

ORGANIZER



# 14TH INTERNATIONAL CONFERENCE on Industrial Engineering and Operations Management

*Dubai, United Arab  
Emirates*

VENUE: HYATT REGENCY DUBAI



HOST UNIVERSITY



جامعة خليفة  
Khalifa University

February 11–14, 2024



# Sponsors and Partners



# 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, a 501(c)(3) non-profit organization, 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 14<sup>th</sup> Annual International Conference on Industrial Engineering and Operations Management, Dubai, UAE

## Dear Conference Attendees:

On behalf of the IEOM Society International, we would like to welcome you to the 14th Annual **International Conference on Industrial Engineering and Operations Management**, February 11-14, 2024, hosted by Khalifa University. The Venue is Hyatt Regency in Dubai. 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 600 papers/abstracts submitted from 53 countries. After a thorough peer-review process, more than 350 have been accepted for presentation and publication. The program includes many cutting-edge topics of industrial engineering and operations management.

This conference will address many of the issues concerning continuous improvement for quality and service. Our keynote speakers will address some of these issues:

1. Dr. Dima Jamali, Vice President of Academic Affairs and Dean of the School of Management, Canadian University in Dubai
2. Prof. Jürgen H. Lenz, Research Professor, Augsburg Technical University of Applied Science, Nördlingen, Bavaria, Germany
3. Ayman Al Issa, Industrial Cybersecurity Lead and Senior Expert, McKinsey & Company, Abu Dhabi, United Arab Emirates
4. Amer Kakish, Chief Executive Officer, Ittihad International Investment LLC, Abu Dhabi, UAE
5. Dr. Farouk Yalaoui, Senior Director (Vice President) for Research, Full Professor, University of Technology of Troyes (UTT), Troyes, France
6. Javed Cheema, Co-Founder and Partner, MC2quare Ventures, LLC, Michigan, USA
7. Dr. Andrei Sleptchenko, Associate Professor, Department of Industrial and Systems Engineering, Management Science and Engineering, Khalifa University, Abu Dhabi, UAE
8. Dr. Shahram Taj, Chair and Professor, Department of Data Science & Business Analytics and Chair, Department of Computer Science, Florida Polytechnic University, Lakeland, Florida, USA
9. Dr. Oliver Elbracht, Managing Director Siemens Advanta Middle East, Dubai, United Arab Emirates
10. Dr. Muthu Mathirajan, Chief Research Scientist, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, India, National President of Operational Research Society of India, 2023-2024
11. Dr. Hany Moustapha, Professor and CEO, SDG Innovation Network, University of Québec, Siemens' Chair on Industry 5.0 Technology Integration, Pratt & Whitney Canada Chair on Propulsion System & Sr. Research Fellow, Pratt & Whitney Canada
12. Dr. Albertus Retnanto, Ph.D., Program Chair Petroleum Engineering, Texas A&M University at Qatar

The conference has plenaries addressing Global Engineering Education, Global Industry Solutions, Global Supply Chain and Logistics, Global Business Management and Project Management, and Global Lean Six Sigma and Operations Excellence. Additionally, it includes four panel sessions covering Women in Industry and Academia, Industrial Engineering and Operations Management Education and Curriculum Improvement, Healthcare Improvement, and a Diversity & Inclusion Panel sponsored by Ford Motor Company. The conference further enriches the experience with four workshops focused on enhancing student learning and assessment, delving into Six Sigma methodologies, exploring Toyota KATA practices, and delving into project management strategies. These diverse sessions and workshops collectively contribute significant value to attendees, fostering knowledge exchange and professional development.

The IEOM Society extends its appreciation to the conference chair and program chair from Khalifa University, Dr. Mohammed Omar and Dr. Ali ElKamel, respectively. The IEOM Society also expresses its sincere thanks to our sponsors, university partners, organizational collaborators, exhibitors, authors, reviewers, keynote speakers, panelists, track chairs, advisors, the local committee, and the numerous volunteers whose dedicated contributions of time and talent have played a pivotal role in ensuring the resounding success of this distinctive international conference.

Wishing you a wonderful and enriching experience at the conference!



**Dr. Mohammed Omar**  
Conference Chair  
Professor and Chair, Department of Industrial and Systems Engineering, Khalifa University  
Abu Dhabi, UAE



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



**Dr. Ali ElKamel**  
Conference Program Chair  
Professor, Chemical Engineering Department  
Khalifa University  
Abu Dhabi, UAE



**Prof. Don Reimer**  
Program Co-Chair  
Chief Operating Officer  
IEOM Society International  
Southfield, Michigan, USA

# Keynote Speakers

## Monday, February 12, 2024

10:00 – 10:20 am, Monday, February 12, 2024

Opening Remarks from Host Khalifa University and Conference Chairs and Program Chairs

10:20 - 11:00 am, Monday, February 12, 2024 – Keynote



**Dr. Dima Jamali**  
**Vice President of Academic Affairs**  
**Dean of the School of Management**  
**Canadian University in Dubai, UAE**

**Presentation Title: “The Reskilling Revolution: Sustainability and Employability Skills”.**

It will shine a spotlight on the importance of embedding sustainability and ESG into curricula and the academic culture and emphasize the CUD's growing commitment to fostering the integration for employability skills in alignment with the World Economic Forum's recommendations and the OECD. As recognized by Forbes NY, Dima Jamali is an entrepreneurial dean and influential thought leader who is leaving a mark on the higher education landscape in the UAE and globally. She just assumed the role of Dean of the School of Management at Canadian University in Dubai, UAE, in September 2023. She also served as Dean of the College of Business Administration at the University of Sharjah, UAE, from August 2020 to August 2023. She has been highlighted by Insights Success Magazine as one of the most admired women in the educational sector in 2023. She has an amazing academic career, having been in academia for over 20 years, primarily at the American University of Beirut (AUB), where she served as Tenured Professor and Associate Dean for the Olayan School of Business (OSB) and Director for Strategic Partnerships for the University. She made her way fast track through the ranks to Full Professor in 2010 and Endowed Chair in Responsible Leadership in 2014. She has won a number of prestigious awards and honors and was ranked among the top 2% most influential global scholars by Stanford University in the field of sustainability for two years in a row (2020 and 2021) and ranked 30 among the top 100 scientists in the UAE in 2022 and 2nd in the Business and Management field.

Starting in 2015, she has founded and served as President and National Representative for the UN Global Compact Network Lebanon (GCNL), a network of businesses committed to advancing Sustainability and the Sustainable Development Goals (SDGs) in Lebanon. She has a PhD in Social Policy and Administration, from the University of Kent at Canterbury, UK, a Masters in Sociology from San Jose State University, CA and a BA in Public Administration from AUB, Lebanon. Her research and teaching revolve primarily around Sustainability, Corporate Social Responsibility (CSR) and Social Entrepreneurship (SE). She is the author/editor of seven books (CSR in the Middle East – Palgrave, 2012; Social Entrepreneurship in the Middle East – Palgrave, 2015; Development Oriented CSR – Greenleaf, 2015; Comparative Perspectives on Global Corporate Social Responsibility – IGI- 2016; Handbook of Responsible Management – Edward Elgar 2019; CSR in Developing and Emerging Economies: Institutions and Sustainable Development – Cambridge University Press 2019 and Corporate Governance in Arab Countries: Specifics and Outlooks, NTER Press 2019) and over 100 high level international publications, which are highly circulated and cited on an international scale, focusing on different aspects of sustainability in developing countries in general and the Middle East specifically.

Besides being ranked among the top 2% most influential global scholars by Stanford University, Dr. Jamali is the winner of the 2016 National Council for Scientific Research Excellence Award, and the 2015 Aspen Institute Faculty Pioneer Award, dubbed by the Financial Times as “the Oscars of the Business School World” for pioneering faculty who are at the cutting edge of teaching and scholarship in their field. She is also winner of the Shield of Excellence for the Arab Region and designated as Personality of the Year for CSR by the Arab Organization for Social Responsibility in 2015. She is also winner of the 2010 Shoman Prize for best young Arab researcher, which recognizes distinctive scientific works that contribute to addressing priority issues at the local, regional and international levels. In 2013, Dr. Jamali was selected for the Eisenhower Fellows Program, joining a global network of leading professionals committed to collaborate for a more prosperous, just and peaceful world; she was also selected in 2007 for the British Academy of Management Fellowship for South Asia and the Middle East which identifies and supports scholars with exceptional potential and trajectory from the Middle East. Dr. Jamali is also winner of the AUB Teaching Excellence Award in 2006, which recognizes outstanding educators across AUB. She worked as an expert consultant for the United Nations on Social Policy and CSR as well as various projects funded by the World Bank, the US Agency for International Development, and major private and public firms across the region. For the past five years, she has been championing the UN Global Compact Network for Lebanon and working with leading firms from the private sector to advance the Sustainable Development Goals (SDGs) and UN 2030 agenda in Lebanon through practical national social, humanitarian, and environmental projects.

11:00 am – 11:40 am, Monday, February 12, Keynote:



**Prof. Jürgen H. Lenz**  
**Research Professor**  
**Augsburg Technical University of Applied Science**  
**Nördlingen, Bavaria, Germany**

**The keynote will outline the benefits and potentials of Hybrid Additive Manufacturing. Hybrid Additive Manufacturing is the combination of additive and traditional manufacturing processes.**

Jürgen Herbert Lenz is Research Professor in the field of AI Systems for Manufacturing at Augsburg Technical University of Applied Science. In addition, he serves as Deputy Scientific Manager at the Technology Transfer Center in Nördlingen, Bavaria. Prior to this position, he was Professor of Smart Manufacturing at the Technical University of Applied Sciences Würzburg-Schweinfurt (THWS). He gained Industry Experience as Solution



Architect for implementation and consulting of (I)IoT-Applications working for INNEO Solutions GmbH based in Ellwangen, Germany. Previously he served as Postdoctoral Fellow at West Virginia University in Morgantown, WV, USA (2018-2020) and worked for Fraunhofer at the Institute for Manufacturing Engineering and Automation IPA in Stuttgart. He completed his PhD at the University of Stuttgart, Germany (2018), his Master of Science in Industrial Engineering as a Fulbright Scholar at Oregon State University (2012) and the German Engineering Diploma in Manufacturing Engineering at University of Applied Science in Ulm (2009). His research interests are in the field of Smart Manufacturing include Machine Tool Connectivity, IoT-Platforms, Data Analytics and Machine Learning. Additionally he carries out research in the field of advanced manufacturing engineering techniques such as additive manufacturing, or new robotics applications.

11:40 am – 12:20 pm, Monday, February 12, Keynote:



**Ayman Al Issa**  
**Industrial Cybersecurity Lead and Senior Expert**  
**McKinsey & Company**  
**Abu Dhabi, United Arab Emirates**

Ayman Al Issa is the McKinsey Industrial Cybersecurity Global Lead and Senior Expert. prior to joining McKinsey, he was the Chief Technologist for Booz Allen Hamilton's Industrial Cyber Security practice in the international market. Over a career which spans more than 27 years to date, Al Issa has gained vast experience in the fields of industrial automation operational technology, information technology, and cyber security. Within these arenas, he counts industrial control systems and systems engineering, as well as cyber security strategy and model building amongst his areas of expertise. Illustrating his contribution to the latter, Mr. Al Issa is a globally recognized expert in industrial cyber security who had early contributions to improving the practice globally.

Contributing to the wider industrial cybersecurity debate, Al Issa is the co-chairman of workgroup 1 in the IEC62443 (formerly ISA99) industrial automation and control systems cyber security standard. He is the chief technology advisor of the Industrial Cybersecurity Center in the ME and he is a member of the cyber security advisory boards at top rated universities world-wide. He is also an active member of international security innovation alliances, focused on improving the security of industrial systems.

12:20 pm – 1:00 pm, Monday, February 12, Keynote:



**Amer Kakish**  
**Chief Executive Officer**  
**Ittihad International Investment LLC**  
**Abu Dhabi, UAE**

Amer Fayeze Kakish is the Chief Executive Officer of Ittihad International Investment LLC, a leading alternative investment group established in 2008, with diversified portfolio businesses in consumer goods manufacturing, infrastructure and building materials manufacturing, business services, and healthcare and other. Amer was appointed in 2008, spearheaded the establishment of the company, and currently steers over 20 fully owned subsidiaries with over 8,000+ employees. Over the past decade, Amer has helped drive the company achieve exponential and sustainable growth, grew revenues by 10-folds with record annual profits successively. At present, Ittihad has operations in 4 countries with a revenue topping USD 3.1 Billion in 2022 and exports over

USD 2.1 billion to more than 50 global markets. He established 5 greenfield plants with total investment of USD 600 million and led them to become market leaders in their sectors. Amer started his professional career in Abu Dhabi in the year 1995 where he headed the Industrial Areas Section of General Industry Corporation (now SENAAT). During his tenure, he led the development of ICAD Industrial City and Al Ain Industrial City, and he also established the Sheikh Khalifa Industrial Award. In 1999, he joined Abu Dhabi National Industrial Projects Co. (ADNIP) and led their business consulting firm. In 2005, he was appointed as Chief Operations Officer of ADNIP where he oversaw the group's operations and directed their investments. By 2008, he managed to double the group's production capacity and grew its sales by 3-folds. During his professional career, Amer played a pivotal role in several prestigious assignments and has executed vital regional projects that have not only helped Abu Dhabi's private sector but contributed as well to the UAE economy in general.

Amer is a Board Member of the Abu Dhabi Chamber of Commerce and Industry, the Chairman of Industry Working Group, a member of the Khalifa University of Science and Technology's Industrial and Systems Engineering Department Advisory Board and the Research Center on Digital Supply Chain and Operations Management Steering Committee Board respectively. Amer is also an accredited Arbitrator at the GCC Commercial Arbitration Centre. Amer received his bachelor's degree in Industrial Engineering from the University of Jordan in Amman, Jordan and his master's degree in Engineering Management from the American University of Beirut in Lebanon. He is a Chartered Engineer from The Institution of Engineering and Technology. He holds a patent for an auto-disable device for syringes. Amer Kakish is a Jordan national and currently resides in Abu Dhabi, the capital of United Arab Emirates.

## Tuesday, February 13, 2024

09:40 am – 10:20 am, Tuesday, February 13 – Keynote:



**Dr. Farouk Yalaoui**  
**Senior Director (Vice President) for Research**  
**Full Professor**  
**University of Technology of Troyes (UTT)**  
**Troyes, France**

Professor Farouk YALAOUI is currently a full Professor at Troyes University of Technology (UTT), France, where he is the Senior Director for Research of UTT. He is also scientific director of Industrial Chair "Connected Innovation" of UTT since 2016. He is the former director of LOSI Lab. (Logistiques et Optimisation des systèmes Industriels) of UTT and former director of Services and Industries of The future of Troyes Institute (ISIFT). He obtained his Engineering degree in Industrial Engineering from the Polytechnics School of Algiers (Algeria) in 1995, his master's degree in Industrial System Engineering from Polytechnics Institute of Lorraine (Nancy, France) in 1997, his Ph.D. degree in Production Management from the Troyes University of Technology (UTT)

in 2000 and followed by a Habilitation à diriger les recherches (Dr. Hab) from Compiegne University of Technology (UTC) in 2006. His research topic focuses on the scheduling problems, system design, operations research, modeling, analysis and optimization of logistic and production systems, reliability and maintenance optimization and on optimization problems in general. He supervised or co-supervised 29 Ph.D thesis and more than 82 projects since 2001. He is founder and partner of OPTA LP SAS company since 2013.

He is author or co-author of a pattern and more than 520 contributions, publications or communications with 1 patent; 3 books (Ellipses, Hermes-Lavoisier, Willey and Sons), 6 edited books (Springer), 16 book chapters and 102 papers in journals such as IIE Transactions, European Journal of Operational research, International Journal of Production Economics, IEEE Transactions on Reliability, Reliability Engineering and System Safety, Computer & Operations research, Journal of Intelligent Manufacturing. He also published more than 320 papers in conference proceedings. He had presented 60 invited speeches (seminaries or conferences plenary sessions). He was invited by different universities (11) more than 20 times. He is member of editor board of the book series "Automation and Control – Industrial Engineering", ISTE Wiley, London, since 2014. He served or serves as editor to 20 International journal Boards: Engineering Applications of Artificial Intelligence (EAAI, Elsevier, IF. 6,212, 2022), The Scientific World Journal as part of the journal's Operations Research subject area (TSWJ), International journal of Supply and Operations Management (IJSOM), British Journal of Mathematics & Computer Science (BJMCS), Journal of Risk Analysis and Crises Response (JRACR), Journal., American Journal of Operations Research (AJOR), Industrial Engineering and Management (IEM), Advances in Computer Science and Engineering (ACSE), Modeling and Simulation in Engineering (MSE), Advances in Artificial Intelligence (AAI), International Journal of Applied Logistics (IJAL). He served as guest editor for Journal special issue (Journal of Multiple Valued Logic and Soft Computing, Journal of Intelligent Manufacturing). He is reviewer for more than 36 international journals.

He is founder and member of steering committee of IWOLIA (since 2010) SHEIC (since 2019) and member IESM-MOSIM Steering Committee, since 2019, Membre IFAC/MIM Steering Committee, since 2021. He is advisory Committees/Organizing Committees members of 36 conferences. He is also member of several international conference committees (about 154 conferences) as (INCOM2021, IFAC WC 2020, IEEE ICALT'2019, INCOM 2018, ICINCO 2017, ACIDS 2017, IEEE SSCI 2016, MIM 2016, INCOM2015, IESM 2015, MIC'2015, SSEMO-WCCI 2014, IEEE-CIPLS 2014, FLINS'14, IEEE-CIPLS 2013, CIIA'2013, EMO13, MIM 2013, CoDIT 2013, ICSSENT'2012, IEEM 2012,), member more than 25 organization committees of conferences and general Chair of IFAC MIM 2016. He organized and or Chair more than 115 tracks or sessions in conference. He is Vice Chair of IFAC (International federation of Automation and Control) TC group 5.2. He is Chair of a Working Group on multiobjective optimization. He is member of IFAC TC group 5.1. He is member of French Universities National Council (CNU) field Automation, Control, Industrial Engineering (section 61). He is member and expert for French ANR agency, and for different agency such French AERES Agency, Natural Sciences and Engineering Research Council of Canada (NSERC), Algerian PNR program. He is member of Algerian Academy of Science and Technology (AAST) since 2015. He obtained of Annual Award 20117 of the IFAC French National Member Organization (NMO).

**10:20 am – 11:00 am, Tuesday, February 13, Keynote:**



**Javed M Cheema**  
Co-Founder and Partner  
MC2quare Ventures, LLC  
Michigan, USA

Javed Cheema Co-Founder and Partner at MC2quare Ventures, a consulting firm providing uncommon and unique perspectives based on specialized and complex analytics. Javed worked as Global Director of Lean Enterprise at Neapco Drivelines since 2016, a leading supplier of automotive propulsion systems. Before that, Javed worked as Chief Engineer, Performance Enhancement at Altarum Institute, a premier consulting firm specializing in public sector healthcare systems where he designed and implemented Kanban inventory management system in all the US Naval Hospitals in Pacific Command. Javed also served as Senior Director of Quality and Operational Excellence at Eaton Aerospace, Alcoa-Howmet Air Power and Propulsion. SVP of Quality

& Global Lean Six Sigma program at Molex Interconnect; Javed has also been a subject matter expert in global trend watching and advanced predictive analytics to Big-5 consulting firms including McKinsey Japan, KPMG EU, Deloitte UK, and Boston Consulting Group in US. Javed has extensive experience of managing corporate level Six Sigma project portfolios in healthcare, pharmaceutical, aerospace, automotive and medical device industries. Javed is a certified Six Sigma Master Black Belt (DMIAC), a certified Design for Six Sigma (DFSS) Master Black Belt and has actively mentored several Six Sigma projects. Javed is a Fellow of American Society (ASQ). A certified Manager of Quality & Operational Excellence (CMQ/OE), Certified Quality Engineer (CQE) and Certified Quality.

**11:00 am – 11:40 am, Tuesday, February 13, Keynote:**



**Dr. Andrei Sleptchenko**  
Associate Professor  
Department of Industrial and Systems Engineering  
Management Science and Engineering  
Khalifa University  
Abu Dhabi, UAE

Dr. Andrei Sleptchenko is an Associate Professor at the Department of Industrial and Systems Engineering at Khalifa University. His primary research interests are in stochastic modeling and optimization of Production and Logistics Systems. Before joining Khalifa University, Dr. Sleptchenko served as a faculty member at the Department of Mechanical and Industrial Engineering at Qatar University. Prior to that, Dr. Sleptchenko worked for several years for different consulting companies in the area of Supply Chain and Transportation and as an Assistant Professor and a researcher at various Universities in the Netherlands and the USA.

Education

PhD in Operations Management and Logistics, University of Twente, The Netherlands  
MSc in Operations Research, Novosibirsk State University, Russia  
BSc in Applied Mathematics, Novosibirsk State University, Russia

11:40 am – 12:20 pm, Tuesday, February 13, Keynote:



**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 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. 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. 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.

12:20 pm – 1:00 pm, Tuesday, February 13:

## IEOM Student Chapters of the Year Presentations

12:20 – 12:40 pm

- IEOM KFUPM Student Chapter – Industrial and Systems Engineering (ISE) Department, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia

12:40 – 1:00 pm

- IEOM ZAG Student Chapter – Industrial Engineering Department, Zagazig University, Egypt

## Wednesday, February 14, 2024

09:40 am – 10:20 am, Wednesday, February 14 Keynote:



**Dr. Oliver Elbracht**  
**Managing Director Siemens Advanta Middle East**  
**Dubai, United Arab Emirates**

### *Industrial Metaverse and role for operational efficiency*

As the Managing Partner for Siemens Advanta Middle East, Dr. Oliver Elbracht has a strong background in digital and business transformation. During the course of his career, he gained deep consulting experience in business strategy & development, AI, Predictive Analytics, BDAA, digital transformation (tech & business), innovation, IT system design, e-commerce, sales & distribution, cybersecurity, greenfield operations. Through his research in computational physics, he has mastered a broad set of computer science knowledge & techniques including machine learning & algorithms, statistical models, and coding languages. Further, he has developed broad experience along the value chain in Telecommunication & Technology, IT, Infrastructure & Transportation,

Government/Public Services, Automotive and Financial Services. He has been working in 15+ countries through international engagements in Europe (e.g. Germany, Austria, Sweden, Turkey), Middle East (e.g. Bahrain, Saudi Arabia, UAE, Kuwait, Qatar) and Asia (e.g. Taiwan, Indonesia, Myanmar, Hong Kong, Kazakhstan).

