University	158. CEBU Technological University		
15. IUBAT			88. UIN Sultan Syarif Kasim, Riau	159. University of San Jose-Recoletos	<b>Portugal</b>	
16. Jessore University of Science and Technology			89. Universitas Diponegoro (Undip)	160. ISEL – Instituto Superior De Engenharia de Lisboa		
17. Khulna University (KU)			90. Universitas Gadjah Mada (UGM)	<b>Qatar</b>		
18. Khulna University of Eng and Tech (KUET)			91. Universitas Iqra Baru	161. Qatar University	<b>Saudi Arabia</b>	
19. Military Institute of Science and Technology			92. Universitas Islam Negeri (UIN) Sunan Kalijaga, Yogyakarta	162. Alfaisal University		
20. National Institute of Textile Eng & Res (NITER)			93. Universitas Islam Negeri Alauddin Makassar	163. Effat University	164. King Abdulaziz University (KAU)	
21. Rajshahi University (RU)			94. Universitas Sebelas Maret (UNS), Surakarta	165. King Abdulaziz University, Rabigh		
22. SUST			95. University of Indonesia	166. King Fahd University of Petroleum and Minerals (KFUPM)	167. King Khalid University, Abha	
23. University of Chittagong			96. Universitas Sumatera, Utara Medan	168. King Saud University (KSU)		
24. World University Bangladesh (WUB)			97. Narotama University, Surabaya	169. Umm Al-Qura University (UQU)	170. Princes Nourah University (PNU)	
25. BAUST			<b>Iran</b>		171. Prince Sattam Bin Abdulaziz University	
<b>Botswana</b>			98. Mehr Astan University, Guilan	172. Prince Sultan University (PSU)	173. Taibah University	
26. University of Botswana			99. University of Eyvanekey	174. University of Tabuk		
<b>Brazil</b>			100. Technical and Vocational University (TVU)	175. Taibah University	176. University of Business and Technology	
27. Federal University of Sao Carlos (UFSCar)			<b>Iraq</b>	177. King Khalid University, Abha		
28. Federal University of Santa Catarina (UFSC)			101. Babylon University		178. University of Bisha	
29. University of Sao Paulo (USP) – Sao Carlos			<b>Israel</b>	179. Taif University		
30. Federal Institute of Sao Paulo, Sorocaba			102. Sapir Academic College		<b>South Africa</b>	
31. FACENS University, Sorocaba			103. Shamoan College of Engineering (SCE), Ashdod		180. Durban University of Technology (DUT)	
<b>Canada</b>			<b>Italy</b>		181. Tshwane University of Technology (TUT)	
32. Concordia University			104. University of Bologna	182. University of Johannesburg (UJ)		
33. Humber Institute of Tech and Adv Learning			105. University of Salento	183. University of South Africa (UNISA)	184. Vaal University of Technology (VUT)	
34. Polytechnic Montreal			<b>Japan</b>			
35. University of New Brunswick at Fredericton			106. Ashikaga University	<b>Sri Lanka</b>		
36. University of Waterloo			<b>Jordan</b>			185. University of Kelaniya
37. University of Windsor			107. Hashemite University	186. University of Peradeniya		
<b>Colombia</b>			<b>Kenya</b>		<b>Sudan</b>	
38. Fundación Univ. Tecn. Comfenalco, Cartagena, Bolívar			108. Kenyatta University, Nairobi	187. Sudan University of Science and Technology, Khartoum		
39. University of Rosario, Bogota			<b>Libya</b>		<b>Thailand</b>	
40. University of Quindío			109. Libyan Academy	188. Chulalongkorn University, Bangkok		
41. Universidad de San Buenaventura, Cali, Valle			<b>Malaysia</b>	189. Chiang Mai University	<b>Turkey</b>	
<b>Costa Rica</b>			110. Universiti Malaysia Sabah (UMS)			190. Turkish-German University
42. University of Costa Rica			111. Universiti Putra Malaysia (UPM)	<b>UAE</b>		
<b>Czech Republic</b>			112. Universiti Teknologi Malaysia (UTM)	191. University of Science & Technology of Fujairah	<b>UK</b>	
43. University of West Bohemia, Pilsen			113. Universiti Tun Hussein Onn Malaysia (UTHM)			192. University of Derby