10:20 am – 11:00 am, Wednesday, February 14, Keynote:



**Dr. Muthu Mathirajan**  
**Chief Research Scientist, Department of Management Studies**  
**Indian Institute of Science (IISc), Bangalore, India**  
**National President of Operational Research Society of India, 2023-2024**  
**Associate Editor of OPSEARCH—A Flagship research platform of ORSI**

Dr Mathirajan is working at the Department of Management Studies, Indian Institute of Science (IISc), Bangalore since April 1986 with various academic/faculty-positions. Currently he is a Chief Research Scientist & Professor at IISc. He received M.S. (Engineering) degree by research in Applied Operations Research area and PhD degree in Operations Management area from the Faculty of Engineering, Indian Institute of Science (IISc), Bangalore. In addition he holds a M.Sc degree in Mathematics of Madurai Kamaraj University and Post Graduate Diploma in Operations Research (OR) of Anna University, Chennai. Between May 2008 and May 2010, Dr

Mathirajan was with Anna University of Technology, Tiruchirappalli, on deputation, and he was the Professor of Planning and Development at the



University level and he was also the Professor and Head of the Department of Management Studies of the Anna University of Technology, Tiruchirappalli. Dr Mathirajan was a post doctoral fellow at Singapore MIT Alliance (SMA) of Nanyang Technological University (NTU), Singapore. He was also a visiting consultant at Sultan Qaboos University (SQU), OMAN. Dr Mathirajan was selected and nominated as young Indian-representative of Operational Research Society of India (ORSI) to present a paper in the 1999 Fall Annual Conference of ORSJ, TOKYO, JAPAN. Dr M. Mathirajan is the Associate Editor of OPSEARCH, A Flagship Journal of Operational Research Society of India (ORSI) and published by SPRINGER. The Operational Research Society of India (ORSI) awarded the Fellowship of ORSI (FORSI) to Dr. M. Mathirajan, based on the assessment by the standing committee on the merit of the contributions towards the promotion & development of Operational Research (OR), carried out by him, and approved by the National Central Council of ORSI. He is recently elected as the National President of Central Council of Operational Research Society of India (ORSI) for two years (2023-2024). Before that he was elected as one of the National President of ORSI for two years (2021-2022) and was elected as one of the National Central Council Member ORSI for two years (2019-2020). He is also one of the National Vice President of Central Council of Analytics Society of India (ASI), since inception (2012).

He was an academic council member and member in board of studies of various Engineering Colleges and Management Studies Department in Tamilnadu and Karnataka. Currently he is an academic council member of RV College of engineering, Bangalore; Atria Institute of Technology, Bangalore CMR University, Bangalore; and Sakthi Institute of Information and Management Studies, Pollachi. He is also currently a member in board of studies/research at Coimbatore Institute of Technology, Coimbatore; Satyabama Institute of Science and Technology, Chennai; Dr. Ambedkar Institute of Technology, Bangalore; and Department of Management Studies – Tumkur University, Karnataka. Dr Mathirajan's PhD thesis was adjudged as best thesis for "M. N. Gopalan Award of 2002-Annual Convention of ORSI". Dr Mathirajan's research interests are in the development of mathematical modelling and heuristic methods for the problems related to Industrial Engineering, Operations, Logistics and Supply Chain Management in Manufacturing, Service, Container Terminal Management areas and Research Methodology. He has published over 200 research articles. He is a co-author of 2 books [published by Person, and PHI] and co-author of 4 edited volumes [published by CRC Press USA; Springer India; and IK Publication, New Delhi; Allied Publishers. He has guided a number of graduate and post graduate projects. So far 13 dissertations were awarded PhD degree under his guidance in IISc, Bangalore. Currently he has been guiding 8 doctoral research students at IISc; and he has examined about 60 PhD theses from various higher learning Institutes (such as Victoria University Australia, Universiti Putra Malaysia (UPM) Malaysia, IITs, IIM, NITs) and Universities (such as Anna University, Gandhigram Rural University, Madurai Kamaraj University, Bharathiar University, Delhi University, Dr. MGR University, Pandichery University).

11:00 am – 11:40 am, Wednesday, February 14 - Keynote:



**Prof. Dr. Hany Moustapha**  
**Fellow ASME, CASI, CSME and CAE**  
**Professor and CEO, SDG Innovation™ Network, University of Québec**  
**Siemens' Chair on Industry 5.0 Technology Integration**  
**Pratt & Whitney Canada Chair on Propulsion System**  
**Senior Research Fellow, Pratt & Whitney Canada**

***Beyond Industry 4.0 and 5.0: Towards a Smart-Digital-Green Society- A Canadian Perspective in Education and Research***

Hany Moustapha, Professor and Director, Innovation SDG™ Network and Aerospace 4.0™, Siemens' Chair on Industry 5.0 Technology Integration and Pratt & Whitney Canada (P&WC) Chair on Propulsion System Design at École de technologie supérieure (ÉTS), Québec University. P&WC Senior Research Fellow. Fellow of American Society of Mechanical Engineers (ASME), Canadian Academy of Engineers (CAE) and Canadian Aeronautics and Space Institute (CASI). With P&WC from 1978 to 2010, Dr. Moustapha was Senior Manager of

Technology, Collaboration and Technical Training Programs for P&WC from 1999 to 2009 and was named P&WC Senior Research Fellow in 2011. Joined ÉTS in 2010 as Professor and Director of Aerospace Programs (AEROÉTS). Dr. Moustapha is the Canadian industry and academic member of NATO's Aviation Technology since 2000. He is Adjunct Professor at McGill and Carleton University (Canada), as well as Distinguished Visiting Professor at Embry-Riddle Aeronautical University (U.S.A.). Dr. Moustapha is the founder and cofounder of the Montreal Aerospace Institute (MAI, 2001), the Consortium for Research and Innovation in Aerospace in Québec (CRIAQ, 2002), Aero Montreal Cluster (2005), the Green Aviation Research and Development Network (GARDN, 2007), AEROETS (2010) and Aerospace 4.0 (2016). He is a keynote speaker at various international conferences and forums on aviation, technologies of aircraft engines, and the various technology and skills challenges of the fifth industrial revolution "Industry 5.0". He is the author and co-author of over 100 publications and two books on gas turbines and the recipient of over 30 national and international awards, including the following: Québec most prestigious Chevalier de l'Ordre National (2013), Montreal Inspiration and Research Award for top five aviation experts (2013), James C. Floyd Award (AIAC) (2012), CRIAQ Tribute and Montreal Inspiration-Innovation Awards (2012), CASI Senior McCurdy Award (2008), ADRIQ Prix Carrière industrielle (2007), ASME Board of Governors Award (2007), Ryerson University Honorary Doctorate (2005), Concordia University Teaching Excellence Award (2002), Canadian House of Commons Award for outstanding academic and professional achievements (2001), etc.

11:40 am – 12:20 pm, Wednesday, February 14 - Keynote:



**Dr. Albertus Retnanto, Ph.D.**  
**Program Chair Petroleum Engineering**  
**Texas A&M University at Qatar**

***Title: Building Communication Strengths and Skills for Non-native English-Speaking Engineering Students***

Dr. Albertus Retnanto is a Program Chair and Professor of the Practice of Petroleum Engineering at Texas A&M University at Qatar and has been in the Petroleum Engineering program since 2009. He received his Ph.D. degree in Petroleum Engineering from Texas A&M University. He held a Principal position with Schlumberger and has more than 18 years of experience worldwide in technical and management positions in well testing, field development, and production enhancement. He served as SPE Drilling & Completion journal review chairman, SPE Cedric K. Ferguson Medal Award committee member, SPE Drilling and Completion Advisory committee, and SPE advanced technology workshops. He received the A Peer Apart SPE Award, which is dedicated to the technical excellence of authors to the industry. He received the Associate of Former Student of Texas A&M University College-level Distinguished Achievement Award in Teaching and SPE Middle East and North Africa Regional Distinguished Achievement Award for Petroleum Engineering Faculty.



February 12, 2024, 2:00 – 6:00 pm – Room 2

## Assessment and Evaluation of Student Learning for Program Improvement Workshops

Primary focus of your and other higher learning educational institutions has been in assuring that its graduates have attained certain knowledge and skills, often expressed in terms of learning outcomes. This workshop will help you in understanding assessment and its role in improving the attainment of these learning outcomes as well as in improving the (degree) program itself.

To practice what we preach, here we state the Learning Outcomes of this workshop. "After completing this workshop, you (the participants) will be able to:

- Articulate learning outcomes of your (degree) program.
- Develop an appropriate assessment plan for your program learning outcomes.
- Use assessment results to improve student learning and the (degree) program itself."

This will be a hands-on workshop. That is, as we discuss various aspects of the workshop topics, you will do at the same time, individually and/or in teams, identify for your own program its learning outcomes, an assessment plan for data collection and its evaluation for your learning outcomes, and how the assessment results can be used for course and program improvement. So, come prepared for "learning by doing".



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

Professor Emeritus and Past Chair

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.

February 12, 2024, 4:00 – 7:00 pm – Room 1

## Workshop on TOYOTA KATA: The Secret Sauce For Toyota Production System

Dave Harry will share the "secret sauce" with university students through an intense hands-on "Kata in the Classroom" workshop. Be prepared to move fast!

Kata in the Classroom (KiC) workshops are based on Mike Rother's "Toyota Kata" methodology and that Scientific Thinking is a life skill. It is the basis for creativity and successfully pursuing seemingly unattainable goals. KiC demonstrates a teachable skill that anyone can learn -- by combining a simple scientific striving pattern with practice routines called Kata -- to help you learn meta-cognitive strategies. Many view Toyota Kata as the "secret sauce" of the Toyota Production System (TPS). Mike Rother wrote "Toyota Kata" to explain the secrets of TPS improvement sustaining methodology. How do we prepare for the future when we don't know what the future will bring? We can't predict how to get from A to B... we're stumped and overwhelmed, there are time constraints and economic pressure. Dave Harry will share the "secret sauce" with IEOM and Lima Area University students through an intense hands-on "Kata in the Classroom" workshop. Be prepared to move fast!

**Prizes: Each round table will be used for a team. Local university can form teams to compete. Dave is very kind to provide some prizes with gift cards.**



### Dave Harry, a.k.a. "The Process Whisperer®"

Retired U.S. Naval Aviator

CEO of Process Whisperer® Consultants LLC, Greeneville, Tennessee, USA  
ASQ certified Six Sigma Black Belt and A PMI certified PMP®

Dave is a retired U.S. Naval aviator and currently CEO of Process Whisperer® Consultants LLC. He teaches LSS classes for TMG Inc of Newport News, VA. Prior to TMG, Dave was a Six Sigma and Productivity Consultant for the University of TN Center for Industrial Services. Dave is a "Kata Geek" and also an ASQ certified Six Sigma Black Belt. He is active in ASQ Sections and the ASQ Lean Enterprise Division Communications. In addition to ASQ, he also holds Black Belt Certification through Rolls-Royce and Northrop Grumman. He is a seasoned ASQ International Team Excellence Awards (ITEA) Judge. Dave is also currently on the Lean Division Board with the Institute of Industrial and Systems Engineers (IISE). Dave is on the Conference Advisory Committee for ASQs 2019 L&SS Conference in Phoenix as well as the Conference Committee for the IISE Engineering 2018 Lean Six Sigma Conference in Atlanta. A PMI certified PMP®, Dave also holds Lean Bronze Certification (LBC) through the SME/ASQ/AME/Shingo Institute Alliance and he holds three Master's Degrees in management related fields. In addition to ASQ, PMI and IISE, Dave is also a member of the Society of Manufacturing Engineers (SME), the Association of Manufacturing Excellence (AME) and the American Production and Inventory Control Society (APICS). Dave lives in Greeneville TN.

February 13, 2024, 2:00 – 6:00 pm – Room 2

## Six Sigma Workshop

This four-hour workshop on Six Sigma methodology aims to unravel the intricacies of Six Sigma and debunk the misconceptions and its use for Lean implementation. Enhance your understanding, challenge your preconceptions, and discover how to effectively apply and adapt Six Sigma to the future.

- Understanding typical myths about Six Sigma: to clear up any confusion, shedding light on what Six Sigma truly entails and dismissing the notion that it's overly complex or industry specific.
- Anatomy of a defect opportunity: explain the process of identifying and understanding the stages of defect opportunity qualification.
- Why Understanding Six Sigma is Crucial for Lean Implementation: explore the synergies between Six Sigma and Lean methodologies and how Lean implementation programmes can benefit from the understanding of Six Sigma
- Applied Lean Six Sigma: Acclimatizing Six Sigma with the Industry and Technology Evolution: how to adapt and apply Lean Six Sigma principles in a rapidly changing technological and industrial landscape.
- Q & A



### Dumidu Ranaweera

Global Director APAC, Middle East, Africa & Oceania  
Dr Mikel J Harry Six Sigma Management Institute Inc.  
Chief Executive Officer – Lean Six Sigma Asia LLC  
Dubai, UAE

One of the well-known resources in the field of "Lean Six Sigma" (referred to as the 'Lean Six Sigma Guru of Sri Lanka' by print media) and "Organizational Excellence" in the region and has been personally endorsed by the principal architect of Six Sigma Dr Mikel J. Harry as one of the best resources available on "Six Sigma". He is featured frequently as a Keynote Speaker/ Chief Guest/Award Judge in many international and local conferences/forums (i.e., Japan, USA, Singapore, Australia, India, Bangladesh, Vietnam, Malaysia, Maldives,

Netherlands etc.) and carries extensive expertise relating to Organizational Excellence & Lean Six Sigma.

During his illustrative career, Dumidu has been recognized by many industry forums and associations. These include Lean Six Sigma Coaching Excellence Medal by SSMI USA, Karma veer Chakra Silver Award by REX in association with the United Nations, 'Business Leader of the Year 2017 & 2019' Awards during Sri Lanka Quality Leadership Awards, 'Hall of Fame Award' during Asia Training & Leadership Awards 2019 and in Sri Lanka in 2017, IT-BPO Young Outstanding Professional Sri Lanka Award from ICTA, Distinguished Industry Achievement Award from IEOM in 2021 etc. He is also the first individual outside the USA to be awarded the 'Executive Master Black Belt' status by the late Prof. Mikel J. Harry was recently listed under the "101 Most Fabulous Global Training & Development Leaders" at the World Training and Development Congress 2020. He currently works as an Advisor/ Consultant for three main universities in Sri Lanka and was responsible in re-designing the curriculum of the Quality Management Degree and the Business Process Management degree offered by SLIIT and the University of Moratuwa respectively. In 2017, Dumidu also introduced Lean Six Sigma methodology to Maldives with HR Maldives.

Dumidu has guided over 300+ organizations, both manufacturing and services across 10 countries in their Organizational Excellence journey and known for his avid skills in Lean Six Sigma deployment and credentials in multiple business disciplines. During his illustrative career, he has mentored over 1000+ process excellence projects across various domains and trained over 30,000+ resources including over 800 Black Belts /Master Black Belts. He has also been responsible for award-winning Organizational Excellence & Lean Six Sigma deployment programmes and implementation of management systems in novel domains.

Apart from EMBB certification from SSMI, he also holds three Lean Six Sigma Master Black Belt certifications from BMG University, Indian Statistical Institute & Dialog Axiata, Black Belt certifications from ASQ & Motorola University and Lean Practitioner certification from BMGI. His other credentials include, MBA with Merit (USJ-PIM), BBA (Colombo), Diploma in Quality Management with Distinction (SLSI), ASQ CQE, ASQ CMQ/OE, ASQ CQA, Sri Lanka's 1st IASSC Accredited Training Associate, Lean Bronze, Lead Auditor ISO 9001 QMS, ISO 14001 EMS & ISO 27001 ISMS, Certified TPM Facilitator (CII, JIPM, TPM Club), PMP, PGDM (CIM-UK), ACMA (CIMA-UK), FCMA (CMA-SL), Senior member ASQ, Council member SLAAQP, HMM (Harvard) & NDHRM (IPM) etc. Dumidu is also currently reading for his Doctorate in Business Administration.

February 14, 2024, 4:00 – 6:00 pm – Room 1

## Project Management Workshop



Dr. Tony Prensa, PhD, MBA, PMP, CB-PMO, CCP, ITIL, 6σ  
Chief Executive Officer & Founder  
TP Global Business Consulting, LLC  
Orlando, Florida, USA

Dr. Prensa is a highly accomplished executive and leader of project management office (PMO), project/portfolio management, information systems and technologies, combines a Doctorate in Organizational Leadership with a major in Information Systems and Technologies, Certified PMO Professional, Authorized PMO Instructor, Certified Project Management (PMP), and ITILIV certification with extensive experience managing and overseeing large information systems projects/programs, strategic planning, and seamless IT implementations. Demonstrated track record of delivery of multiple technical and business projects on time and within budget. Experience in full-lifecycle

project management methodologies and tools. Dr. Prensa has been involved with the Project Management Institute for more than twenty-five years. He served a vice president of PMI Puerto Rico Chapter from 1998-2000.



# Conference Committee

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Dr. Mohammed Omar, Professor and Chair, Department of Industrial and Systems Engineering, Khalifa University, Abu Dhabi, UAE

Dr. Ahad Ali, Associate Professor and Director of Industrial Engineering Program, Lawrence Technological University, Southfield, Michigan, USA and Executive Director of IEOM Society International

### Program Chairs

Dr. Ali ElKamel, Khalifa University, UAE and University of Waterloo, Canada  
Prof. Don Reimer, Chief Operating Officer, IEOM Society International

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Dr. Adriana Gabor Associate Professor of Mathematics, Khalifa University  
Dr. Qutubuddin S.M, PDA College of Engineering and Technology, India

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Dr. Mahmoud Awad, Associate Professor, Department of Industrial Engineering, American University of Sharjah

Dr. Abroon Qazi, Associate Professor, Department of Marketing and Information Systems, School of Business Administration, American University of Sharjah, University City, Sharjah, UAE

Dr. Balan Sundarakani, Associate Professor, School of Business, University of Wollongong Dubai, Dubai Knowledge Park

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Dr. Salah Haridy, Associate Professor, Department of Industrial Engineering and Engineering Management, University of Sharjah

Dr. Raid Al-Aomar, Professor, Industrial Engineering and Director of the Master of Engineering Management (MEM) program, Abu Dhabi University

Dr. Mohamed Alblooshi, Assistant Professor, College of Business/Operations Management, Zayed University

Dr. Sujan Piya, Associate Professor, Department of Industrial Engineering and Engineering Management, University of Sharjah

Dr. Ahm Shamsuzoha, Associate Professor (Tenure Track), Industrial Systems Analytics, Digital Economy Research Platform, University of Vaasa, Finland

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### Artificial Intelligence (AI)

Dr. Fady Alnajjar, UAEU

### Business Management

Soroush Avakh Darestani, London Metropolitan University, UK

### Case Studies

Dr. Husham A. Ali Elbaloula, Alfa Star Global Oil Field Services LLC, UAE

### Construction Management

Farman Baig, Senior QAQC Engineer, Besix Construction, Dubai, UAE

### Data Analytics and Big Data

Ganji Kashmira, IBS – ICFAI Business School, Hyderabad, Telangana, India

### Digital Manufacturing

Mohamed Osman, University of Duisburg-Essen, Duisburg, North Rhine-Westphalia, Germany

### E-Business and E-Commerce

Dr. Payam Hanafizadeh, Allameh Tabataba'i University, Tehran, Iran

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Ali Ahmadian, University of Waterloo, Canada

### ERP

Dr. Rab Nawaz Lodhi, University of the Punjab, Lahore, Pakistan

### Human Factors and Ergonomics

Dr. Mario Fagnoli, Rome, Italy

### Industry 4.0

Dr. Rohit Sharma, National Institute of Industrial Engineering, Mumbai, India

### IoT

Dr. Vishal Ashok Wankhede, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India

### Lean

Dr. Cherrafi Anass, Cadi Ayyad University, Marrakech – Morocco

### Mathematical Sciences and Mathematical Modeling

Arshia Kaul, CQUUniversity, Melbourne, Victoria, Australia

### Mechatronics

Dr. Muthuramalingam Thangaraj, SRMIST, Chennai, Tamil Nadu, India

### Modeling and Simulation

Khairul E. Fahim, Universiti Brunei Darussalam, Brunei

### Operations Management

Dr. Pouria Liravi, University of Derby, UK

### Product Design and Development

Waleed Ahmed, UAEU

### Project Management

Dr. Abroon Qazi, American University of Sharjah, United Arab Emirates

### Quality Control

Dr. M. Shamsuzaman, Professor, Department of Industrial Engineering and Engineering Management, College of Engineering, University of Sharjah, UAE

### Six Sigma

Dr. Cherrafi Anass, Associate Professor in Industrial Engineering, Cadi Ayyad University, Marrakech – Morocco

### Supply Chain Management

Dr. Abroon Qazi, Fellow Society of Actuaries, Associate Professor of Operations Management, School of Business Administration, American University of Sharjah, PO Box 26666, Sharjah, United Arab Emirates

### Sustainability and Green Systems

Dr. Neyara Radwan, Associate Professor, Industrial Engineering Department, Al Maarefa University, Saudi Arabia & Mechanical Engineering, Faculty of Engineering, Suez Canal University, Egypt

### Total Quality Management (TQM)

Dr. Mohammed Al Awadh, King Khalid University, Abha, Saudi Arabia

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Professor, Department of Industrial Engineering and Engineering Management  
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Associate Professor, Department of Industrial Engineering  
American University of Sharjah

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Aaron Rubel  
University R&T Partnerships Manager  
Americas Research and Technology - AATU  
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Mobile, Alabama 36615, USA

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Professor, Industrial Engineering and Director of the Master of Engineering Management (MEM) program  
Abu Dhabi University

Chair, Lean Six Sigma Competition sponsored by Tooling Tech Group

Dr. Mohamed Alblooshi  
Assistant Professor, College of Business/Operations Management  
Zayed University

Chair, Simulation Competition

Dr. Suzan Alaswad  
Chair, College of Business  
Zayed University

Chairs, Supply Chain and Logistics Competition

Dr. Abroon Qazi, PhD  
Fellow Society of Actuaries  
Associate Professor of Operations Management  
School of Business Administration  
American University of Sharjah  
PO Box 26666, Sharjah  
United Arab Emirates

Dr. Balan Sundarakani  
Associate Professor, School of Business  
University of Wollongong Dubai, Dubai Knowledge Park

Chair, High School STEM Competition

Dr. Ahm Shamsuzzoha  
Associate Professor (Tenure Track), Industrial Systems Analytics, Digital Economy Research Platform  
University of Vaasa, Finland

Chair, Poster Competition

Dr. Mohammad Miftaur Rahman Khan Khadem  
Professor, Department of Industrial Engineering and Engineering Management  
University of Sharjah

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Prof. Dr. Anand Kumar, M.S. Engineering College, Bangalore Karnataka, India  
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Dr. Halim Mahfud, Department of Industrial Engineering, UPN Veteran Jakarta, Indonesia  
Yun Arifatul Fatimah, Universitas Muhammadiyah Magelang, Indonesia  
Andi Sudiarso, Universitas Gadjah Mada (UGM), Yogyakarta, Indonesia  
Dr. Arian Dhini, Department of Industrial Engineering Universitas Indonesia  
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Dr. Wahyuda, Department of Industrial Engineering, Universitas Mulawarman  
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Dr. Eng. Hendri Widyandari, University Centre of Excellence for Electrical Energy Storage Technology, Universitas Sebelas Maret, Surakarta, Indonesia  
Retno Tanding Suryandari, Universitas Sebelas Maret, Surakarta, Indonesia  
Didiek Sri Wiyono, Universitas Sebelas Maret, Surakarta, Indonesia  
Dr. Fethma M Nor, Mechanical Engineering, Curtin University, Malaysia  
Abroon Qazi, American University of Sharjah, Sharjah, United Arab Emirates

# Plenary Speakers

## Plenary – I

Monday, February 12, 2024, 8:00 – 9:40 am (Onsite) – Ballroom

8:00 – 8:20 am



**Prof. John Kiong Chai**  
Professor and Dept. Chair  
Mechanical and Aerospace Engineering Department  
United Arab Emirates University  
Al Ain, Abu Dhabi, United Arab Emirates

8:20 – 8:40 am



**Dr Sayyad Zahid Qamar**  
Professor, Mechanical and Industrial Engineering Department  
Room 2052, Box 33, College of Engineering  
Sultan Qaboos University, Al-Khodh 123, Muscat, OMAN

Dr Sayyad Zahid Qamar is a Professor of Mechanical Engineering Department at Sultan Qaboos University (SQU), Muscat, Oman. He has over 30 years of academic and research experience in different international universities. He has also worked as a professional mechanical engineer in the field for over 6 years in the heavy engineering and fabrication industry (Manager Research and Development; Deputy Manager Design; Production Engineer; Quality Control Engineer). On top of his experience as a researcher/academician, he has been actively involved in research and accreditation work related to engineering education. His research areas are Applied materials and manufacturing; Applied mechanics and design; Reliability engineering; and Engineering education. As part of the

Applied Mechanics and Advanced Materials Research group (AM2R) at SQU, he has been involved in different applied research funded projects in excess of 4 million dollars. He has over 225 research/technical publications to his credit (research monographs/books, edited book volumes, book chapters, publications in refereed international journals and conferences, and technical reports). He has recently authored a book titled Swelling Elastomers in Petroleum Drilling and Development — Applications, Performance Analysis, and Material Modeling; edited one volume (Renewability of Synthetic Materials) for the Elsevier Encyclopedia of Renewable and Sustainable Materials; and is currently editing one volume (Thermal Engineering of Steel Alloy Systems) in the 13-volume series Comprehensive Materials Processing, 2nd edition by Elsevier; and is editing a book on Quality Assurance and Quality Control by Intech International. He has served as Associate editor, Guest editor, and Member editorial board for different research journals (including Materials and Manufacturing Processes, Journal of Elastomers and Plastics, the Journal of Engineering Research, American Journal of Mechanical and Industrial Engineering, etc.)

8:40 – 9:00 am



**Dr. Tryfon Theodorou**  
Vice Dean at the Inspection Technology and Quality Assurance National Institute (ITQAN)  
Kingdom of Saudi Arabia

### *Applications of Intelligent Software Defined Network protocols in IIoT wireless communications*

Dr. Tryfon Theodorou holds a Ph.D. degree in the area of Intelligent Software-Defined Networks over IoT devices. He holds two MSc degrees: in Artificial Intelligence – Knowledge-Based Systems from the University of Edinburgh, Scotland, and in Applied Informatics from the University of Macedonia, Thessaloniki, Greece. He is a senior software engineer and machine learning expert, currently lecturing and managing Colleges in Riyadh, Saudi Arabia. As a software engineer, he developed and administered a number of IT solutions for the medical and banking sector. Moreover, he is an active researcher and consultant currently working in the area of Intelligent Edge

Computing for the Internet of Things, used in Industrial environments and Smart Cities. He is currently appointed to the post of the Vice Dean of the Inspection Technology & Quality Assurance National Institute (ITQAN). He contributed to several scientific publications and he serves as a reviewer in competitive research venues. His interests are primarily focused in the areas of Machine learning, Internet of Things, Computer Vision, Acritical Intelligence, Wireless Sensor Networks, Fog Computing, and Software-Defined Networks.

9:00 – 9:20 am

**Dr Kaouther Ghacham**  
Associate Professor, Department of Industrial Engineering, and Systems  
Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia  
Director of the student chapter PNU-CEN, Riyadh, KSA

Kaouther Ghacham is an Associate Professor within the Department of Industrial and Systems Engineering, participates as a Committee Member for the Industrial Engineering and Systems Programs, Head of the accreditation committee, Internal reviewer of the industrial and systems program and holds the position of Director for the Measurement and Evaluation Administration at the College of Engineering at Princess Nourah bint Abdulrahman University, also engaged in active research, focusing on optimizing energy systems.



9:20 – 9:40 am



**António João Pina da Costa Feliciano Abreu, PhD**  
**Associate Professor with Habilitation, Polytechnic University of Lisbon**  
**Coordinator of the MSc in Industrial Engineering and Management**  
**Department of Mechanical Engineering, Lisboa, Portugal**

**Talk Title: Understanding the sustainability of cooperative networks through Social Network Analysis (SNA)**

Before joining the academic world in 1998, he had an industrial career since 1992 in manufacturing industries with management positions. He concluded his PhD in 2007, and the Habilitation title in 2020, in Industrial Engineering. He is member of several international associations e.g. IFAC at TC5.3 Enterprise Integration & Networking, ISO/TC 258, and INSTICC – Institute for Systems and Technologies of Information, Control and Communication. He is co-founder of SOCOLNET – Society of Collaborative Networks. As researcher, he has been involved in several National and European research projects. He has been involved in the organization and member of the program committees of several national and international conferences. He is member of review board and editorial board of several international journals. He has more than 130 publications in books, journals, and conferences proceedings in the area of logistics, project management, quality management, open-Innovation, risk management and lean management.

9:40 – 10:00 am

**Prof. Juan Carlos Quiroz**  
**Research Professor of Industrial Engineering**  
**Faculty of Engineering**  
**University of Lima, Peru**

### Plenary II

**Tuesday, February 13, 2024, 8:00 – 9:40 am (Onsite) – Ballroom**

8:00 – 8:20 am



**Sajid Anwar, Ph.D.**  
**Professor of Computer Science**  
**Institute of Management Sciences**  
**Peshawar, Pakistan**

Dr. Sajid Anwar is Professor at the Centre of Excellence in Information Technology Institute of Management Sciences (IMSciences), Peshawar, Pakistan. He received his MS (Computer Science, 2007) and Ph.D degrees (Computer Science, 2011) from NUCES-FAST, Islamabad. Previously, he was head of Undergraduate Program in Software Engineering at IMSciences. Dr. Sajid Anwar is leading expert in Mining Software Repositories. His research interests are cross-disciplinary & industry focused and includes: Search based Software Engineering; Prudent based Expert Systems; Customer Analytics, Active Learning and applying Data Mining and Machine Learning techniques to solve real world problems. Dr. Sajid Anwar is Associate Editor of Computers & Electrical Engineering Elsevier, PLOS ONE, Expert Systems Journal Wiley, and Network: Computation in Neural Systems Taylor & Francis. He has been a Guest Editor of numerous journals, such as Neural Computing and Applications, Cluster Computing Journal Springer, Grid Computing Journal Springer, Expert Systems Journal Wiley, Transactions

on Emerging Telecommunications Technologies Wiley, and Computational and Mathematical Organization Theory Journal Springer. He is also Member Board Committee Institute of Creative Advanced Technologies, Science and Engineering, Korea (iCatse.org) <http://icatse.org/>. He has conducted and led collaborative research with Govt. organizations and academia and has published over 60 research articles in prestigious journals and conferences. He had/had supervised/co-supervising several Ph.D. and Master Students. He served as the International Chair/ General Co-Chair of the ICITA (15<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup> International Conference on Information Technology and Applications). He served as the workshop chair of the ISEA (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> International Workshop on Intelligent Software Engineering Automation) associated with APSEC (28<sup>th</sup>, 29<sup>th</sup>, 30<sup>th</sup> Asia Pacific Software Engineering Conference) and NLP-SEA (1<sup>st</sup>, 2<sup>nd</sup> International Workshop on Software Engineering Automation: A Natural language Perspective) associate with ASE (35<sup>th</sup>, 36<sup>th</sup> IEEE/ACM International Conference on Automated Software Engineering).

8:20 – 8:40 am



**Dr. Elie Menassa**  
**Dean, Amity Business School Dubai**  
**Dubai, United Arab Emirates**

### **Social Responsibility in Operations and Supply Chain**

Professor Elie Menassa is a Lebanese-Australian national currently based in Dubai. He has extensive teaching experience and serves now as full professor of Accounting and Dean of Amity Business School Dubai. Previously, he was the Dean at Notre Dame University Lebanon and has held various academic, administrative, and visiting positions at other universities in the USA, UK, Germany, Cyprus, and Lebanon. A board member and former President and Vice President of several non-profit and public institutions, Professor Elie has also held senior managerial positions at reputable organisations like PricewaterhouseCoopers, Eternit SAL, Libano-Suisse SAL, and Somerfield LTD (UK). In addition to three active professional licenses (CFE, CRMA, and FAIA Acad.), Professor Elie's academic qualifications include a Doctorate in Accounting and Finance from Leicester Business School, UK, and a Postdoctoral position at Mendoza College of Business, University of Notre Dame, USA. Professor Elie is also an active researcher with publications in top refereed academic journals and professional outlets and a reviewer for many authoritative journals and conference proceedings.

8:40 – 9:00 am



**K.M. Sharath Kumar, Ph.D.**  
 Professor & Head – Management and Commerce  
 (Supply Chain Management and DEA)  
 Ramaiah University of Applied Sciences  
 Bangalore – 560 054, India

Dr K M Sharath Kumar is the Director of Research and an Associate Professor at the Department of Management Studies under the Faculty of Management and Commerce, RUAS. He has served in the capacity of Deputy Director – Sponsored Research and previously was a full-time Faculty and Coordinator— Sponsored Research in the Department of Management Studies. He is a life member of the Indian Society of Technical Education. He has served as a PhD Examiner and has supervised the doctoral thesis of students. As a member of the Research and Innovation Council – RUAS, he is responsible for managing International Partnerships. He is also in-charge of managing Patents and Patent Commercialisation process for the Research and Exchange (both Faculty and Student) initiative at the university. He has more than 15 years of teaching and research experience. He brings with him extensive knowledge of coordinating funded research activities with various organisations in the government, public and private sectors. He leverages his considerable skills as a leader in assembling high-performance teams, setting goals and successfully achieving them. Dr Sharath Kumar graduated in Mechanical Engineering and also completed his Master's degree in Business Administration with a specialisation in Marketing. In addition, he has a PhD degree offered by Coventry University, UK. His research is primarily focused on Management Science, Operations Management, Mathematical Modelling, Logistics and Supply Chain Management.

9:00 – 9:20 am



**Dr. Umar Asghar**  
 Discipline Leader (Civil and Mechanical Engineering)  
 Assistant Professor, School of Engineering  
 University of Wollongong Dubai (UOWD)  
 UAE

**Topic: Additive Manufacturing**

Dr Umar Asghar is Assistant Professor at the University of Wollongong in Dubai (UOWD). Prior to joining UOWD Dr Asghar was working as lead engineer in the design and development of port access systems for minimally invasive surgery at Surgical Innovations Ltd in UK. Dr Asghar has several years' experience in the industry across Nuclear, Defence, Medical Engineering and Manufacturing. He worked as a design engineer on material handling machines for the nuclear industry and has extensive experience in managing and delivering projects from design engineering, project management, project controls, quality assurance and stakeholder management.

9:20 – 9:40 pm



**Professor Sulaiman Al-Zuhair**  
 Professor of Chemical Engineering  
 Assistant Dean for Research and Graduate Studies  
 College of Engineering  
 United Arab Emirates University, UAE

**Talk Title: Utilization of enzymes for enhanced CO2 removal and conversion**

Sulaiman Al-Zuhair is a Professor of Chemical Engineering at UAE University and currently holds the position of Assistant Dean for Research and Graduate Studies. Before that, he held the positions of Head of Chemical and Petroleum Engineering Department, Director of Project Management Unit and Coordinator of the Postgraduate Program. Prof. Al-Zuhair's research resulted in publication of over 100 papers in Scopus and his current Scopus h-index is 34. He also has five patents under his name and published an authored book and three book chapters. As a Principal Investigator, Prof. Al-Zuhair was able to secure research funds of over AED 3 million dirhams, and over AED 20 million as a Co-Investigator. He is the recipient of the Dubai Award for Sustainable Transport (Best Academic Research) and the UAEU Research Excellence Award in 2019, and College of Engineering Excellence Research Award in 2016 and 2020. Prof. Al-Zuhair is on the Editorial Boards in a number of journals, and had held positions in the scientific and organizing committees of several international conferences.

## IEOM Global Engineering Education Plenary Speaker



**Dr. Mario Chauca**  
Professor at Engineering Faculty  
Ricardo Palma University  
Surco, Lima, Perú

### Strategies for increasing student performance based on lighting conditions in learning spaces

This proposal is based on the research project of Ricardo Palma University on the influence of the lighting conditions in learning spaces over the student performance. The objective is to show special considerations for design of the classroom including use of daylight to promote the good health of students in learning spaces and save the budget in electric energy. The method includes the analysis of lighting conditions considering daylight and artificial light using LED lighting systems and findings found in related studies. The results show a proposal of strategies for increasing the students performance considering LED light systems, lighting conditions and embedded solutions. This research is a good opportunity for development motivation for research capabilities in the students and obtaining a special lighting solution for increasing the students performance.

### Technical Papers on Global Engineering Education



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# Panel Sessions

## Protection of Industrial Assets from Emerging Cybersecurity Panel

2:00 – 3:45 pm, Monday, February 12, Room 1 – Ballroom

### Panel Chair



**Ayman Al Issa**  
Industrial Cybersecurity Lead and Senior Expert  
McKinsey & Company  
Abu Dhabi, United Arab Emirates

Ayman Al Issa is the McKinsey Industrial Cybersecurity Global Lead and Senior Expert. prior to joining McKinsey, he was the Chief Technologist for Booz Allen Hamilton's Industrial Cyber Security practice in the international market. Over a career which spans more than 27 years to date, Al Issa has gained vast experience in the fields of industrial automation operational technology, information technology, and cyber security. Within these arenas, he counts industrial control systems and systems engineering, as well as cyber security strategy and model building amongst his areas of expertise. Illustrating his contribution to the latter, Mr. Al Issa is a globally recognized expert in industrial cyber security who had early contributions to improving the practice globally.

Contributing to the wider industrial cybersecurity debate, Al Issa is the co-chairman of workgroup 1 in the IEC62443 (formerly ISA99) industrial automation and control systems cyber security standard. He is the chief technology advisor of the Industrial Cybersecurity Center in the ME and he is a member of the cyber security advisory boards at top rated universities world-wide. He is also an active member of international security innovation alliances, focused on improving the security of industrial systems.

### Panel Speakers



**Dr. Fuad Alattar**  
Senior Vice President, Middle East  
Siemens Digital Enterprise Services  
Dubai, United Arab Emirates

Dr. Fuad Alattar is a Senior Vice President with Siemens, managing the Digital Enterprise Services business unit in the Middle East since 2017. He has more than 25 years' experience in automation engineering, OT Cybersecurity, and digitalization fields, including positions of General Manager, Operations Manager, and Engineering Manager. Throughout his career, he designed the digital systems for dozens of prestigious projects, including the First Smart Multi-Aircraft Docking System in the World, the Largest RO/UF Plant in the World, the Largest Offshore-Onshore Integration Project in the Middle East, and an H2O Award Winning Project. Dr. Alattar holds a PhD degree in Artificial Intelligence, and he is an active researcher in OT Cybersecurity, Machine Learning, Signal Processing, and Natural Language Processing topics. He was selected by ARAMCO standards' department to carry out Value Engineering for critical process automation and protection systems.

## Diversity and Inclusion Panel sponsored by Ford Motor Company

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

2:00 – 3:40 pm, Wednesday, Feb 14, Room 1

### Panel Chair



**Neetu Choudhary**  
CEO and Founder  
Evolvitude FZE  
Dubai, UAE

Neetu brings neuroscience, behavioral science, and science-based studies along with six sigma-based structured approach to professional development in its most simple, practical, and interesting form. With more than 22 years of experience, Neetu helps organizations improve revenue by upskilling employees and inspiring them. Neetu has won various awards, including Best Public Speaker 2022 by Global Women Leadership Awards, Life Coach of the Year 2021 by Lifestyle Fiesta, and Top-Rated Speaker by ISACA USA for many years. Having won The Brand Ambassador Award, the CR Champion Award, and the Self-Development Award by DP World, she has spoken across the globe, been featured in international magazines, and published more than 100 articles. She is an author, speaker, and thought leader. Neetu is an idea presentation expert, keynote speaker, strategic partner for startups, corporate trainer, and professional development coach. She has left a highly-paid job at a renowned organization, to embark on an entrepreneurial journey for a cause much bigger than herself. Her work is based on neuroscience, behavioral science, neuroplasticity, NLP (neuro-linguistic programming), emotional intelligence, hypnotherapy, positive intelligence, and a growth mindset. Neetu has a technical background, not HR, she brings science and technical aspects together to enhance professional development. She is a certified organizational coach, a certified NLP practitioner, an emotional intelligence coach, and a hypnotherapist. She holds a Master's degree in Computer Applications, is a Six Sigma Black Belt, and is an EFQM Certified Assessor. She is associated with various international business excellence awards as a Team Leader and senior assessor, like DQA by Dubai Economic Development, SKEA by the Abu Dhabi Chamber of Commerce, MRM by the Dubai Chamber of Commerce, TAQDEER by the Dubai Ministry of Labour, UAE Innovation by the Dubai Quality Group, ASQ ITEA by the American Society of Quality, Steve Awards USA.

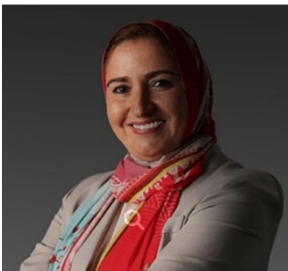
### Panel Speaker I



**Hitashi Malik, SPHRi, ODCP**  
**Sr. Manager HR, Rasan**  
**Forbes Council Member**  
**LinkedIn Top Community Voice, NHRD Dubai Member**  
**Dubai, UAE**

Hitashi is a vivacious and unconventional leader having over 14 years of experience in human resources, people development and culture building. Holding an MBA in HR and certified as SPHRi from HRCI, US, she has also completed the Organization Development Program from Tata Institute of Social Sciences. Her extensive professional journey spans across the UAE, USA, and India, with notable roles in Tech Startups, Financial Services, Retail, Consulting, and Hospitality. In these sectors, she has proficiently overseen a comprehensive array of HR sub functions, establishing the People function and fostering a work environment conducive to maximizing employee potential. Currently working as a Sr. Manager HR at Rasan, Hitashi is entrusted with the responsibility of attracting, and retaining talent, creating policies & procedures, developing, and implementing performance reviews and providing strategic HR support to ensure a positive, diverse, high performing organizational culture. She consistently promotes diversity, actively creating an inclusive and equitable environment within the organization. Notably, Hitashi is a distinguished member of the Forbes HR Council and LinkedIn Top Community Voice.