<b>Ecuador</b>			114. Universiti Utara Malaysia (UUM)	193. University of the West of England, Bristol	194. Central Connecticut State University	
44. Technical University of Ambato			<b>Mexico</b>			
<b>Egypt</b>			115. Instituto Politécnico Nacional (IPN), Mexico	195. Eastern Michigan University		
45. Zagazig University			116. Universidad del Caribe, Cancun	196. Lawrence Technological University, Michigan		
<b>Ethiopia</b>			<b>Morocco</b>	197. University of the District of Columbia	198. Indiana State University	
46. Bahir Dar Institute of Technology			117. Akhawayn University			199. Florida Polytechnic University
<b>Finland</b>			118. Ecole Mohammadia d'Ingénieurs (EMI)	200. Buffalo State College	201. Southern Arkansas University	
47. University of Vaasa			119. Sidi Mohamed Ben Abdellah University of Fez			202. Western Michigan University
<b>France</b>			120. N. School of Appl Sci. Kenitra, Ibn Tofail Univ	203. Loyola University Chicago	<b>Venezuela</b>	
48. IESEG School of Management			121. Ecole Supérieure De Technologie, Fez			204. Catholic University Andrés Bello, Caracas
49. Lorraine University, Metz			<b>Mozambique</b>	<b>Vietnam</b>		
<b>Ghana</b>			122. Eduardo Mondlane University	205. CFVG, Ho Chi Minh City, Vietnam		
50. Technological Education Institute (TEI), Thessaly, Larissa			<b>Namibia</b>	<b>Zambia</b>		
<b>Greece</b>			123. National Univ. of Sci. and Tech. in Windhoek	206. University of Zambia		
51. Accra Technical University			<b>Nepal</b>	207. Copperbelt University	208. Evelyn Hone College	
<b>Haiti</b>			124. Kathmandu University			<b>Zimbabwe</b>
52. Université Quisqueya			125. Tribhuvan University	209. University of Zimbabwe, Harare		
<b>India</b>			<b>Nigeria</b>		210. National University of Science and Technology	
53. College of Engineering and Technology, Bhubaneswar, Odisha, India			126. Covenant University	211. Harare Institute of Technology (HIT)		
54. College of Engineering Guindy, Chennai			127. University of Ibadan	212. Women's University in Africa (WUA)	213. Chinhoyi University of Technology (CUT)	
55. Guru Nanak Dev Engineering College			128. University of Nigeria, Nsukka			<b>High School Chapters</b>
56. Pandit Dendayal Petroleum Univ., Gujrat			129. University of Benin	214. Bay Area of San Francisco & San Jose, CA		
57. P.D.A. College of Engineering, Gulbarga			130. Olabisi Onabanjo University	215. Arongghata, Khulna, Bangladesh		
58. Vellore Institute of Technology			<b>Oman</b>			
59. Vidya Jyothi Institute of Technology, Hyderabad			131. Sultan Qaboos University			
60. Universal College of Engineering & Technology (UCET), Dokaiparu, Guntur, Andhra Pradesh			132. Middle East College			
61. National Institute of Technology (NIT), Warangal			<b>Pakistan</b>			
62. Jawaharlal Nehru Technological University Hyderabad			133. Dawood University of Engineering and Technology, Karachi			
63. IITS, India			134. Government College University Faisalabad			
64. Birla Institute of Tech & Sciences (BITS Pilani)			135. Mehran University of Engineering and Technology, Jamshoro, Sindh			
65. Amrita School of Business – Bangalore			136. Riphah International University, Lahore Campus			
66. Amrita school of Arts and Sciences, Mysuru			137. University of Engineering and Technology, Lahore			
67. Amrita School of Business, Coimbatore			138. UOT – Nowshera			
68. Aligarh Muslim University, Aligarh			139. Information Technology University of the Punjab, Lahore			
69. Mahant Bachittar Singh College of Engineering and Technology, Jammu			<b>Papua New Guinea</b>			
70. Baba Banda Singh Bahadur Eng College			140. Papua New Guinea University of Technology			
71. Ramaiah University of Applied Sciences			<b>Paraguay</b>			
			141. National University of Asuncion			