#### Panel Speaker II



**Dr. Zoubida Benmamoun, PhD**  
**Assistant Professor, Industrial and Mechanical Department**  
**Engineering Faculty**  
**Liwa College, Abu Dhabi, UAE**

Dr. Zoubida Benmamoun is an assistant professor in the Industrial and Mechanical Department at the Engineering faculty, with tenure exceeding two decades in the realm of higher education institutions and Industry. She worked as an Adjunct Professor at Hassan II University and as a senior consultant of Supply Chain Management for many international organizations, also as a Procurement and Supply Chain manager for different Aerospace and Engines companies: Boeing, Airbus, Safran Space Group, Linde Forklifts, and Daher Nuclear & Aerospace Technologies. Dr. Zoubida Benmamoun brings a wealth of experience in teaching and administrative leadership within the higher education sector. Her involvement in numerous meetings, seminars, conferences, and workshops has significantly enriched her pedagogical repertoire, resulting in enhanced teaching methods, skills, and overall knowledge. Beyond her instructional pursuits. She actively participates in curriculum and syllabi development, while also serving on esteemed committees such as the International Accreditation Committee, examination committees, equivalence committees, disciplinary committees, and others. Dr. Zoubida has a record of publications in prestigious journals and conferences around the world: Italy, the Czech Republic, Thailand, Morocco, Indonesia, and Uzbekistan. Her research expertise spans across multiple fields, including Operation Excellence, Supply Chain Management, Optimization, education, and specialized studies utilizing content analysis methodologies. Furthermore, Dr. Zoubida has demonstrated leadership skills by leading a research grant and effectively managing resources to achieve research objectives.

#### Panel Speaker III



**Reema Akhtar, Forbes HR, Chartered MCIPD, SHRM-SCP**  
**Official Member, Forbes Human Resources Council**  
**Group HR Head, SeerSolutionz**  
**Dubai, United Arab Emirates**

The Group HR Head at SeerSolutionz is a dynamic and innovative leader with over 15 years of experience in human resources. She holds SHRM and CIPD credentials, an MBA in HR and Operations, and specializes in executive search, performance management, conflict resolution, leadership development, L&D, and DEI. She has extensive knowledge of visa and labour laws, HR policies and procedures, and Total Rewards in various regions (India/Europe/MENA). As an HR Head, She has launched a social media-based hiring campaign that resulted in a 50% increase in qualified applicants and a 95% reduction in hiring costs. She has also diversified each department's team by hiring employees from diverse backgrounds and with different skills and experiences. She has established a flexible work policy that allows employees to work from home or the office, depending on their needs. She believes in creating a culture of collaboration, team-building, and excellence. She is a member of the prestigious FORBES HR council and leads a group (Automation in HR) exclusively within this council.

#### Panel Speaker IV



**Roujin Ghamsari (FCIPD)**  
**Top 10 UK HR Most Influential 2023**  
**Founder, MappdHR**  
**Director of HR & OD – Professional Development Programme, NHS England**  
**Dubai, United Arab Emirates**

**GEE Forum – IE & OM Education and Curriculum Panel**

4:00 - 5:40 pm, Wednesday, Feb 14, Room 2

## Panel Chair



**Professor Abu Masud, Ph.D., P.E.**  
**Professor Emeritus and Past Chair,**  
**Department of Industrial and Manufacturing Engineering**  
**Past Dean of Graduate School**  
**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.

## Panel Speakers



**Dr. Erialdi Syahrial**  
**Senior Lecturer**  
**Faculty of Management**  
**Universiti Teknologi Malaysia (UTM)**  
**Johor Bahru, Malaysia**

Erialdi Syahrial is a senior lecturer at the Faculty of Management, Universiti Teknologi Malaysia (UTM), Malaysia. He had been appointed as a Visiting Researcher at Weber State University, Ogden, Utah, United States for research collaboration with Goddard School of Business and Economics. He obtained his Bachelor of Engineering (Mechanical-Industrial) from Universiti Teknologi Malaysia, Malaysia and Master of Science (Manufacturing System Engineering) from Universiti Putra Malaysia (UPM), Malaysia. Furthermore, he was a section head, lead engineer and project leader at Research and Development (R&D) Department at PROTON, Malaysia's first national car manufacturing company. He worked in the R&D department, PROTON for 11 years and the main responsibility was associated with after-sales service and customer satisfaction. He had also been appointed to perform after-sales service projects in United Kingdom, Italy, Korea, and Germany. He dealt with CEO, managing directors, customers, suppliers, and consultants to support after-sales service and customers. After 11 years of working at PROTON, he pursued his Doctorate of Philosophy (Ph.D.) in Japan and graduated with a Doctoral degree in Engineering from Keio University, Yokohama, Japan. He stayed in Japan for almost 8 years with several working experiences at different companies. Currently, as a senior lecturer at the Faculty of Management, his teaching and research focus on Quality Management, Project Management, Operation Management, Supply Chain Management, Research Methodology, Work Design/Ergonomics, Total Quality Management, Logistic Management, Business Mathematics and Human Resource Management. He also holds a university-level position, which is a Green Manager and at the same time a member of the Board of Engineers (BEM) Malaysia. He is currently active as a project member with the Faculty of Engineering (Department of Industrial and Manufacturing Engineering) with a secured grant funded by the government of Malaysia. In 2022, he was a session chairperson during the 3rd Asia Pacific Conference on Industrial Engineering and Operations Management (IEOM 2022). He also presented his research during the 27th Annual Conference of the Production and Operations Management Society (POMS), organized by the Production and Operations Management Society, United States of America.



**Prof. (Dr.) Devinder Kumar Banwet, FIE.**  
**Vice Chancellor (Founding)**  
**University of Engineering & Management**  
**Kolkata 700160 Mob 9891039832**  
**Former Professor Emeritus IIT Delhi**  
**HOD DMS IITD, Professor HAG IITD**  
**Chairman PEC of ASRP & Entrepreneurship Interdiscip. Programs**

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.





**Dr. Ahad Ali**  
**Associate Professor**  
**Director of Bachelor of Science in Industrial Engineering**  
**Director, Master of Science in Industrial Engineering**  
**Director of Smart Manufacturing and Lean Systems Research Group**  
**Director, Graduate Certificate in Lean Six Sigma**  
**Coordinator, Siemens Electro-Matic Industrial Engineering Lab**  
**A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering**  
**Lawrence Technological University**  
**Southfield, Michigan, USA**

Ahad Ali is an Associate Professor and Director of Industrial Engineering Programs (BSIE & MSIE), Director of Graduate Certificate in Lean Six Sigma and Director of Smart Manufacturing and Lean Systems Research Group, A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering at the Lawrence Technological University, Southfield, Michigan, USA. He established Siemens Electro-Matic Industrial Engineering Lab at LTU in 2019. Dr. Ali was the primary author of the ABET self-study report of the BSIE Program at LTU in 2022. He earned B.S. in Mechanical Engineering from Khulna University of Engineering and Technology (KUET), Bangladesh, Masters in Systems and Engineering Management from Nanyang Technological University, Singapore and Ph.D. in Industrial Engineering from University of Wisconsin-Milwaukee, USA. Dr. Ali was Assistant Professor in Industrial Engineering at the University of Puerto Rico – Mayaguez, Visiting Assistant Professor in Mechanical, Industrial and Manufacturing Engineering at the University of Toledo and Lecturer in Mechanical Engineering at the Bangladesh Institute of Technology, Khulna. He received an Outstanding Professor Award of the Industrial Engineering Department, University of Puerto Rico - Mayaguez, (2006-2007). He has published 60 journal and 150 conference papers. Dr Ali has conducted research projects with Chrysler, Ford, DTE Energy, New Center Stamping, Whelan Co., 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 manufacturing systems modeling, simulation and optimization, intelligent scheduling and planning, artificial intelligence, predictive maintenance, e-manufacturing, and lean manufacturing. He supervised 11 doctoral students. Dr. Ali has involved with many international conference committees. He is the Founder of IEOM Society International and serving as an Executive Director. Dr. Ali serves as a Conference Co-Chair of the International Conference on Industrial Engineering and Operations Management and organized events in Dhaka, Kuala Lumpur, Istanbul, Bali, Dubai, Orlando, Detroit, Rabat, UK, Bogota, Paris, Washington, DC, Pretoria, Bangkok, Pilsen, Toronto, Costa Rica, Sao Paulo, India, Riyadh, Manila and Sydney. He is a member of IEOM, INFORMS, SME and IEEE.

## Submissions Received from Countries and Territories

1. Australia	12. France	23. Kuwait	34. Russia	45. Uganda
2. Austria	13. Ghana	24. Malaysia	35. Rwanda	46. UAE
3. Bangladesh	14. Greece	25. Mexico	36. Saudi Arabia	47. UK
4. Brazil	15. India	26. Morocco	37. Singapore	48. United States
5. Canada	16. Indonesia	27. Nigeria	38. South Africa	49. Vietnam
6. Chile	17. Iran	28. Oman	39. South Korea	50. Zimbabwe
7. Colombia	18. Israel	29. Pakistan	40. Sri Lanka	
8. Costa Rica	19. Italy	30. Palestinian	41. Taiwan	
9. Egypt	20. Japan	31. Peru	42. Tanzania	
10. Ethiopia	21. Jordan	32. Philippines	43. Thailand	
11. Finland	22. Kenya	33. Qatar	44. Turkey	

# Parallel Sessions

All Times are in Dubai Time

## Sunday, February 11, 2024

	Virtual Room 1	Virtual Room 2	Virtual Room 3
8:00 – 9:45 am	Undergraduate Student Paper Competition	Graduate Student Paper Competition	Supply Chain Management
10:00 – 11:45 am	Undergraduate Student Paper Competition	Master Thesis Competition and Doctoral Dissertation Competition sponsored by Airbus	Operations Management
12:00 – 1:45 pm	Undergraduate Student Paper Competition	Human Factors and Ergonomics Competition Senior Design Project Competition	Manufacturing
2:00 – 6:00 pm	<b>Onsite Registration Open</b>		
2:00 – 3:45 pm	Undergraduate Research Competition	Supply Chain and Logistic Competition Simulation and High School Competitions	Artificial Intelligence
4:00 – 5:45 pm	Lean Six Sigma Competition	Business Management	Case Studies
<b>7:00 – 9:00 pm: Organizing Committee Planning Meeting Dinner</b>			

## Monday, February 12, 2024

	Room 1 - Ballroom	Room 2 Onsite	Room 3 Onsite	Room 4 Onsite	Room 5 Onsite	Room 6 Virtual
8:00	Plenary I	Graduate Student Paper Competition	MS and Simulation Competitions	Undergraduate Paper Competition	SCM Competition	SCM and Transportation
9:40	Welcome Keynote from Host Khalifa University					
10:20	Keynote: Dr. Dima Jamali, Vice President of Academic Affairs and Dean of the School of Management, Canadian University in Dubai					
11:00	Keynote: Prof. Jürgen H. Lenz, Research Professor, Augsburg Technical University of Applied Science, Nördlingen, Bavaria, Germany					
11:40	Keynote: Ayman Al Issa, Industrial Cybersecurity Lead and Senior Expert, McKinsey & Company, Abu Dhabi, United Arab Emirates					
12:20	Keynote: Amer Kakish, Chief Executive Officer, Ittihad International Investment LLC, Abu Dhabi, UAE					
1:00	Lunch Break – Buffet Lunch at Ballroom					
2:00	Cybersecurity Panel	Assessment and Evaluation of Student Learning for Program Improvement Workshop	LSS and Senior Design Competitions	Undergraduate Paper Comp.	Human Factors & Ergonomics Competition	Industry 4.0 and Healthcare
3:45	Afternoon Networking Coffee Break					
4:00	TOYOTA KATA Workshop	Assessment and Evaluation of Student Learning for Program Improvement Workshop	High School STEM Competition	Undergraduate Research Competition	PhD Dissertation Competition	Lean
<b>7:00 – 9:00 pm, Monday, February 12, 2024 – IEOM Global Council Meeting</b>						

## Tuesday, February 13, 2024

	Room 1 - Ballroom Onsite	Room 2 Onsite	Room 3 Onsite	Room 4 Onsite	Room 5 Onsite	Room 6 Virtual
8:00	Plenary II	Global Lean Six Sigma and OpEx	Engineering Management & Project Management	Global SCM	Sustainable Supply Chain and Manufacturing	Case Studies
9:40	Keynote: Dr. Farouk Yalaoui, Vice President for Research, Full Professor, University of Technology of Troyes (UTT), Troyes, France					
10:20	Keynote: Javed Cheema, Co-Founder and Partner, MC2square Ventures, LLC, Michigan, USA					
11:00	Keynote: Dr. Andrei Sleptchenko, Associate Professor, Department of Industrial and Systems Engineering, Management Science and Engineering, Khalifa University, Abu Dhabi, UAE					
11:40	Keynote: Dr. Shahram Taj, Chair and Professor, Department of Data Science & Business Analytics and Chair, Department of Computer Science, Florida Polytechnic University, Lakeland, Florida, USA					
12:20	Keynote: Chapters of the Year Presentations – KFUPM and Zagazig University					
1:00	Lunch Break – Buffet Lunch at Ballroom					
2:00	Global Industry Solutions and Industry 4.0	Six Sigma Workshop	Quality	Optimization	Operations Management	Case Studies
<b>4:00 – 6:00 pm – Poster Competition (Display your poster throughout the conference, judging will be during this time)</b>						
4:00	Global Artificial Intelligence and ML	Six Sigma Workshop	Business Management	Operations Research	Sustainability and Green Systems	Engineering Management
<b>7:00 – 9:00 pm – IEOM Academy of Fellows Meeting</b>						

## Wednesday, February 14, 2024

	Room 1 - Ballroom Onsite	Room 2 Onsite	Room 3 Onsite	Room 4 Onsite	Room 5 Onsite	Room 6 Virtual
8:00	Global Business Management and Project Management	Case Studies	Industry Solutions	Supply Chain Management	Occupational Safety and Health (OSH)	Data Science
9:40	Keynote: Dr. Oliver Elbracht, Managing Director Siemens Advanta Middle East, Dubai, United Arab Emirates					
10:20	Keynote: Dr. Muthu Mathirajan, Chief Research Scientist, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, India, National President of Operational Research Society of India, 2024-2024					
11:00	Keynote: Dr. Hany Moustapha, Professor and CEO, SDG Innovation Network, University of Québec, Siemens' Chair on Industry 5.0 Technology Integration, Pratt & Whitney Canada Chair on Propulsion System & Sr. Research Fellow, Pratt & Whitney Canada					
11:40	Keynote: Dr. Albertus Retnanto, Ph.D., Program Chair Petroleum Engineering, Texas A&M University at Qatar					
12:20						
1:00	Lunch Break – Buffet Lunch at Ballroom					
2:00	Women in Industry and Academia Panel + Diversity and Inclusion Panel sponsored by Ford Motor Company	Global Engineering Education	Data Analysis	Operations Management	Manufacturing	Occupational Safety and Health (OSH)
4:00	Project Management Workshop	GEE Forum – IE & OM Education and Curriculum Panel	Multicriteria Decision Making	Logistics	Modeling and Simulation	Lean and Quality
<b>7:00 – 10:00 pm, February 14, 2024 – Awards Ceremony and Gala Dinner Buffet</b>						

# February 12, 2024 (Monday)

## February 12, 2024 (Monday) - Session: 8:00 – 9:45 am

**8:00 – 9:45 am, MONDAY**
**Plenary I**
**Onsite Room 1**

Session Chair: Dr Sayyad Zahid Qamar, Sultan Qaboos University

8:00 – 8:20 am

Prof. John Kiong Chai  
 Professor and Dept. Chair  
 Mechanical and Aerospace Engineering Department  
 United Arab Emirates University  
 Al Ain, Abu Dhabi, UAE

8:20 – 8:40 am

Dr Sayyad Zahid Qamar  
 Professor, Mechanical and Industrial Engineering Department  
 Sultan Qaboos University  
 Al-Khodh 123, Muscat, OMAN

### ***Challenges in Engineering Education***

8:40 – 9:00 am

Dr. Tryfon Theodorou  
 Vice Dean at the Inspection Technology and Quality Assurance National Institute (ITQAN)  
 Kingdom of Saudi Arabia

### ***Applications of Intelligent Software Defined Network protocols in IloT wireless communications***

9:00 – 9:20 am

Dr Kaouther Ghacham  
 Associate Professor, Department of Industrial Engineering, and Systems  
 Princess Nourah bint Abdulrahman University  
 Riyadh, Saudi Arabia  
 Director of the student chapter PNU-CEN, Riyadh, KSA

9:20 – 9:40 am

António João Pina da Costa Feliciano Abreu, PhD  
 Associate Professor with Habilitation and Coordinator of the MSc in Industrial Engineering and Management  
 Department of Mechanical Engineering  
 Polytechnic University of Lisbon  
 Lisboa, Portugal

9:40 – 10:00 am

Prof. Juan Carlos Quiroz  
 Research Professor of Industrial Engineering  
 Faculty of Engineering  
 University of Lima, Peru

**8:00 – 9:45 am, MONDAY**
**Onsite Room 2**

Session Chair: Dr. Abdulrahim Shamayleh, Associate Professor, Department of Industrial Engineering, American University of Sharjah

## **Graduate Student Paper Competition sponsored by Eaton Corporation**

### **ID 412 Driving Safety Excellence: Strategies for Minimizing Land Transportation Incidents in the Oil and Gas Industry**

Shaikha A, Hajar Als, Abdulrahman A, Maryam H and Afifa A, Department of Management Science and Engineering, Faculty of Engineering  
 Khalifa University of Science and Technology, Abu Dhabi, UAE

Saed Talib, Senior Lecturer, Department of Management Science and Engineering, Faculty of Engineering, Khalifa University of Science and  
 Technology, Abu Dhabi, UAE

### **ID 12 Investigating the relationship between marketing capabilities and export investment performance: The mediating role of marketing communication and competitive strategy, and the moderating role of technological turbulence**

Mohsen Mohammadi Mahvelati and Mohammad Akbari, Faculty of Management and Economics, Payam-e-Noor University, Tehran, Iran



**ID 458 Study Consumers' Willingness to Accept Autonomous Vehicles as a Mode of Transportation. Further Investigate Infrastructure Modifications to Facilitate Automated Vehicle Ecosystem**

Soujanya Pillala, Eastern Michigan University, United States

**ID 527 Model-Based Approaches to Customer Churn Perspective: Bibliometric Analysis**

Dr. Abdelghani Bouras and Mr. Abdulrahman Alosaimi, Professor of Industrial Engineering, Master of Engineering and Systems Management Candidate, Alfaisal University, Riyadh, Riyadh, KSA

**ID 620 Driving Safety Excellence: Strategies for Minimizing Land Transportation Incidents in the Oil and Gas Industry**

Shaikha Abdulla, Hajar Alshehhi, Abdulrahman Alhashmi, Maryam Alhammadi and Afifa Alremeithi, Department of Management Science and Engineering Faculty of Engineering, Khalifa University of Science and Technology, Abu Dhabi, UAE

Saed Talib, Senior Lecturer, Department of Management Science and Engineering, Khalifa University of Science and Technology, Abu Dhabi, UAE

**8:00 – 9:45 am, MONDAY**

**Onsite Room 3**

## Master Thesis Competition

Session Chair: Dr. Sujan Piya, Associate Professor, Department of Industrial Engineering and Engineering Management, University of Sharjah

**ID 399 Blockchain application for value chain management in corporate banking to enhance competitive advantage**

Rowdha Makki and Dr Balan Sundarakani, University of Wollongong in Dubai, United Arab Emirates

**ID 471 Data-driven strategies for green methanol process parameter optimization using machine learning**

Nabeel Sultan, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE

Ali Almansoori and Ali Elkamel, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE and Department of Systems Design Engineering and Department of Chemical Engineering, University of Waterloo, Waterloo, ON, Canada

**ID 409 Sociotechnical Aspects of Decentralized Wastewater Treatment Systems in the Alabama Blackbelt**

Rachel Chai, Ph.D. Candidate, Department of Systems Engineering, College of Engineering, University of South Alabama, Mobile, Alabama, USA

Kevin White and Kaushik Venkiteswaran, Department of Civil, Coastal, and Environmental Engineering, College of Engineering, University of South Alabama, Mobile, Alabama, USA

Kari Lippert and Sean Walker, Department of Systems Engineering, College of Engineering, University of South Alabama, Mobile, Alabama, USA

**ID 404 The Role of Social Norms in Shaping Normative Beliefs and Forming Subjective Norms for Predicting Fitness Mania Intention to Consume Amino 2000 Supplements in Indonesia: A Mixed Method Approach**

Shine Pintor Siolomba Patiro, Lecturer of Master of Management Program, Universitas Terbuka, Jakarta, Indonesia

Sri Yusriani, Student of Master of Management Program, Universitas Terbuka, Grindsted Billund, Denmark

Kabul Wahyu Utomo, Lecturer of Master Management Program, Universitas Terbuka, Jakarta, Indonesia

**ID 626 The Effect of Physical Factors Towards the Performance of Workers in Automotive Machining Shop**

Nawi Zharif Iman bin Kamarulzaman and Jafri Mohd Rohani, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia, Johor, Malaysia

Erialdi Syahril, Faculty of Management, Universiti Teknologi Malaysia, Johor, Malaysia

## Lean Six Sigma Competition sponsored by Tooling Tech Group

Session Chair: Dr. Mohamed Alblooshi, Assistant Professor, College of Business/Operations Management, Zayed University

**ID 526 A Six Sigma Approach to Improve Healthcare Operations in a Hospital in Kuwait**

Hajar Alqahtani, Hala Alotaibi, Maryam Alajmi, Rinad Alrasheedi, Teef Albarjas, Hussam Ali Alothman and Mutaz Tayseer Ayed, College of Engineering and Technology, American University of the Middle East, Kuwait

**ID 99 Improving the Processes by Applying Lean Six Sigma Tool (VSM): Case Study in KSA**

Ali Almuflih, Assistant Professor in the department of Industrial Engineering at King Khalid University (KKU), Saudi Arabia

M.Sc. degree in the Department of Mechanical & Industrial Engineering at Northeastern University

Abrar Alamri, Afnan Asiri, Reema Alshahrani, Ruwayda Shawkhan and Samar Alshahrani, Senior Industrial Engineering at King Khalid University (KKU), Saudi Arabia

**8:00 – 9:45 am, MONDAY**

**Onsite Room 4**

Session Chair: Dr. Mohammad Shamsuzzaman, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah

## Undergraduate Paper Competition sponsored by Siemens

**ID 441 "Securing the Digital Realm: Navigating Cyber Threats, Risks, and Resilience"**

Jai Bhortake and Mayank Herode, Veermata Jijabai Technological Institute, India

**ID 283 Assessing Lean Manufacturing Implementation across Saudi Arabia's Factories Using Rapid Plant Assessment**

Eman Mastour Alqarni, Leen Ahmad AlBinAli and Raafat Elshaer, Industrial Engineering Department, Collage of Engineering, King Khalid University Abha, Kingdom of Saudi Arabia

**ID 421 Blockchain Technology for Sustainable Industry**

Fares Mohamed, Juma Alsaadi, Abdulla Alameri and Zoubida Benmamoun, Liwa College, Faculty of engineering, Abudhabi, United Arab Emirates

**ID 167 Enhancing Agricultural Productivity and Sustainability through Technological Innovation in Latin America**

Andy R. Tineo and Almanzor E. Vila, Department of Industrial and Systems Engineering, Pontificia Universidad Católica Madre y Maestra, Santiago 51000, Dominican Republic  
 Dr. Richard Olawoyin, School of Engineering and Computer Science, Oakland University, Rochester, MI 48309, USA

**ID 464 Identification and Prioritization of Tourism Development Strategies Using SWOT, and AHP: A Case Study of Asir Development Authority**

Maha Asiri Atheer AlGhasib, Huda AlMoawadh, Nada Alsaif and Dina Almutawa Raghad Alghtani Mohammed Al Awadh, Industrial Engineering Department, King Khalid State University, Saudi Arabia

**8:00 – 9:45 am, MONDAY****Onsite Room 5**

Session Chairs:

Dr. Balan Sundarakani, Associate Professor, School of Business, University of Wollongong Dubai, Dubai Knowledge Park  
 Dr. Abroon Qazi, Associate Professor of Operations Management, School of Business Administration, American University of Sharjah, UAE

**Supply Chain and Logistic Competition****ID 377 Building RMA Process for an Electronic Manufacturing Company: A Case Study**

Basel Sultan and Daryl Santos, Thomas J. Watson College of Engineering and Applied Science, Systems Science and Industrial Engineering Department, Watson Institute for Systems Excellence (WISE), The State University of New York at Binghamton, Binghamton, NY 13902, USA  
 Thomas Byrnes, Foxconn Industrial Internet, Mount Pleasant, WI 53177, USA

**ID 413 Differentiation and Visualization of Board Image Changes: A Comprehensive Computational Approach using Python**

Basel Sultan, Hamzeh Alshraida and Daryl Santos, Systems Science and Industrial Engineering Department, Watson Institute for Systems Excellence (WISE), The State University of New York at Binghamton, Binghamton, NY 13902, USA  
 Fernando Franco, Foxconn Industrial Internet, Mount Pleasant, WI 53177, USA

**ID 289 Enabling Collaborative Resource Sharing in the Pharmaceutical Industry During Disruption: An Exploratory Assessment**

Mustapha Saidi Atanda and Mouhamad Shaker Ali Agha, Department of Management Sciences, University of Strathclyde, Glasgow, UK  
 Tariq Masood, Department of Design, Manufacturing and Engineering Management, University of Strathclyde, Glasgow, G1 1XQ, United Kingdom

**ID 61 Identifying a Catalyst for Competitiveness for Family-owned Enterprises in Manufacturing Using Supplier Selection Criteria – Case from South Africa**

Ndivhuwo Nemtajela, Lecturer, Department of Operations Management, College of Economic and Management Sciences, University of South Africa, Pretoria, South Africa  
 Jan-Harm Christiaan Pretorius and Andre Vermeulen, Department of Engineering Management, Faculty Engineering and the Built Environment University of Johannesburg, Johannesburg, South Africa

**ID 358 PHILIPPINE ARMY REQUISITION DATABASE SYSTEM (PARDS): Military Supply Chains with PARDS - A Comprehensive Analysis and Implementation of the Philippine Army Requisition Database System**

LTC Alan P. Sillacay (OS) PA, LTC Erasto Gallardo (INF) PA and MAJ Carlo Dendiego (FS) PA, Master of Logistics and Supply Chain Management, Graduate Studies, Technological Institute of the Philippines, Quezon City Philippines, Military Servicemen, Philippine Army Fort Bonifacio, Taguig City, Philippines  
 Antoniette T. Molléjon and Cherry D. Casuat, Professor & Department Chair, Industrial Engineering Department, Professor, Computer Engineering University of Perpetual Help System Dalta, Calamba. Laguna, Philippines

**ID 163 Single Objective Functions in Location Routing Problems: A Comparative Case Study**

Osama Alotaik, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

**ID 535 Assessing electric freight vehicles deployment in city logistics system: Case of Global South Country**

Aalok Kumar, Assistant Professor, Production and Operations Management area, Indian Institute of Management Visakhapatnam India

**ID 568 On board vehicle technological innovations for sustainable transportation of chicks in poultry value chain**

Issac Hute, Pr Eng Tsatsi, Muririka Walter, Machiri Tatenda M and Vumu Adonijah N, HUTE, Harare polytechnic, Zimbabwe

**8:00 – 9:45 am, MONDAY****SCM and Transportation****Online Room 6**

Session Chair: Tomas Agustin Bas, Department of Mathematical and Industrial Engineering, Polytechnique Montreal, Montreal QC, Canada

**ID 312 A Systematic Review of Simulation Literature in Blood and Blood Components Supply Chains**

Eliana de Jeus Lopes, Leandra Silvestre da Silva Lima and Marina Bouzon, Department of Production and Systems Engineering, Federal University of Santa Catarina, Caixa Postal 476, 88040-900, Florianopolis, SC, Brazil

**ID 280 Key Performance Indicators in Public Transport Industry- A Literature Review**

Bhadranandan N, Research Scholar (Management), Department of Mechanical Engineering, Sree Chitra Thirunal College of Engineering, Thiruvananthapuram, Kerala, Affiliated to APJ Abdul Kalam Technological University, Thiruvananthapuram, Kerala, India  
 Kavilal E G (Ph, D), Assistant Professor, Department of Mechanical Engineering, Sree Chitra Thirunal College of Engineering, Thiruvananthapuram, Kerala, Affiliated to APJ Abdul Kalam Technological University, Thiruvananthapuram, Kerala, India

**ID 29 Service model under the PHVA approach based on Lean Manufacturing, MPS, MRP to improve the service level of an SME in the textile sector: A research in Perú**

Claudia Lucia Bonifaz-Roca, Faculty of Engineering, University of Lima, Perú  
 Gianella Angela Maravi-Vilcas, Faculty of Engineering, University of Lima, Perú

Martin Fidel Collao-Díaz, Research Professor, Faculty of Engineering, University of Lima, Perú

**ID 295 Deep Learning Model-based Reinforcement Learning for Joint Distribution and Route Planning in the Supply Chain**

Ali Arishi, Assistant Professor, Department of Industrial Engineering, King Khalid University, Saudi Arabia

**ID 444 Title: Resilience and Crisis Entrepreneurial Leadership During Turbulent Times in Corporate Governance**

Naushad Alam and Aftab Alam, Amity Business School, Amity University Uttar Pradesh, India

**ID 277 Integration Between PMBOK 7th Concepts: A Network Analysis**

Luisa Zambrano, Edison Atencio, Costanza Mariani and Mauro Mancini, Department of Management, Economics and Industrial Engineering, Politecnico di Milano, Via Lambruschini 4b, Bovisa, 20156 Milan, Italy

Edison Atencio, Department of Civil Engineering, Pontificia Universidad Católica de Valparaíso, Av. Brasil 2147, 2340000, Valparaíso, Chile

**ID 176 Freight Broker Business Models in the Digital Age: A Comparative Analysis and Recommendations for Start-ups**

Tomas Agustin Bas, Department of Mathematical and Industrial Engineering, Polytechnique Montreal, Montreal QC, Canada

Samira Keivanpour, Department of Mathematical and Industrial Engineering, Polytechnique Montreal, Montreal QC, Canada

Asad Yarahmadi, Department of Civil, Geological and Mining Engineering, Polytechnique Montréal, Montréal, Canada

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## February 12, 2024 (Monday) - Session: 9:40 am – 1:00 pm - Ballroom

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### Keynote Speakers

10:00 am

Opening Remarks from Host Khalifa University  
Remarks from Conference Chairs and Program Chairs

10:20 am – Keynote I:

**Dr. Dima Jamali**

Vice President of Academic Affairs and Dean of the School of Management  
Canadian University in Dubai

11:00 am – Keynote II:

**Prof. Jürgen H. Lenz**

Research Professor, Augsburg Technical University of Applied Science  
Nördlingen, Bavaria, Germany

11:40 am - Keynote III:

**Ayman Al Issa**

Industrial Cybersecurity Lead and Senior Expert  
McKinsey & Company, Abu Dhabi, United Arab Emirates

12:20 Keynote IV:

**Amer Kakish**

Chief Executive Officer  
Ittihad International Investment LLC  
Abu Dhabi, UAE

**11:00 – 1:00 pm, MONDAY**

**Technical Presentations**

**Onsite Room 2**

Session Chair: Salman Nazir, Professor, Department of Maritime operations, University of South-Eastern Norway, Vestfold, Norway

**ID 529 Predictive Modeling and Comparative Analysis of Opportunistic Maintenance Strategies in PVC Manufacturing: A Simulation and Machine Learning Approach**

Mazen Kiki, Department of Mechanical Engineering, The University of Akron, 244 Sumner Street, Akron, OH 44325, United States

Ismail Hamieh, Department of Electrical and Computer Engineering the University of Windsor, 401 Sunset Ave, Windsor, ON N9B 3P4, Canada

Shengyong Wang, Associate Professor, Mechanical Engineering, 244 Sumner Street, Akron, OH 44325, United States

**ID 566 Optimizing Quality and Safety: An Enlightened Perspective on Integrating Experience Feedback into the Management of Goods and Services**



Ghania Rahmani Abdelbaki Laidoune and Nabil Sahraoui, Laboratory of Research in Industrial Prevention, Institute of Health and Safety, University of Chahid Mostepha Ben Boulaid Batna 2, Batna, Algeria

**ID 549 Determinant of FDI Attraction in Chad: A Literature Review**

Khalil Kaya, Mohd Azlan Shah Zaidi and Rohayu Abdul Ghani, Faculty of Economics and Management, Universiti Kebangsaan Malaysia

**ID 560 Human Error: A 10-Year Review of Trends and Techniques in Maritime and Process Industries**

Salman Nazir, Professor, Department of Maritime operations, University of South-Eastern Norway, Vestfold, Norway

**ID 467 A Comprehensive Analysis of Electric Beca Adoption in Malaysia**

Haslinda Musa, Faculty of Technology Management & Technopreneurship (FPTT) Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya, 75350 Taman Tasik Utama, Melaka, Malaysia

Abdul Rahim Abdullah, Faculty of Electrical Engineering (FKE), Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya, 75350 Taman Tasik Utama, Melaka, Malaysia

Mohd Nasar Othman, NMS Legacy Sdn Bhd. Lot 2890 E, Losong Panglima Perang, 21000 Kuala Terengganu, Malaysia

Mohd Syafiq Taib, Faculty of Technology Management & Technopreneurship (FPTT) Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya, 75350 Taman Tasik Utama, Melaka, Malaysia

Fadhur Rahim Azmi, Faculty of Business and Management, Universiti Teknologi MARA Cawangan Melaka, Malaysia

**1:00 – 2:00 pm**  
**Buffet Lunch - Ballroom**

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**February 12, 2024 (Monday) - Session: 2:00 – 3:45 pm**

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**2:00 – 3:45 pm, MONDAY**

**Cybersecurity Panel**

**Onsite Room 1**

Session Chair:

Ayman Al Issa

Industrial Cybersecurity Lead and Senior Expert

McKinsey & Company

Abu Dhabi, United Arab Emirates

Panel Speaker

Dr. Fuad Alattar

Senior Vice President, Middle East

Siemens Digital Enterprise Services

Dubai, United Arab Emirates

**2:00 – 3:45 pm, MONDAY**

**Onsite Room 2**

**Assessment and Evaluation of Student Learning for Program Improvement Workshop**  
**Professor Abu Masud, Ph.D., P.E.**

Professor Emeritus and Past Chair, Department of Industrial and Manufacturing Engineering  
Past Dean of Graduate School, Wichita State University, Kansas, USA

**2:00 – 4:00 pm, MONDAY**

**Onsite Room 3**

**Simulation Competition**  
**2:00 – 3:00 pm**

Session Chair: Dr. Suzan Alaswad, Chair, College of Business, Zayed University

**ID 229 Characterization of mathematical modeling of control systems at undergraduate level using Unity software**

Diego Cachay, Valerio Laura, Ayrton Poma, Sebastián Solórzano and Mario Chauca, Mechanical and Electrical Engineering (MEA), Faculty of Engineering and Management, Universidad Nacional Tecnológica de Lima Sur, Lima, Perú

**ID 1 Feasibility analysis of utilizing renewable energy supply options for a large hotel in Salalah, Oman**

Paul C. Okonkwo, El Manaa Barhouni and Fadhil Khadoum Alhousni, College of Engineering, Dhofar University, Salalah 211, Oman

**ID 472 Sustainable Hydrogen Production via HSMR: Integrating Machine Learning for Process Optimization and Forecasting**

Sheeraz Ahmad, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE

Ali Almansoori and Ali Elkamel, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE and Department of Systems Design Engineering and Department of Chemical Engineering, University of Waterloo, Waterloo, ON, Canada

**ID 651 An Integration of Lean and Digital Twin Simulation Modelling for Warehouse Material Handling and Optimization**

Ahmed Zainul Abideen, Lecturer, Faculty of Transport and Logistics, Muscat, Sultanate of Oman

## Senior Design Project sponsored by Tooling Tech Group 3:00 – 4:00 pm

Chair: Dr. Salah Haridy, Associate Professor, Department of Industrial Engineering and Engineering Management, University of Sharjah

### **ID 499 Data-Driven Analysis of Ticket Options in the Airline Industry**

Zainab Alshammari, Fatemah Maarafi, Khuloud AlMutairi, Danah AlYousef, Farah Bohamad and Ethem Canakoglu, College of Engineering and Technology, American University of the Middle East, Kuwait

### **ID 405 Enhancing Saudi Arabia Railways Signalling System Efficiency**

Elana Bahmaid, Layan AlEssa, Maha AlThenyan and Nourah AlHudaithi, Princess Nourah Bint Abdulrahman University (PNU), Saudi Arabia

### **ID 544 Cost-Effective Air-to-Ground System and Network Design for 5G Inflight Connectivity in the Kingdom of Saudi Arabia**

Danah Al Ateeq, Rawan Alomari, Aram Albulayhid, Manar Alkahtani, Eman Alhuthayl and Yazan M. Allawi, Department of Electrical Engineering, College of Engineering, Princess Nourah bint Abdulrahman University, Riyadh 84428, Saudi Arabia

## **2:00 – 3:45 pm, MONDAY**

## **Onsite Room 4**

Session Chair: Dr. Mohammad Shamsuzzaman, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah

## Undergraduate Paper Competition sponsored by Siemens

### **ID 400 Improving the Operational Efficiency at a Manufacturing Facility by Using Lean Techniques: A Case Study at Shams Factory**

Osama AL-Qahtani, Abdulrahman Almotairi, Mohammed Alamodi and Dr. Alaa Momena, Prince Sattam bin Abdulaziz University College of Engineering, Industrial Engineering Department, Saudi Arabia

### **ID 439 Increasing Production Capacity Plan Via Smart Scheduling Systems Using Lean Tools**

Faisal A Alqahtani, Mohammed S Altamimi, Mohammed A Aldossary and Dr. Ahmed M. Abed, Prince Sattam Bin Abdulaziz University, College of Engineering, Industrial Engineering Department, Saudi Arabia

### **ID 449 Occupational health and safety management system for an automotive paint sales company based on the international standard ISO 45001-2018**

Jorge Pacheco Zevallos, Maribel Espinoza Noa, Nicol Flores Ruiz, Ariet Salvatierra Hilares and Dr. Juan Jacinto Gomez Meza, Professional School of Industrial Engineering, Ricardo Palma University, Santiago de Surco, Lima, Perú

### **ID 62 Rauvolfia Serpentina (Serpentina) And Peperomia Pellucida (Pansit-Pansitan) As an Antiparasitic Spray Against Rhipicephalus Sanguineus Latreille (Common Ticks)**

Mahmooda Azizah Bhatti, Bulacan State University, Philippines

### **ID 142 Seaweed Bioplastic Air Columns as a Sustainable Alternative to Plastic Bubble Wrap**

Lara Mae L. Guelas, Denielle M. Santos and Reinnan Carl C. Cediño, 4th Year Industrial Engineering Students, College of Engineering, University of Perpetual Help System Dalta Calamba, Calamba City, Laguna, Philippines  
Dr. Antoniette T. Mollejon, Research Adviser & Department Head, Industrial Engineering Department, College of Engineering, University of Perpetual Help System Dalta Calamba, Calamba City, Laguna, Philippines

### **ID 260 Two-dimensional modeling of aquatic surfaces based on obstacle detection and distance measurement using ultrasound**

Diego Cerna and Bryan Vega, Professional School of Mechatronic Engineering, Engineering faculty, Ricardo Palma University, Lima, Peru  
Mario Chauca, Engineering Research for Science and Technology research group (ERSTECH), Ricardo Palma University, Lima, Peru

## **2:00 – 3:45 pm, MONDAY**

## **Onsite Room 5**

Session Chair: Dr. Hamdi Bashir, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah, UAE

## Human Factors and Ergonomics Competition sponsored by CINTAS

### **ID 124 Reconnoitering Perceived Knowledgeability of Environmental Conservation Initiatives, Participation and their Adaptive Strategies at KwaZulu-Natal, South Africa**

Nwachukwu, T.P.T, Faculty of Education, Department of Educational Management and Policy Studies, University of Pretoria, South Africa  
College of Science, Graduate Institute of Sustainability Management and Environmental Education, National Taiwan Normal University, Taipei, ROC, Taiwan

Akpagu, F. C., Department of Geography and Environmental Studies, University of Zululand, KwaDlangezwa, 3886, South Africa

Moyo, I, Department of Geography and Environmental Studies, University of Zululand, KwaDlangezwa, 3886, South Africa

### **ID 497 Digital Human Modeling (DHM) to Overcome Ergonomic Challenges at Warehouses in Kuwait**

Areej Almarri, Hessah Almutairi, Modhawi Albaqmi, Khadija Alyousef, Ruqayah Alqadheeb, Karim Abbady and Suat Kasap, College of Engineering and Technology, American University of the Middle East, Kuwait

**ID 19 Exploration of green ergonomics utilising the system dynamics approach with the lenses of 5.0**  
Carol Dineo Diale, Rhodes University, South Africa

**2:00 – 3:45 pm, MONDAY**

**Industry 4.0 and Healthcare**

**Online Room 6**

Session Chair: Nardjesse BENSEKHRIA, University of Batna 2, Algeria

**ID 86 Exploring the Manufacturability and Quality of Small-Scale hole via Fused Deposition Modeling Technology**  
Wadea Ameen, Industrial Engineering Department, College of Engineering and Architecture, Alyamamah University, Riyadh-11512, Saudi Arabia

**ID 505 The Just Walk Out Technology and its Challenges: An Assessment of Carrefour City Plus Experience**  
Mohammad Khaled Elabed and In-Ju Kim, Department of Industrial Engineering & Engineering Management, College of Engineering, University of Sharjah, Sharjah, UAE

**ID 278 An Enterprise Architecture Approach to Digital Transformation in Small and Medium-Sized Construction Companies**  
Luisa Zambrano, Edison Atencio, Costanza Mariani and Mauro Mancini, Department of Management, Economics and Industrial Engineering Politecnico di Milano, Via Lambruschini 4b, Bovisa, 20156 Milan, Italy  
Edison Atencio, Department of Civil Engineering, Pontificia Universidad Católica de Valparaíso, Av. Brasil 2147, 2340000, Valparaíso, Chile

**ID 259 Enhancing Resilience and Sustainability in Industrial Symbiosis Network with Blockchain Technology**  
Ahmed Mehrem and Bernd Noche, Institute of Transport Systems and Logistics, Factory of Engineering, University of Duisburg-Essen, Forsthausweg 2, 47057 Duisburg, Germany

**ID 92 Healthcare 4.0 technologies for patient transfer in operating theatre rooms – A review**  
Winnie Mutenhabundo, Department of Industrial and Manufacturing Engineering, Harare Institute of Technology, Belvedere, Harare, Zimbabwe  
Department of Industrial and Mechatronics Engineering, Faculty of Engineering and the Built Environment, University of Zimbabwe, P.O Box MP167, Mt Pleasant, Harare, 263, Zimbabwe  
Tawanda Mushiri, Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, University of Zimbabwe, Mt Pleasant, Harare, 263, Zimbabwe  
Brighton Muchini, Department of Clinical Pharmacology, Anaesthesia and Critical Care Medicine, Faculty of Medicine and Health Sciences, University of Zimbabwe, P.O Box MP167, Mt Pleasant, Harare, 263, Zimbabwe

**ID 111 Process Management and Improvement Practises In Healthcare Systems**  
Ahmet Anil Kaya, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey  
Gülce Karaçay, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey  
Özgür Erol-Yeşilsirt, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

**ID 120 Estimating Midwifery Staffing Needs in a Maternity Ward Using the Workload Indicators of Staffing Need (WISN) Method**  
N Bensekhria and W Benhassine, Faculty of Medicine, University of Batna 2, Algeria