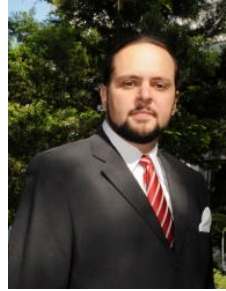
# IEOM Global Council



**Professor Charles Mbohwa**  
Past Pro-Vice Chancellor Strategic Partnerships and Industrialisation  
University of Zimbabwe  
Mt Pleasant, Harare, Zimbabwe



**Prof. Abdul Talib Bon, Ph.D.**  
Professor of Technology Management, Department of Production and Operations Management, Universiti Tun Hussein Onn Malaysia



**Prof. Vitor Mendes Caldana**  
Federal Institute of Sao Paulo (IFSP) – Sorocaba Campus  
Sorocaba, Sao Paulo, Brazil



**Eldon Caldwell, Ph.D., Sc.D., Ed.D.**  
**President-Elect**  
Full Professor/Cathedraticus  
Industrial Engineering Department  
University of Costa Rica  
San Jose, Costa Rica



**Prof. Jose Arturo Garza-Reyes**  
Prof. of Operations Management  
Head of the Centre for Supply Chain Improvement  
College of Business, Law and Social Sciences  
Derby Management School  
University of Derby, UK



**Dr. Umar Al-Turki**  
Professor  
Systems Engineering Department  
King Fahd University of Petroleum and Minerals  
Dhahran, Saudi Arabia



**Adedeji B. Badiru, Ph.D., PE, FIIE**  
Dean, Graduate School of Engineering and Management  
Professor of Systems Engineering  
Air Force Institute of Technology  
Wright-Patterson Air Force Base  
Dayton, Ohio, USA



**Dr. Abdelaziz Berrado**  
Chair and Professor  
Dept. of Industrial Engineering  
The Ecole Mohammadia d'Ingénieurs (EMI), Mohammed V University,  
Rabat, Morocco



**Prof. Abu Masud, Ph.D., P.E.**  
**Past President, 2018-2021**  
Emeritus Professor, Industrial and Manufacturing Engineering  
Wichita State University  
Kansas, USA



**Dr. Ir. Wahyudi Sutopo, ST.**  
Professor, Department of Industrial Engineering  
Vice Dean, Faculty of Engineering, Universitas Sebelas Maret (UNS),  
Surakarta, Indonesia



**Prof. Hamid Parsaei, Ph.D., PE**  
**President, 2021-2023**  
Professor, Industrial and Systems Engineering and Director, College of Engineering Accreditation and Assessment, Texas A&M University,  
College Station, USA



**Luz María Valdez de la Rosa, Ph. D.**  
Professor  
School of Engineering and Technology  
Universidad de Monterrey  
Nuevo León, Mexico



## IEOM Society

*"Achieving and Sustaining Operational Excellence"*

[www.ieomsociety.org](http://www.ieomsociety.org)

**Industrial Engineering and Operations Management Society International**

# Upcoming IEOM Conferences



**6th European Conference on Industrial Engineering & Operations Management**  
**Lisbon, Portugal, July 18-20, 2023**  
 Venue: Doubletree by Hilton Hotel  
 Host: NOVA School of Science and Technology – FCT NOVA



**NOVA**  
 NOVA SCHOOL OF  
 SCIENCE & TECHNOLOGY



**4th Asia Pacific Conference on Industrial Engineering and Operations Management**  
**Sept. 12-14, 2023, Ho Chi Minh City, Vietnam**  
 Venue: CFVG-HCM and University of Economics Ho Chi Minh City



**HOST UNIVERSITIES**  
**UEH** UNIVERSITY OF ECONOMICS HO CHI MINH CITY  
**CFVG** European Excellence in Management Education

**CO-HOSTS**  
**UWE Bristol**  
**BIRMINGHAM CITY UNIVERSITY**  
**UNIVERSITY OF SURREY**  
**UNIVERSITY OF NOTTINGHAM**



**IEOM International Conference on Smart Mobility and Vehicle Electrification**  
**October 10-12, 2023**  
**Southfield, Michigan, USA**



**3rd Indian International Conference on Industrial Engineering and Operations Management**  
**New Delhi, India, November 2-4, 2023**  
 Hosts: AMU and DTU



**2nd Australian Conference on Industrial Engineering and Operations Management**  
**Nov. 14-16, 2023, Melbourne**  
 Venue: Batman's Hill Hotel on Collins



**14th International Conference on Industrial Engineering and Operations Management**  
**February 12-14, 2024, Dubai, UAE**  
 Venue: Hyatt Regency Dubai, Host: Khalifa University



**جامعة خليفة**  
 Khalifa University



**5th African International Conference on Industrial Engineering & Operations Management**  
**Johannesburg/Pretoria, South Africa**  
 April 23-25, 2024, Venue: CSIR ICC



**UNISA** university of south africa

**SOMA** Society of Operations Management in Africa



**5th South American Conference on Industrial Engineering & Operations Management**  
**Bogota, Colombia, May 7-9 2024**  
 Host: Fundación Universitaria UNIR Colombia



**unir** FUNDACIÓN UNIVERSITARIA INTERNACIONAL DE LA RIOJA  
 COLOMBIA



**9th North American Conference on Industrial Engineering and Operations Management**  
**Washington, DC, USA, June 4-6, 2023**  
 Host: University of the District of Columbia (UDC)  
 Venue: UDC Campus, 4200 Connecticut Ave NW



**Host University**  
 UNIVERSITY OF THE DISTRICT OF COLUMBIA  
 1851