**ID 528 A Digitalization Framework for Real-time Large-scale Production Scheduling**  
Neha Kadu, Shankar Prawesh and Avijit Khanra, Department of Management Sciences, Indian Institute of Technology, Kanpur, India  
Naoyuki Fujiwara, Yuichi Koga and Yosuke Watanabe, Digital Innovation Headquarters, 0360074 Mitsubishi Heavy Industries, Ltd., India

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## February 12, 2024 (Monday) - Session: 4:00 – 5:45 pm

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**4:00 – 6:30 pm, MONDAY**

**Onsite Room 1**

### TOYOTA KATA Workshop

The Secret Sauce for Toyota Production System

**Dave Harry**

Retired U.S. Naval Aviator and CEO of Process Whisperer® Consultants LLC, Greeneville, Tennessee, USA  
ASQ certified Six Sigma Black Belt and A PMI certified PMP®

**4:00 – 5:45 pm, MONDAY**

**Onsite Room 2**

### Using Assessment to Improve Student Learning and Curriculum Workshop

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

Professor Emeritus and Past Chair, Department of Industrial and Manufacturing Engineering  
Past Dean of Graduate School, Wichita State University, Kansas, USA

**4:00 – 5:45 pm, MONDAY**

**Onsite Room 3**

Session Chair: Aalok Kumar, Assistant Professor, Production and Operations Management, Indian Institute of Management, Visakhapatnam, India

## High School STEM Competition



**ID 378 A Little Bit of Sun Fight Dementia in Arab Women: A Systematic Review**

Qamar Bader Helal Obaid Bin Helal Alalili and Lindall Elaine Adams, Institute of Applied Technology, United Arab Emirates

**ID 380 Exploring the Blurry Vision After Zero Graffiti Phenomenon**

Musabbah Ahmed Musabbah Alzahmi and Lindall Adams, Institute of Applied Technology, United Arab Emirates

**ID 381 Revealing the Enigmatic Influence of AI on Student Writing: Exploring its Implications for ESL Learners**

Manal Mohammad Adam Rahm and Lindall Adams, Institute of Applied Technology, United Arab Emirates

**ID 382 Climate Change and Rocket Launches: The Impact of Space Travel on the Ozone Layer**

Musabbah Ahmed Alzahmi and Lindall Adams, Institute of Applied Technology, United Arab Emirates

**ID 383 Safe your house with Tetra Pak**

Khadija Khalifa Humaid Bin Aran Al Ali, Hessa Ebrahim Darwish Alshahin Alharmi and Lindall Adams, Institute of Applied Technology, UAE

**ID 384 Imperilled Royalty: The Emperor Penguin's Battle Against Melting Ice and Extinction: A Systematic Review**

Salamah Ahmed Saeed Rashed Alsereidi and Lindall Adams, Institute of Applied Technology, United Arab Emirates

**ID 385 From cafeteria to carbon footprint: UAE student-led initiatives tackling the food waste dilemma and climate change**

Salim Ali Sultan Almakri Alali, Hamad Salim Juma Hamad Alaleeli and Lindall Adams, Institute of Applied Technology, United Arab Emirates

**ID 386 Clouded Minds and Fading Grades: The Alarming Nexus Between Adolescent Vaping in the UAE, Cognitive Deficits, and Academic Struggles – Systematic Review**

Khalifa Salim Obaid Ghurair Alketbi, Lindall Adams, Huwaidin Salim Meadad Huwaidin Alketbi and Ahmed Obaid Suwaidan Alkaabi, Institute of Applied Technology, United Arab Emirates

**ID 387 Supplement Misadventure: The Overuse of Fat-Soluble Vitamins in Women**

Khawla Haytham Atef Alyafei, Aamnah Jamal Abdullah Aljallaf Alzaabi, Fatmah Khaled Hamad Alkhaaldi and Lindall Adams, Institute of Applied Technology, United Arab Emirates

**ID 611 Safety and Quality Improvement of Bangladesh Ready Made Garments Industry using Lean Systems**

Rubana Ahmed, MBA Student, Central Women's University, Dhaka, Bangladesh and Assistant Marketing Manager, IEOM Society, USA

Rhijan Parves, Student of Commerce, Notre Dame College, Dhaka, Bangladesh

Md Aqib Islam Chowdhury, Director of IEOM Bangladesh Operations, IEOM Society International, Dhaka, Bangladesh

Ahad Ali, Department of Mechanical, Robotics and Industrial Engineering, Lawrence Technological University, Southfield, Michigan, MI, USA

**4:00 – 5:45 pm, MONDAY****Onsite Room 4**

Session Chair: Dr. Mahmoud Awad, Associate Professor, Department of Industrial Engineering, American University of Sharjah, UAE

**Undergraduate Research Competition sponsored by Daikin Applied****ID 44 Cooling Comfort with Less Cost: A Experimental Analysis on Ceiling Fan Energy Efficiency**

Rupesh Bhortake, Marathwada Mitramandal Institute of Technology, Pune, India

Jai Bhortake, Veermata Jijabai Technological Institute, Mumbai, India

**ID 510 Application of Industrial Engineering Tools for Improving Performance of Oil and Gas Factory**

Mahmoud Z. Mistarihi, Department of Mechanical and Industrial Engineering, Faculty of Engineering, Liwa College, Abu Dhabi, UAE

Department of Industrial Engineering, Hijjawi Faculty for Engineering Technology, Yarmouk University, Irbid 21163, Jordan

Nasser Albreiki, Omar Albreiki, Ahmed AL Aleeli, Abdulla AL Menhali, Yousef Alzaabi and Mohammed Al suweedi, Department of Mechanical and Industrial Engineering, Faculty of Engineering, Liwa College, Abu Dhabi, United Arab Emirates

**ID 455 Breaking the Glass Ceiling: Examining Strategies and Government Initiatives for Advancing Emirati Women in the UAE Industrial Sector**

Jamal Al Memari, Mariam Al Remeithi, Helal Alakberi, Khaled Al Swaidi and Khaoula Khlie, Industrial Management Department, Faculty of Business, Liwa College, Abu Dhabi, United Arab Emirates

**ID 233 Enhancing Healthcare Supply Chain Resilience in the UAE: Strategies for Navigating Uncertainty**

Layal Ehab Eshaq, Fizza Hasan and Jagroop Singh, College of Healthcare Management and Economics, Gulf Medical University, Ajman, UAE

**ID 593 Assessment of Perceptions Versus Reality: A Comparative Study of Air Quality Levels in Kuwait**

Zainab Alsabt, and Takeaki Toma, Faculty of Industrial Engineering, College of Engineering and Technology, American University of the Middle East, Egaila, Kuwait

**ID 657 Renewable Energy Integration Strategy Development for Dubai South**

Oshba AlMheiri, Dubai South, UAE

**4:00 – 5:45pm, MONDAY****Onsite Room 5**

Session Chairs:

Dr. Hamdi Bashir, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah, UAE

Dr. Erialdi Syahrial, Senior Lecturer, Faculty of Management, Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia

## Doctoral Dissertation Competition sponsored by Airbus

**ID 177 A Hybrid Approach to Prescribe a Dynamic Operational Location for Stationing a Delivery Truck of LPG Cylinder for Efficient Last Mile Delivery**

Prithvirajan D and Mathirajan M, Department of Management Studies, Indian Institute of Science, Bangalore 560012, India

**ID 376 Antecedents for Adoption of Additive Manufacturing in the Healthcare Sector and its Impact on Performance**

Jaya Priyadarshini and Rajesh Kumar Singh, Management Development Institute, Gurgaon, Haryana, India

**ID 451 Charging Planning Model for Electric Vehicles Based on Range Prediction**

Hilal Yılmaz, Assist. Department of Industrial Engineering, Bursa Technical University, Bursa, Turkey

**ID 500 Critical Issues Hindering the Implementation of Digitalisation In the Insurance Industry of South Africa: The Application of Delphi Technique**

Linda Malifete, Dept of Quality and Operations Management, University of Johannesburg, Johannesburg, South Africa

Samuel Adekunle, Department of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, South Africa

Clinton Aigbavboa, Department of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, South Africa

**ID 367 Culture Management Framework Towards the Philippine Coast Guard Strategic Organizational Performance: Mediating and Moderating Role of Personnel Commitment and Competence**

Dr. Febwin E Villaceran, Wesleyan College of Manila, Philippines

**ID 11 Effect of Foreign Direct Investment on Income Inequality in Sub Saharan Africa**

Danladi Bashir, Department of Economics, Bauchi State University, Gadau, Nigeria

Dr. Auwal Yahaya Tilde, Senior Lecturer, Department of Economics, Bauchi State University, Gadau, Nigeria

**ID 258 Integration of Human Error and Knowledge Management in Major Hazard Accident Prevention in Oil and Gas Exploration and Field Development**

Ahmad Soyuti Haji Sabran, Sapura Offshore Sdn Bhd, Malaysia

**ID 31 Ranking of Vital Enablers Impacting Lean Production System in SME through Integrated MCDM Approaches**

S. Bharath Sankar and Muthu Mathirajan, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, Karnataka, India

**ID 357 Support Vector Machine with Fused Synthetic Minority Over-Sampling Technique for Predicting Student's Employability**

Cherry D. Casuat, Doctor of Engineering, Graduate Studies, Technological Institute of the Philippines, Quezon City, Philippines

Professor, Computer Engineering, Polytechnic University of the Philippines, Sta. Mesa, Manila, Philippines

Enrique D. Festijo, Adviser, Graduate Studies Technological Institute of the Philippines, Quezon City, Philippines

Ruji P. Medina, Dean, Graduate Studies Technological Institute of the Philippines, Quezon City, Philippines

Julius S. Cansino, Program Chair, Computer Engineering, Polytechnic University of the Philippines, Sta. Mesa, Manila, Philippines

**4:00 – 5:45 pm, MONDAY**

**Lean**

**Online Room 6**

Session Chair: Jannette Perez Barbosa, Universidad Ana G. Méndez-Gurabo Campus, Gurabo, Puerto Rico, United States

**ID 362 Achieving Excellence in SMEs: A Deep Dive into Six Sigma Methodologies for Process Improvement**

Hossein Soltani, Department of Manufacturing Engineering Technology, Minnesota State University, Mankato, MN 56001, USA

Kuldeep Agarwal, Department of Manufacturing Engineering Technology, Minnesota State University, Mankato, MN 56001, USA

**ID 320 The Power of Testing Parameter on The Specified Continuous Distributions**

Budi Pratikno, Alfa Annisa Pratama, Dian Permana, Jajang, Mashuri and Agustini Tripena Br. Sb, Department of Mathematics, Faculty of

Mathematics and Natural Science, Jenderal Soedirman University, Purwokerto, Indonesia,

Jl. Dr. Soeparno 61 Karangwangkal, Purwokerto, Banyumas, 53122, Central of Java, Indonesia

**ID 112 Simulation-Based Automated Non-Stress Test Device Development Using Systematic Approach**

Gülce Karaçay, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

Ahmet Anıl Kaya, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

Özgür Erol-Yeşilsirt, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

**ID 537 The impact of culture and national leadership on Operational Excellence maturity: case study of the automotive sector in Morocco**

Mohammed Hamoumi, Mariam Benhadou and Abdellah Haddout, Industrial Management and Plastics Forming Technology Team Mechanics,

Engineering and Innovation Laboratory, LM2I, National High School of Electricity and Mechanics – ENSEM- Hassan II University, Casablanca,

Morocco

**ID 532 Evaluating the Research Development on Critical Success Factors for Lean Six Sigma Implementation**

Guilherme Bolzan Cieto, MSc Student, Department of Industrial Engineering, São Carlos School of Engineering, University of São Paulo (USP)

São Carlos, São Paulo, Brazil

Roberto Antonio Martins, Professor, Department of Industrial Engineering, Federal University of São Carlos (UFSCar), São Carlos, SP, Brazil

**ID 652 Strategies to Enhance Energy Efficiency of HVAC Airside System of Commercial Buildings in Sri Lanka**

P A P Y Gajaba and Piumi Dissanayake, Department of Facilities Management, University of Moratuwa, Sri Lanka

## February 13, 2024 (Tuesday)

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**February 13, 2024 (Tuesday) - Session: 8:00 – 9:30 am**


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**8:00 – 9:30 am, TUESDAY****Plenary II****Onsite Room 1**

Session Chair: Professor Sulaiman Al-Zuhair

8:00 – 8:20 am

Sajid Anwar, Ph.D.  
 Professor of Computer Science  
 Institute of Management Sciences  
 Peshawar, Pakistan

8:20 – 8:40 am

K.M. Sharath Kumar, Ph.D.  
 Professor & Head – Management and Commerce  
 (Supply Chain Management and DEA)  
 Ramaiah University of Applied Sciences  
 Bangalore – 560 054, India

8:40 – 9:00 am

Dr. Umar Asghar  
 Discipline Leader (Civil and Mechanical Engineering)  
 Assistant Professor, School of Engineering  
 University of Wollongong Dubai (UOWD), UAE

Topic: Additive Manufacturing

9:00 – 9:20 am

Professor Sulaiman Al-Zuhair  
 Professor of Chemical Engineering  
 Assistant Dean for Research and Graduate Studies  
 College of Engineering  
 United Arab Emirates University, UAE

Talk Title: Utilization of enzymes for enhanced CO2 removal and conversion

9:20 – 9:40 pm

**8:00 – 9:30 am, TUESDAY****Onsite Room 2**


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**Global Lean Six Sigma and Operations Excellence**


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Session Chair: Venkata Seshachala Sarma Yadavalli, University of Pretoria, South Africa

**ID 230 Increase in Productivity of the Iron Ore Loading Terminal**

Ana Georgia Viana Pestana, Analyst in Operational Excellence, Carajás Railway (EFC) - North Corridor - VALE S.A., São Luís, MA – Brazil  
 Fabio Pereira da Costa, Senior Engineer, Railway Operation EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Fernando Nunes da Silva, Operational Analyst, Operational reliability of EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Gerisval Alves Pessoa, Specialist in Operational Excellence, Carajás Railway (EFC) - North Corridor - VALE S.A., São Luís, MA – Brazil  
 Jamison Miranda Souza, Supervisor of Railway Operations, Railway Operation EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 José Magno Martins Pereira, Operational Analyst, Railway Engineering of EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Manoel Maciel da Silva de Araujo, Yard Control Center Coordinator, Railway Operation EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Thiago Cardoso Nunes, Inspector Mentor, Railway Operation EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Thiago de Oliveira Pinheiro, Operations Manager, Railway Operation EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Valdeilton Nunes Sobrinho, Mine Operations Supervisor, Railway Operation EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil

**ID 23 Mixed Pull and Push Approaches for Improving Yarn Production System (Kombolcha Textile Share Company Spinning Department)**

Abebe Shimelis Kassaye, Addis Ababa University Institute of Technology, School of Mechanical and Industrial Engineering, Industrial Engineering Stream, Addis Ababa, Ethiopia

**ID 271 Optimizing Work Processes: A Comparative Study of Lean and Work Study Principles**

Kemlall Ramdass, Professor, Department of Industrial Engineering, School of Engineering, College of Sciences Engineering and Technology University of South Africa (UNISA), Pretoria, South Africa  
 Ngaka Mosia, Lecturer, Department of Industrial Engineering, School of Engineering, College of Sciences Engineering and Technology University of South Africa (UNISA), Pretoria, South Africa

**ID 126 Energy Efficiency of Carajás Railway**

Fernando Nunes da Silva, Operational Analyst, Operational reliability of EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil  
 Denio Oliveira da Fonseca, Operational Analyst, Railway Engineering of EFC, Carajás Railroad to Vale S.A., São Luís, MA – Brazil



Gerisval Alves Pessoa, Specialist in Operational Excellence, Carajás Railway (EFC) - North Corridor - VALE S.A., São Luís, MA – Brazil  
Francisco Alves de Araujo Filho and Andre de Araujo Pereira e Abdo Fran Frances de Sousa, Inspector Mentor, Railway Operation EFC, Carajás Railroad to Vale S.A., Av. dos Portugueses, S/N Anjo da Guarda, CEP 65085 580 São Luís, MA – Brazil

**ID 210 Application of QC Tools for Defect Analysis in a Heavy Fabrication Industry- A Case study**

Pravin P. Tambe, Faculty of Operations Management and Decision Sciences, Indian Institute of Management Tiruchirappalli, Tiruchirappalli, India

**ID 220 An Exploratory Investigation on the Circular Economy Framework for the Electric Vehicle Battery Industry**

Dr. Balakrishnan. A.S, Director - Material Planning and Logistics, Silverton Assembly Plant, Ford Motor Co. Southern Africa Private Limited, Simon Vermooten Road, Silverton, Pretoria – 0001. South Africa  
Usha Ramanathan and Ramakrishnan Ramanathan, Professor, College of Business Administration, University of Sharjah, Sharjah, UAE

**ID 149 Melting Nonconductive Pig Iron in an Induction Furnace With the aid of Graphite as a Susceptor: Focusing on Melt Loss Analysis**

Fabrizio Canei, Metal Casting Technology Station, University of Johannesburg, Johannesburg, South Africa

**ID 181 A study of a 2-unit cold standby repairable system operating in a multi-level environment**

Venkata Seshachala Sarma Yadavalli, University of Pretoria, South Africa

**ID 401 The Integration of Water Desalination in Modern Energy System**

Ibrahim AlHajri, Professor, Department of Chemical Engineering, Technological Studies College, PAAET, Kuwait  
Ali Ahmadian, Visiting Professor, Department of Chemical Engineering, University of Waterloo, Waterloo, Canada

**8:00 – 9:30 am, TUESDAY Project Management and Engineering Management Onsite Room 3**

Session Chair: Dima Jawad, Faculty of Engineering and Applied Science, Ontario Tech University, Oshawa, Ontario, Canada

**ID 133 Benchmarking Engineering Management Graduate Program at the Onset of the AI Era**

Dima Jawad, Associate Professor, Engineering Management Graduate Program, Faculty of Engineering and Applied Science, Ontario Tech University, Oshawa, Ontario, Canada

**ID 22 Big Data Analytics and Supply Chain Management: A Mediating Role of Inventory Management**

Dr. Olusegun Kazeem Lekan and Prof. Oladejo Lukman Gbolagade, Department of Business Management, Faculty of Management Sciences, Federal University Dutsinma, Katsina, P.M.B.5001, Katsina State., Nigeria

**ID 139 Organizational culture and innovation in aerospace industry's SMEs in Mexico**

Christian Muñoz-Sánchez, Dulce María Monroy-Becerril, Jorge Alejandro Silva Rodríguez de San Miguel and Eugene Hakizimana, Business School (ESCA-STO), National Polytechnic Institute of Mexico (IPN), Mexico City, Mexico

**ID 17 Unbalanced Bidding in the Jordanian Construction Industry**

Khaled Hesham Hyari, Professor, Department of Civil Engineering, Faculty of Engineering, The Hashemite University, Zarqa, Jordan  
Thamer Alamayreh, Mostaqbal Engineering & Environmental Consultants, Amman, Jordan

**ID 363 A Value Chain Approach Turning Ga-Lekgothoane Village into a Home of Sweet Potato Yoghurt**

Sebonkile C. Thaba, Department of Transport and Supply Chain Management, School of Management, University of Johannesburg, South Africa  
Charles Mbohwa and Nelson Madonsela, Department of Quality and Operations Management, University of Johannesburg, South Africa

**ID 343 Attentive or Not? Early Detection of Inattentiveness among Construction Site Workers Using Affective Computing and Machine Vision**

Antonieta T. Mollejon, Professor & Department Chair, Industrial Engineering Department, University of Perpetual Help System Dalta, Calamba, Laguna, Philippines  
Cherry D. Casuat, Professor, Computer Engineering, University of Perpetual Help System Dalta, Calamba, Laguna, Philippines  
Roselle P. Alviar, Professor and Dean, College of Engineering, University of Perpetual Help System Dalta, Calamba, Laguna, Philippines  
Edison III Bengco, Professor and Department Chair, Electronics Engineering, University of Perpetual Help System Dalta, Calamba, Laguna, Philippines  
LTC Alan P. Sillacay, Military Servicemen, Philippine Army, Fort Bonifacio, Taguig City, Philippines

**8:00 – 9:30 am, TUESDAY Global Supply Chain Management Onsite Room 4**

Session Chair: Sana Latif, American University of Sharjah, Sharjah, UAE

**ID 137 A Simulation-Optimisation Approach to Assess the Impact of Covid-19 Movement Control Orders on Supply Chains**

Cheng Jia Yan, Hawa Hishamuddin, Hilmi Hisyam Naimin, Noorhelyna Razali, Nizaroyani Saibani and Mohd Nizam Ab Rahman, Department of Mechanical Engineering and Manufacturing, Faculty of Engineering and Built Environment, Universiti Kebangsaan Malaysia, Selangor, Malaysia

**ID 298 Agri-Food Supply Chain and Crisis Management Resilience needs and future research avenues**

Valérie Jean, Professor, Management science department, University of Quebec at Rimouski, Lévis, Quebec, Canada  
Anissa Frini, Research professional, Management science department, University of Quebec at Rimouski, Lévis, Quebec, Canada

**ID 424 An Automated Supplier Ranking Mechanism for a B2B e-Commerce Platform**

Minakshi Kumari, Assistant Professor, Department of Mechanical Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi, India  
Nikhil Beniwal, Internal Business Strategist, DS Group, India

**ID 91 An Insight into Tasnee's Supply Chain Strategy for Polymer Products**

Bandar S. Aljabri, Abdullah A. Alsaleh and Mohamed S. Alkahtani, Department of Industrial Engineering, College of Engineering, King Saud University, P.O. Box 800, Riyadh 11421, Saudi Arabia

**ID 65 Challenges and Opportunities in Implementing Digital Solutions in Cold Chain Logistics in Oman**

Ali al Kalbani, Senior Lecturer, Middle East College, Muscat, Oman  
 Dr. Reason Masengu, Senior Lecturer, Middle East College, Muscat, Oman  
 Jowhara al Habsi, Lecturer, University of Technology and Applied Sciences, Muscat Oman

**ID 8 Component Procurement under Unobservable Contracts**

Ehsan Bolandifar, HSBC Business School, Peking University, China

**ID 292 A Systematic Literature Review: Exploring Healthcare Supply Chain Risk Management, Resiliency, and Future Research Implications**

Sana Latif, American University of Sharjah, Sharjah, UAE

**8:00 – 9:30 am, TUESDAY**

**Sustainable Supply Chain and Manufacturing**

**Onsite Room 5**

Session Chair: Rajeev A, Department of Operations & Quantitative Techniques, Indian Institute of Management Raipur, Raipur, India

**ID 327 Green Logistics and Sustainable Innovation: Strategic Solutions in The Market of Sultanate of Oman**

Sultan Alkaabi, Operation Manager, KWMS. Muscat, Sultanate of Oman, Oman  
 Abu Bakar Abdul Hamid, Professor, Faculty of Business Information and Human Science, Infrastructure University Kuala Lumpur, Malaysia  
 Samar Algalebi, Head sustainability strategy and Growth, Falak Tayyeb Platinum Government Services L.L.C Dubai, UAE  
 Issa Alrawahi, Operation Manager, Operation Department. Etihad Airways. Abu Dhabi, UAE

**ID 454 Identifying a Catalyst for Enterprise Competitiveness Using Supplier Selection Criteria – Case from Family-owned Enterprise Manufacturers**

Ndivhuwo Nemtajela, Lecturer, Department of Operations Management, College of Economic and Management Sciences, University of South Africa, Pretoria, South Africa  
 Jan-Harm Christiaan Pretorius and Andre Vermeulen, Department of Engineering Management, Faculty Engineering and the Built Environment University of Johannesburg, Johannesburg, South Africa

**ID 418 Impact of Sustainable Supply Chain Practices on Firm Performance: A Configurational Study**

Rajeev A, Assistant Professor, Department of Operations & Quantitative Techniques, Indian Institute of Management Raipur, Raipur, India

**ID 66 Sustainable Supply Chain Performance in Emerging and Developing Economies (EDEs)**

Goitom Abera Baisa, Ph.D. Student, Faculty of Engineering and Technology, Liverpool John Moores University, UK  
 Dante Benjamin Matellini, Faculty of Engineering and Technology, Liverpool John Moores University, UK

**ID 87 Realizing the Dynamic Capabilities of Manufacturing Organizations through Total Quality Management - An Empirical Primary Results**

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

**ID 145 The Entrepreneurship Factor in North Sumatera Sustainable Tourism Development**

Hafiza Adlina, Business Administration, Social Science and Political Science, University of Sumatera Utara, Medan, Indonesia  
 Feronica and Dyki, Business Administration, Social Science and Political Science, University of Sumatera Utara, Medan, Indonesia

**ID 146 Size Controlled Palladium Nanoparticles for Liquid Phase Transfer Dehydrogenation of Alcohols**

Reem AlBilali, Assistant Professor of Physical Chemistry, Department of Chemistry, College of Science, Imam Abdulrahman Bin Faisal University, P.O. Box 1982, Dammam 31441, Saudi Arabia

**ID 534 Circular procurement roadmap development for construction industry: Developing nation context**

Vidyasagar Gembalia, PhD Student, Production and Operations Management area, Indian Institute of Management Visakhapatnam 530003 India  
 Aalok Kumarb, Assistant Professor, Production and Operations Management area, Indian Institute of Management Visakhapatnam 530003 India  
 PRS Sarma, Associate Professor, Production and Operations Management area, Indian Institute of Management Visakhapatnam 530003 India

**8:00 – 9:40 am, TUESDAY**

**Case Studies**

**Virtual Room 6**

Session Chair: Deeder Aurongzeb, Dell Technologies, United States

**ID 297 Parametric connection of biosphere index to industrial process for sustainable industrial growth**

Deeder Aurongzeb, Dell Technologies, United States

**ID 359 Flexibility in Energy Systems to Integrate Renewable Energy into Grid**

Md Mizanur Rahman, Universiti Teknologi Malaysia, Australia

**ID 180 Illuminating Efficiency: A Deep Dive into the Performance and Characteristics of 9W LED Illuminator**

Fakir Sheik Zihad, Manager (Product Development), Super Star Group, Engineer, Master's in Industrial Engineering, Lamar University, Beaumont, Texas, USA  
 Asif Mohammad Mithu, Graduate Research Assistant at Biomedical Signals, Systems and Analysis Laboratory, Ph.D. in Electrical Engineering Villanova University, Villanova, Pennsylvania, USA  
 Mehrab Masayeed Habib, Engineer, Master's in Electrical Engineering, Lamar University, Beaumont, Texas, USA

Mrinmoy Sen, Manager (Product Development), Super Star Group, Engineer, BSc. In Mechanical Engineering, Rajshahi University of Engineering & Technology, Rajshahi, Bangladesh

Md. Yasin Arafat, Engineer, Master's in Industrial Engineering, Lamar University, Beaumont, Texas, USA

**ID 28 Maintenance model based on Lean and TPM to increase machine availability in an SME in the plastic sector**

Jorge Sebastian Abad-Mendoza, Faculty of Engineering and Architecture, University of Lima, Perú

Miguel Angel Palga-Condori, Faculty of Engineering and Architecture, University of Lima, Perú

Martin Fidel Collao-Díaz, Research Professors, Faculty of Engineering and Architecture, University of Lima, Perú

**ID 218 Mediating Role of Entrepreneurial Motivation Between Individual Entrepreneurial Orientation Factors, Self-Efficacy and Entrepreneurial Intention in the UAE**

Khaled Mohammed Khalfan, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, Johor, Malaysia

Khadijah Md Ariffin, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

**ID 57 Net Zero Carbon Retrofitting of Existing Buildings – A Bibliometric Study**

Lichini Nikesha Kumari Weerasinghe, Amos Darko and Albert P.C. Chan, Department of Building and Real Estate, The Hong Kong Polytechnic University, Hong Kong

**ID 582 Occupational Safety Model in Maintenance Operations: A Case Study of a Service Company**

Marolim Chavez Vasquez, Mateo Bresani Doig and Rafael Villanueva Flores, Universidad De Lima, Peru

**ID 587 Downtime Analysis of a Mayo Bottling Line during the Ramp-Up Period: A Case Study**

Dima Jawad, Associate Professor, Department of Mechanical and Manufacturing Engineering, Ontario Tech University, Oshawa, ON, Canada

Peter El Khoury, Department of Mechanical and Manufacturing Engineering, Ontario Tech University, Oshawa, ON, Canada

**ID 169 Developing Parent Company Centralized Project Management Office (PMO) Services to Enforce Project Management Practice in Multiple Subsidiaries, Study of Pertamina Central Project Management**

Misbah Burhanudin, Project Management Office Upstream PT Pertamina Persero, Industrial Engineering, Bandung Institute of Technology, Indonesia

Dian Vita Alpha Suandi, Project Management Office Downstream PT Pertamina Persero, Industrial Engineering, Energy Management Executive MBA, Bandung Institute of Technology, Indonesia

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## February 13, 2024 (Tuesday) - Session: 9:40 am – 1:00 pm

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### Keynote Speakers

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9:40 am Keynote V:

**Dr. Farouk Yalaoui**

Senior Director (Vice President) for Research and Full Professor  
University of Technology of Troyes (UTT), Troyes, France

10:20 am Keynote VI:

**Javed Cheema**

Global Director of Lean Enterprise  
Neapco Drivelines, Belleville, Michigan, USA

11.00 am Keynote VII:

**Dr. Andrei Sleptchenko**

Associate Professor, Department of Industrial and Systems Engineering  
Management Science and Engineering, Khalifa University, Abu Dhabi, UAE

11:40 am Keynote VIII:

**Dr. Shahram Taj**

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

**ID 503 Data Science Solutions for the Greater Good: Contributing to Broadband Connectivity Planning**  
Shahram Taj and Rei Sanchez-Arias, Florida Polytechnic University, Lakeland, FL 33805, USA



12:20 pm, Tuesday, Feb 13, 2024

### IEOM Student Chapters of the Year Presentations

12:20 – 12:40 pm

IEOM KFUPM Student Chapter – Industrial and Systems Engineering (ISE) Department, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia –  
<https://ieomsociety.org/ieom/kfupm/>

12:40 – 1:00 pm

IEOM ZAG Student Chapter – Industrial Engineering Department, Zagazig University, Egypt –  
<https://ieomsociety.org/ieom/zag/>

11:00 – 1:00, TUESDAY

Supply Chain, Logistics and Waste

Onsite Room 2

Session Chair: Iman Noor, Institute of Geographic Information Systems, National University of Sciences and Technology, Islamabad, Pakistan

**ID 590 Block chains and its future in reverse logistics in Southern Africa: A bibliographical approach**  
Tatenda Talent Chingono, University of Johannesburg, South Africa

**ID 591 Bibliometric analysis and Visualization of reverse logistics and Block chains in Southern Africa**  
Tatenda Talent Chingono, University of Johannesburg, South Africa

**ID 561 A Fuzzy Multi-Objective Model for Green Closed-Loop Supply Chain Network Design with Transshipment**  
Sepideh Aghajani, PhD, Department of Industrial Engineering, Faculty of Engineering, Alzahra University, Tehran, Iran  
Mehdi Seifbarghy, Associate Professor, Department of Industrial Engineering, Faculty of Engineering, Alzahra University, Tehran, Iran

**ID 619 Artificial Intelligence-Driven Predictive Analysis for Optimizing Food Supply Chain Operations**  
Hadeel Ali S. Mudhish, Industrial and Systems Engineering, Princess Nourah Bint Abdul Rahman University, Saudi Arabia  
Sara Abdulrazzak S. Alkuait, Industrial and Systems Engineering, Princess Nourah Bint Abdul Rahman University, Saudi Arabia  
Sara Tariq M. Alyaeesh, Industrial and Systems Engineering, Princess Nourah Bint Abdul Rahman University, Saudi Arabia  
Dr. Ali AlArjani, Associate Professor Industrial Engineering, Prince Sattam Bin Abdulaziz University, Saudi Arabia

1:00 – 2:00 pm

Buffet Lunch - Ballroom

## February 13, 2024 (Tuesday) - Session: 2:00 – 3:45 pm

2:00 – 3:45, TUESDAY

Global Industry Solutions and Industry 4.0

Onsite Room 1

Session Chair: Jaya Priyadarshini, Management Development Institute, Gurgaon, Haryana, India

**ID 147 Blockchain Technology Integration with Additive Manufacturing: Analysis of Challenges**  
Jaya Priyadarshini and Rajesh Kumar Singh, Management Development Institute, Gurgaon, Haryana, India

**ID 231 Enhancing Operational Efficiency in Oil and Gas Through I4.0-Enabled Condition-Based Maintenance**  
Liyanage Kapila, Senior Lecturer in Engineering Management, College of Science and Engineering, The University of Derby, Derby, UK  
Onyeme Chinedu, Ph.D. Researcher, College of Science and Engineering, The University of Derby, Derby, UK

**ID 170 Expanding MAM Readiness: Towards A Holistic Model for Metal Additive Manufacturing in the Fourth Industrial Revolution**  
Andrew Couch, Engineering Research Fellow, Stanford University, Stanford, California, USA  
Engineering Research Fellow, National Institute of Standards and Technology, Gaithersburg, Maryland, USA  
Yan Lu, Deputy Chief of Systems Integration Division, National Institute of Standards and Technology, Gaithersburg, Maryland, USA

**ID 256 Industry 4.0 Implementation Barriers for SMEs: A Proposed Decision-Support Model of the Most Appropriate Adoption Route**  
Beryl Amatta and Mouhamad Shaker Ali Agha, Department of Management Science, University of Strathclyde, Glasgow, UK

**ID 174 Navigating the AM Frontier: Strategic Imperatives for Small and Medium-Sized Enterprises**  
Andrew Couch, Graduate Research Assistant, Department of Management Science and Engineering, Stanford University, Stanford, CA, USA  
Engineering Research Fellow, National Institute of Standards and Technology, Gaithersburg, Maryland, USA  
Yan Lu, Deputy Chief of Systems Integration Division, National Institute of Standards and Technology, Gaithersburg, Maryland, USA

**ID 69 Quality Management Software Design for AS9100 Compliance in Defense and Aerospace Advanced Ceramic Manufacturing**  
Tugba Danaci, Fatma Senses VS Business Administration Department, Member, Public University-Industry Collaboration Committee, Kirikkale University, Kirikkale, Turkey and DEDA Technology Investment Ltd, Ankara, Turkey

**ID 166 Restructuring the Supply Chain: Analyzing Additive Manufacturing Implications**

Andrew Couch, Graduate Research Assistant, Department of Management Science and Engineering, Stanford University, Stanford, CA, USA  
 Engineering Research Fellow, National Institute of Standards and Technology, Gaithersburg, Maryland, USA  
 Yan Lu, Deputy Chief of Systems Integration Division, National Institute of Standards and Technology, Gaithersburg, Maryland, USA

**ID 316 Vibration analysis based analytical reliability model for flexible-coupling pins with parallel-misalignment.**  
 Shafiullah Hussain V M, Assistant Professor, National Institute of Advanced Manufacturing Technology, Ranch- 834003. India

**2:00 – 3:45, TUESDAY**

**Onsite Room 2**

## Six Sigma Workshop Dumidu Ranaweera

Global Director APAC, Middle East, Africa & Oceania – Dr Mikel J Harry Six Sigma Management Institute Inc.  
 Chief Executive Officer – Lean Six Sigma Asia LLC, Sri Lanka

**2:00 – 3:45, TUESDAY**

**Quality**

**Onsite Room 3**

Session Chair: Sambil Charles Mukwakungu, Department of Quality and Operations Management, University of Johannesburg, South Africa

**ID 269 The Dynamics of Quality Management System (Qms) in Maintenance Operations**  
 Kemlall Ramdass, Professor, Department of Industrial Engineering, School of Engineering, College of Sciences Engineering and Technology  
 University of South Africa (UNISA), Pretoria, South Africa

Ngaka Mosia, Lecturer, Department of Industrial Engineering, School of Engineering, College of Sciences Engineering and Technology, University  
 of South Africa (UNISA), Pretoria, South Africa

**ID 489 A Review of Digital Twins in Manufacturing for Improving Sustainability and Process Optimizing**  
 Onu Peter and Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment,  
 University of Johannesburg, P. O. Box 524, Johannesburg, South Africa

**ID 488 Circular Economy in Manufacturing: Maximizing Resource Efficiency and Minimizing Waste**  
 Onu Peter and Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and the Built Environment,  
 University of Johannesburg, P. O. Box 524, Johannesburg, South Africa

**ID 132 Downtime Analysis of a Mayo Bottling Line during the Ramp-Up Period: A Case Study**  
 Dima Jawad, Associate Professor, Engineering Management Graduate Program, Faculty of Engineering and Applied Science, Ontario Tech  
 University, Oshawa, Ontario, Canada  
 Peter El Khoury Master of Engineering in Engineering Management, Engineering Management Graduate Program, Faculty of Engineering and  
 Applied Science, Ontario Tech University, Oshawa, Ontario, Canada

**ID 456 Optimizing Hip Implant Quality: A Data-Driven Model for Investment Casting – A Case Study**  
 Janak Suthar, Assistant Professor at Institute of Rural Management Anand, India  
 Jinil Persis, Assistant Professor at IIM Kozikode, India

**ID 223 Role of Delivery Management in attaining Business Excellence through TQM: An Empirical Case Study**  
 Sumit Kumar, Sunil Kumar and Pardeep Gupta, Department of Mechanical Engineering, SLIET, Longowal, Sangrur (Pb), India  
 Prabhkiran Kaur, Department of Mechanical Engineering, IKGPTU, Amritsar Campus, India

**ID 141 Reliability and Maintenance Optimization at a Saudi Glass Production Plant**  
 Meshary F. Alsaif, Fahad B. Al-Askar and Basem A. Alkhaleel, Department of Industrial Engineering, King Saud University, Riyadh, Saudi Arabia

**ID 594 Enhancing Customer Satisfaction in Iron Ore Sample Preparation: A Case Study Utilizing Overall Equipment Effectiveness (OEE) to Assess Laboratory Capabilities**  
 Gloria Mamorena Mokoena, Sambil Charles Mukwakungu and Charles Mbohwa, Department of Quality and Operations Management, University  
 of Johannesburg, South Africa

**2:00 – 3:45, TUESDAY**

**Optimization**

**Onsite Room 4**

Session Chair: Eric Renault, ESIEE, Paris, France

**ID 509 Enhancing Profit Maximization Strategies: A Case Study of the Songket Industry in Indonesia**  
 Yuana Delvika, Mechanical and Industrial Engineering Department, Indian Institute of Technology Roorkee, Uttarakhand, India  
 Industrial Engineering Department, Universitas Medan Area, Indonesia  
 Akshay Dvivedi, Professor, Mechanical and Industrial Engineering Department, Indian Institute of Technology Roorkee, Uttarakhand, India

**ID 110 Establishing Product Quality in The Market Through Flash Sales**  
 Anand Kumar, Assistant Professor, Operations & Quantitative Methods Area, Indian Institute of Management Raipur, Raipur, Chhattisgarh, India

**ID 157 Graph Theoretical Tools for Path Selection in Logistic Problems**  
 Zehra Hafizoglu Gokdag, Phd Candidate & Data Scientist II, HepsiJet, Meclis, Sancaktepe, Istanbul, 34785, Turkey  
 Ayse Humeyra Bilge, Professor, Kadir Has University, Department of Industrial Engineering, Cibali, Kadir Has Street, Fatih Istanbul, Turkey

**ID 209 Job scheduling on Identical Parallel Machines to Minimize Total Tardiness**  
 Pravin P. Tambe, Faculty of Operations Management and Decision Sciences, Indian Institute of Management Tiruchirappalli, Tiruchirappalli, India

**ID 281 Millet Thali (Food Basket) for Transforming Nutrition Intake**

Pratik Badgujar, PhD Research Scholar, Department of Mechanical Engineering, Indian Institute of Technology Delhi, New Delhi, India  
 Nomesh B. Bolia, Professor, Department of Mechanical Engineering, Indian Institute of Technology Delhi, New Delhi, India

**ID 131 The Optimization of the Food-Energy-Water Nexus Framework of Urban Farms with Renewable Energy and Micro Supply Chains**  
 Marwen Elkamel and Luis Rabelo, Industrial Engineering & Management Systems Department, University of Central Florida, Orlando, FL, USA

**ID 296 Optimal quadratic control of queues by dynamic service rates**  
 Eric Renault, ESIEE, Paris, France

**ID 184 Optimal Design of Electrical Vehicle Parking Lots in Distribution Networks with Private Investor Participation in Improving Technical Constraints**  
 Mehrdad Hajizadeh, Hormozgan Electrical Distribution Company, Iran

**2:00 – 3:45, TUESDAY****Operations Management****Onsite Room 5**

Session Chair: Khathu Mushavhanamadi, Senior Lecturer/ Masters Coordinator, University of Johannesburg, South Africa

**ID 34 The Barriers to The Application of Quality Management System (Qms) in South African Manufacturing Organizations**  
 Engr. Festus Uche Uwadia, Dr. Emmanuel Innocents Edoun, Prof. Anup Pradhan and Prof. Charles Mbohwa, Faculty of Engineering and Built Environment, Department of Quality & Operation Management, University of Johannesburg, South Africa

**ID 33 The Benefit's of Quality Management System (Qms) Application on The South African Manufacturing Sectors**  
 Engr. Festus Uche Uwadia, Dr. Emmanuel Innocents Edoun, Prof. Anup Pradhan and Prof. Charles Mbohwa, Faculty of Engineering and Built Environment, Department of Quality & Operation Management, University of Johannesburg, South Africa, Johannesburg, 2028, South Africa

**ID 285 The Impact of Sales and Operations Planning Practices on Manufacturing Operational Performance in a South African company**  
 Khathutshelo Mushavhanamadi, Lebogang Margret Seopela, Faculty of Engineering and Built Environment Department of Quality and Operations Management, University of Johannesburg, South Africa

**ID 159 Trade Credit Dynamics and the Impact of Payment Delays on Business Relationships**  
 Bhawna Priya, Assistant Professor, Operations & Quantitative Techniques Area, Indian Institute of Management (IIM) Raipur, Chhattisgarh, India

**ID 264 Utilization of KB Field Flare Gas for Own Use Gas Fuel and Commercial Sales Gas**  
 Panglima M. S. Asihono, Achmad F. Mahyuddin and Fahmi M. Putra, Engineering & Planning Project Department, PT. Pertamina Hulu Rokan Zona 4, Prabumulih, South Sumatera, Indonesia

**ID 492 On Waiting Time Prediction in Hospital Emergency Departments**  
 Dr. Chengye Zou, City University of Hong Kong, China  
 Yiran Zhang, Prof. Huiyin Ouyang, HKU Business School, University of Hong Kong, China  
 Prof. Zhankun Sun, Department of Management Sciences, City University of Hong Kong, China

**ID 423 SWOT Analysis for Assessing Autonomous Shipping's Viability using Literature: A Review Study**  
 Mohamed Amjath, Division of Engineering Management and Decision Sciences, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar  
 Laoucine Kerbache, Professor, Division of Engineering Management and Decision Sciences, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar; and HEC Paris, France

**ID 257 Patient Appointment Scheduling at Hemodialysis Centers: An Exact Branch and Price Approach**  
 Mohammad REIHANEH, IESEG School of Management, Univ. Lille, CNRS, UMR 9221 - LEM - Lille Economie Management, Lille, France

**2:00 – 3:45, TUESDAY****Case Studies****Virtual Room 6**

Session Chair: Naveed Ahmed, Industrial Engineering Department, Alyamamah University, Riyadh-11512, Saudi Arabia

**ID 10 Comparative Analysis of Thin-walled U-shaped SS 304 Bellows-type Expansion Joint Profiles Formed through Single and Multi-stage Mandrel Forming Processes**  
 Agraja Magesh and Raji Sundararajan, Department of Engineering Technology, Purdue University, West Lafayette, Indiana, USA  
 Umamagesh Ganesan and Arasu Sekar, LSI-MECH Engineers Pvt Ltd, Chennai, India

**ID 284 Exploring the Capacity of Engineers to Perform the Capital Budgeting Function Effectively**  
 Afia Amoa-Mensah, Edoghogho Ogbeifun and Jan-Harm C. Pretorius, Postgraduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

**ID 457 Crowdfunding: Exploring its Role as an Alternative Financial Avenue in the Indian Context**  
 Ritika, Indian Institute of Technology Roorkee, India

**ID 228 An alternative approach to building inspection challenges in south African municipalities**  
 Maphutha Letsau Khutso and Morena William Nkomo, Department of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, South Africa  
 Stephan Molusiwa Ramabodu, Department of Construction Management and Quantity Surveying, University of Johannesburg, South Africa

**ID 494 Facility Layout Planning Optimization in a Family Restaurant Using Systematic Layout Planning and Ergonomic Approach**



Hasna Hamida Nurkamila, Jeanne Risananda Sharone, Tri Inayah Bagus Setyawati and Yasmin Hanifah, Undergraduate Students, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, Indonesia  
 Rahmat Nurcahyo, Professor, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia  
 Arief Nurdini, Doctoral Student, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia

**ID 417 Modeling funnels for web marketing operations: the case of funnel type 1**

Maouia JEBBOURI and Samir MBARKI, Department of Mathematics and Computer Science, Faculty of science, Ibn Tofail University  
 Mohammed ERRAMDANI, Department of Management, EST Mohammed1 University, Oujda, Morocco

**ID 275 Design and Fabrication of Multi-functional Fixture with Experimental Case Studies**

Naveed Ahmed, Industrial Engineering Department, College of Engineering and Architecture, Alyamamah University, Riyadh-11512, Saudi Arabia

**ID 541 Into the Future with Cloud: A Comparison with On-premises Data Warehouse**

Iman Noor and Saad Bin Tariq, Institute of Geographic Information Systems, National University of Sciences and Technology, Islamabad, Pakistan

Aisha Shabbir, NUST Institute of Civil Engineering, School of Civil and Environmental Engineering, National University of Sciences and Technology, Islamabad, 44000, Pakistan

Mary Aksa, Department of Software Engineering, Foundation University, Islamabad, 44000, Pakistan

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## February 13, 2024 (Tuesday) - Session: 4:00 – 5:45 pm

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**4:00 – 5:45, TUESDAY****Global Artificial Intelligence and ML****Onsite Room 1**

Session Chair: Prof. Jürgen H. Lenz, Research Professor, Augsburg Technical University of Applied Science, Nördlingen, Bavaria, Germany

**ID 32 Explainable AI Enhanced Fault Diagnosis of Power Transformer: Unveiling the Black Box**

Jeetesh Sharma, Murari Lal Mittal and Gunjan Soni, Department of Mechanical Engineering, Malaviya National Institute of Technology, Jaipur, 302017, India

**ID 282 Risk Profile Classification and Premiums Estimation in Property Lines Insurance: A Multinomial Regression Approach**

Reem Adel Abdallah, Department of Industrial Engineering and Engineering Management University of Sharjah, Sharjah, United Arab Emirates

**ID 155 Selection of an Artificial Intelligence Forecasting Approach for PV Panel Prices**

Aisha Alhosani, Department of Industrial and Systems Engineering, Khalifa University of Science and Technology, Abu Dhabi, 127788, UAE  
 Saed Amer, Faculty Member, Department of Management Science and Engineering, Khalifa University of Science and Technology, Abu Dhabi, 127788, UAE

Andrei Sleptchenko, Associate Professor, Department of Management Science and Engineering, Khalifa University of Science and Technology, Abu Dhabi, 127788, UAE

**ID 200 Artificial Intelligence Implementation: Evidence from Radiology**

Maria Ibanez, Northwestern University, United States

**ID 274 Generative AI for BIM-based Digital Construction Cost Management: A Qualitative Sentiment Analysis Approach**

Temitope Omotayo, Jiamei Deng and Shohrab Hossain, School of Built Environment, Engineering and Computing, Leeds Beckett University Leeds, United Kingdom

Shakeel Khan and Milan Parmar, 21 Borrowdale Close, Ilford, England, IG4 5LS, United Kingdom

**ID 118 Automated Machine Learning Algorithms for Long-Term Time Series Forecasting**

Ying Su and Morgan C. Wang, Department of Statistics and Data Science, University of Central Florida, Orlando, Florida 32816, USA

**ID 618 Evaluating the Integration of Deep Learning-Based Artificial Intelligence in the UAE Service Industry, with a Focus on Emirates Airlines' Technological Advancements in Aviation**

Dr Pouria Liravi, Senior Lecturer Operations and Supply chain, University of Derby, United Kingdom

Mohammad Ali Alhosani, Doctorate student, Innovation and Technology Adoption, University of Derby, United Kingdom

**ID 547 Text Mining and Data Mining Applications in Industrial Engineering: Review and Extension**

Mitra Bagherini, School of Industrial Engineering, Iran University of Science & Technology, Tehran, Iran

Ali RezaHoseini, School of Industrial Engineering, Iran University of Science & Technology, Tehran, Iran

Mohammad Rabiei, Assistant Professor of Iranian Research Institute for Information Science and Technology (IRANDOC)

Morteza Baghepour, Department of industrial engineering, Antalya Bilim University, Antalya, Turkey

Semail Ulgen, Department of industrial engineering, Antalya Bilim University, Antalya, Turkey

**4:00 – 5:45, TUESDAY****Onsite Room 2**

## Six Sigma Workshop Dumidu Ranaweera

Global Director APAC, Middle East, Africa & Oceania – Dr Mikel J Harry Six Sigma Management Institute Inc.  
 Chief Executive Officer – Lean Six Sigma Asia LLC, Sri Lanka

**4:00 – 5:45, TUESDAY****Business Management****Onsite Room 3**

Session Chair: Khaled Medini, Mines Saint-Etienne, Univ Clermont, INOP Clermont Auvergne, CNRS, Saint-Etienne, France

**ID 68 Driving Innovation and Business Growth Utilizing New Product Development Approach: A Comprehensive Empirical Study**  
Pardeep Gupta, Department of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur (Pb) India  
Niharika Gupta, Robert H. Smith Business School, University of Maryland, USA

**ID 7 The Paradox of Budget Transparency in reward-based Crowdfunding**  
Ehsan Bolandifar, HSBC Business School, Peking University, China

**ID 372 Techno-Economic Feasibility of Office Building Integrated PV Systems in KSA**  
Abduallatif Al Omair and Mounir Bouzguenda, King Faisal University, Al Ahsa, Saudi Arabia

**ID 273 Strategies to Enhance Energy Efficiency of HVAC Airside System of Commercial Buildings in Sri Lanka**  
Papy Gajaba and Piumi Dissanayake, Department of Facilities Management, University of Moratuwa, Sri Lanka

**ID 122 Revolutionizing Performance: A Groundbreaking Study on Enhancing Government Efficiency in Indonesia**  
Rusdi Akbar, Universitas Gadjah Mada, Indonesia

**ID 40 Influence of Environmental Leadership on pro-environmental employees' behavior in Nigerian Public Services with the mediating role of communication and moderating effect of self-reflection**  
Oladejo Lukman Gbolagade and Olusegun Kazeem Lekan, Dept. of Business Management, Federal University Dutsin-Ma, Katsina State, Nigeria

**ID 204 Operationalizing agility improvement through a Process Oriented framework – what do practitioners think?**  
Mariam Afilal and Asmae Bakry, Mines Saint-Etienne, 42023, Saint-Etienne, France  
Khaled Medini, Mines Saint-Etienne, Univ Clermont, INOP Clermont Auvergne, CNRS, UMR 6158 LIMOS, 42023, Saint-Etienne, France

**ID 486 Adapting Information and Communication Technology to Contemporary Needs in Global Engineering Education**  
Rumi Tobita, Center for Liberal Arts and Sciences of Engineering Department, Ashikaga University, Tochigi, Japan

**ID 462 Crafting Consumer Confidence: Unveiling the Dynamics of Customized E-Commerce in Chennai, India**  
Dr. A.K. Sheik Manzoor, Professor, Department of Management studies, Anna University, Chennai, India

**ID 460 Employee Engagement and Organisational Performance in Higher Education: The mediating role of Reward System**  
Davis, M.S., Durban University of Technology, South Africa and Takoradi Technical University, Ghana  
Okeke Uzodike, O.E., Durban University of Technology, South Africa

**4:00 – 5:45, TUESDAY****Operations Research****Onsite Room 4**

Session Chair: Nuno Q.M. Lopes, CEGE - Católica Porto Business School, Porto, Portugal

**ID 63 A Branch and Bound Algorithm to Optimize Multi-Objective Competitive Multi-Agent Scheduling with Simultaneous Log-linear Position-based Learning and Time-based Deterioration Effects**  
Tugba Danaci, Fatma Senses VS Business Administration Department, Member, Public University-Industry Collaboration Committee  
Kirikkale University, Kirikkale, TURKIYE and DEDA Technology Investment Ltd, Ankara, TURKIYE

**ID 294 A Variable Neighborhood Search Approach to a Multi Order Fulfillment and Consolidation Problem**  
Kehinde G. Ismaila, Andrei Sleptchenko, PhD and Maher Maalouf PhD, Department of Management Science and Engineering, Khalifa University, Abu Dhabi, United Arab Emirate UAE  
Adriana F. Gabor, Associate Professor, Department of Applied Mathematics, Khalifa University, Abu Dhabi, United Arab Emirate UAE

**ID 18 Courts performance - The case of Portugal**  
Maria C. A. Silva and Nuno Q.M. Lopes, CEGE - Católica Porto Business School, Porto, Portugal

**ID 121 Decision Support System to Find the Optimal Fair Nurse Schedule at A Local PICU**  
Hamoud Bin Obaid, King Saud University, Saudi Arabia

**ID 235 Holistic Framework Proposition for Offshore Hydrocarbon Installations: From Safety Culture Interpretation**  
Matar Nasser Salem Hamed Alrasbi, College of Business, Law and Social Sciences, University of Derby, United Arab Emirates

**ID 419 Optimizing On-Site Electric Vehicle Charging: Routing for Efficient Last-Mile Operations**  
Shazeb Liyakath and Prof. Arshinder Kaur, Department of Management Studies, Indian Institute of Technology, Madras, Chennai 600 036, INDIA  
Viswanath Kumar Ganesan and Haripriya K, Tata Consultancy Services Ltd., IIT Madras Research Park, Chennai 600 013, INDIA

**ID 150 Incremental feature selection and interpretable learning: An application for Glioma grading and detection**  
Jinil Persis, Indian Institute of Management Kozhikode, Kerala, India

**ID 42 Mobile Technology for Improving Project Management in the Construction Industry - Philippine Setting**  
Roselle P. Alviar, University of Perpetual Help System Dalta – Calamba Campus, Dean, College of Engineering, Calamba City, Laguna, Philippines  
Cherry D. Casuat, University of Perpetual Help System Dalta – Calamba Campus, Faculty, College of Engineering, Calamba City, Laguna, Philippines  
Johnny P. Belizar, University of Northern Philippines, Director, Infrastructure Project Management and Development Office, Tamag, Vigan City, Ilocos Sur, Philippines

**ID 21 Development of a Predictive Maintenance System Using Machine Learning Technique**  
Osamah Abdulhameed, Naveed Ahmed, Wadea Ameen and Murtadha Aldoukhi, Industrial Engineering Department, College of Engineering and Architecture, Al-Yamamah University, Riyadh-11512, Saudi Arabia  
Abdulrahman Al-Ahmari, Moath Alatefi and Ahmed Badewlan, Industrial Engineering Department, King Saud University, Riyadh Saudi Arabia

**4:00 – 5:45, TUESDAY****Sustainability and Green Systems****Onsite Room 5**

Session Chair: Kapila Liyanage, Senior Lecturer in Engineering Management, University of Derby, UK

**ID 158 Addressing Sustainability in African Airports**

Caroline K. Marete, Visiting Assistant Professor, School of Aviation and Transportation Technology, Purdue University, West Lafayette, IN, USA

**ID 95 Life-Cycle Environmental and Economic impacts of Alternative Fuel Buses**

Noura Elagouz, Research Assistant, Qatar Transportation and Traffic Safety Center, College of Engineering, Qatar University, Doha, Qatar  
Nuri Onat, Associate Professor, Qatar Transportation and Traffic Safety Center, College of Engineering, Qatar University, Doha, Qatar  
Muhammet Enis Bulak, Assistant Professor, Department of Industrial Engineering, Uskudar University, Istanbul, Turkey  
Murat Kucukvar, Associate Professor, Department of Business Ethics and Legal Studies, Daniels College of Business, University of Denver, Denver, CO, USA

**ID 43 Fiscal Policy and Environmental sustainability in Sub-Sahara African; An Empirical investigation**

Abdulsalam S. Ademola, Abdullahi Badiru and Dahiru Zainab Wowo, Department of Economics and Development Studies, Federal University Dutsin-Ma, Nigeria

**ID 232 Goal Programming Model for Sustainability and Circular Economy Evaluation**

Noushin Bagheri, SP Jain School of Global Management, Dubai, UAE  
Fouad Ben Abdelaziz, NEOMA Business School, Rouen, France

**ID 185 Kinetic Study of Mineralization during Electrochemical Oxidation of Lamotrigine**

Vinod Kumar Meena, Assistant Professor, Department of Chemical Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur, Punjab 148106, India  
Himadri Roy Ghatak, Professor, Department of Chemical Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur, Punjab 148106, India

**ID 465 Smart Textiles: Enhancing Digital Transformation in Healthcare through Circular Economy Principles**

Jifí Tupa, Associate Professor, Department of Technologies and Materials, Faculty of Electrical Engineering, University of West Bohemia, Pilsen, Czech Republic

**ID 368 Strengths (S), Weaknesses (W), Opportunities (O), and Threats (T) Analysis of Electric Vehicles**

Ali Ahmadian, Visiting Professor, Department of Chemical Engineering, University of Waterloo, Waterloo, Canada  
Ali Elkamel, Professor, Department of Chemical Engineering, University of Waterloo, Waterloo, Canada  
Mohamed Faadil, Khalifa University, Abu Dhabi, UAE

**ID 161 Sustainability of Second-Hand Fast Fashion: Sentiment and Content Analysis on Consumer Attitudes on Social Media**

Nusrat Jahan Raka and Stanislav Chankov, Constructor University, Bremen, Germany

**4:00 – 5:45, TUESDAY****Engineering Management****Virtual Room 6**

Session Chair: Samira Keivanpour, Department of Mathematical and Industrial Engineering, Polytechnique Montreal, Montreal QC, Canada

**ID 217 The Relationship Between TOE Factors, Quality Factors and SMEs Performance in the UAE: Mediating and Moderating Effect of Perceived Satisfaction and Perceived Intention to Use and Organizational Culture**

Saeed Ali Saeed Bin AL DADA AL SHEHHI, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia  
Khadijah MD ARIFFIN, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia

**ID 326 Strategies for Enhancing the Water Sector in Kuwait**

Mohammed A. Hajeesh, Techno-Economics Division, Kuwait Institute for Scientific Research, P.O. Box 24885; Safat-13109, Kuwait

**ID 9 Distribution Function Similarity of Overloaded Commercial Trucks Detection (Case Study: Iran)**

Abbas Mahmoudabadi, Director, Master Program in Industrial Engineering, Department of Industrial Engineering, MehrAstan University, Gilan, Iran  
Hassan Abdous, Deputy of Traffic Safety Department, Road Maintenance and Transport Organization, Tehran, Iran  
Fatemeh Pourhossein Ghazimahalleh, Graduated Student, Department of Information & Commerce Technology, MehrAstan University, Gilan, Iran

**ID 162 Sustainable Construction of Deep-Water Injection Wells: A Life Cycle Assessment Approach**

Gamaleldin Farag, Master Student, Department of Mechanical & Industrial Engineering, College of Engineering, Qatar University, Doha, Qatar  
Dr. Kadir Ertogral, Associate Professor, Department of Mechanical & Industrial Engineering, College of Engineering, Qatar University, Doha, Qatar

**ID 20 Influence of Perceived behavioral control, Personal creativity, Personal attitude and social norms on entrepreneurial intention**

Mebratm Teklehaimanot Tesfa, Departement of Garment and Textile Engineering, Ethiopian Institute of Technology -Mekelle, Mekelle University, Ethiopia  
Hailekiros Sibhato Gebremikael and Kinfe Tsegay Beyene, School of Industrial and Mechanical Engineering, Ethiopian institute of technology - Mekelle, Mekelle University, Ethiopia

**ID 55 Renewable Resources & Green Hydrogen**

Sharaf Fahed Al Wakeel, Department of Industrial & Mechanical Engineering, Qatar University, Doha, Qatar  
Syeda Manahil Akhter, Department of Industrial & Mechanical Engineering, Qatar University, Doha, Qatar

**ID 116 An Assessment of the Foreign Debt Management in Sierra Leone: Case Study- Ministry of Finance**

Alimamy Kamara and Osman Angeles Conteh, Former Students, University of Sierra Leone, Sierra Leone, Africa

**ID 117 Artificial Intelligence and Industry 4.0 based Digital Transformation of Supply Chains: Opportunities and Challenges**

Irina Neaga, Senior Lecturer in Logistics, Wales Institute of Science and Art, University of Wales Trinity St David, Swansea, United Kingdom

**ID 53 Artificial Intelligence (AI) in Engineering Research: An Ethics Perspective**

Dr. Lorraine Doherty, Complementary studies in the School of Mechanical, Industrial and Aeronautical Engineering, University of the Witwatersrand, Johannesburg, South Africa

**ID 202 The Influence of the Planning and Execution Mode on Effective Infrastructure Delivery**

Edoghogho Ogbeifun, Civil Engineering Department, Faculty of Engineering, University of Jos

Jan-Harm C. Pretorius, Postgraduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

**ID 584 E-waste Management in Egypt: Analyzing the Impact of Households' E-Waste Awareness and E-waste Disposal Behavior on Customer Participation**

Nour Tarek and Islam El-Nakib, College of International Transport and Logistics, Arab Academy for Science, Technology and Maritime Transport, Alamein, Egypt

Rasha Abdelaziz, Business Information Systems Department, College of Management and Technology, Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt

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4:00 – 6:00 pm, Tuesday, February 13, 2024 – Foyer Area

## Poster Competition

Display your posters throughout the conference, judging will be from 4:00 pm to 6:00 pm on Tuesday

Session Chair: Dr. Mohammed Khadem, University of Sharjah, UAE

**ID 96 Production and Cooperation Strategies in A Remanufacturing System Involving Knowledge Spillover**

Nannan WANG, IESEG School of Management, 59000 Lille, France

Linda L. ZHANG, IESEG School of Management, Univ. Lille, CNRS, UMR 9221 - LEM – Lille Economie Management, F-59000 Lille, France

**ID 407 Engineering Strategies for Revenue Maximization in View Water Factory**

Naif Almugrin, Abdullah Aldawsari, Yazeed Alberiqi and Dr. Alaa Momena, Prince Sattam bin Abdulaziz University College of Engineering, Industrial Engineering Department, Saudi Arabia

**ID 546 Revolutionizing Last-Mile Logistics: A Conceptual Model for Smart Parcel Delivery with Contactless Innovation**

Rakan Alkahlani, Khaled Almaliki, Mohammed Aljohani, Ahmad Abuduhair and Dr. Hassan Hijry, University of Tabuk, College of Engineering, Department of Industrial Engineering, Saudi Arabia

**ID 585 Data - Driven Based Energy Management Model for EVS Wireless Charging System**

Ibtisam Abdullah, Sahar Mughram, Shahad Al-aziz, Sara Ahmad and Shahad Al-shahrani, Department of Industrial Engineering, King Khalid University, Abha, 62529, Saudi Arabia

**ID 595 Data Driven Based Energy Management Model for EVS Wireless Charging System**

Mohammed Alqahtani, Assistant Professor in the department of Industrial Engineering, King Khalid University, (KKU), Saudi Arabia and M.Sc. degree in the Department of Mechanical & Industrial Engineering at University of Arizona

Ibtisam Abdullah, Sahar Mughram, Shahad Alaziz, Sara Ahmad and Shahad Alshahrani, Senior Industrial Engineering at King Khalid University, Abha, Saudi Arabia

**ID 601 Navigating the Road to Value: Knowledge as a Strategic Driver in Ride-Hailing Service**

Amna Javed, Senior Lecturer, Graduate School of Knowledge Science, Japan Advanced Institute of Science and Technology, Ishikawa, Japan

Ahson Javaid, Founder & CEO, ROCKETtech, Oberwangen, Switzerland

Youji Kohda, Professor, Graduate School of Knowledge Science, Japan Advanced Institute of Science and Technology, Ishikawa, Japan

**ID 603 Modeling Critical Success Factors for Green Supply Chain Management in Saudi Arabia**

Mohamed Rafik N. Qureshi, Professor, Department of Industrial Engineering, College of Engineering, King Khalid University, Abha, Saudi Arabia

Taif Alqhtani, Norah Al-Daaboub, Yosra Alahmari, Ruba Abdullah and Raghad Mohammed, Department of Industrial Engineering, College of Engineering, King Khalid University, Abha, Saudi Arabia

**ID 507 Optimal Design Parameters for a Vortex Wind Turbine**

Sarah Alshahrana, Shahad Almasuda, Sabah Alshahrana, Fatima Aljameela, Reham Alashwla and Mohammed Alqahtania, Department of Industrial Engineering, King Khalid University, King Fahad St., Abha, 62529, Saudi Arabia

**ID 408 Study and development of AI Jomaih factory for the production of cans and lids**

Mohammed Alkhalifah, Prince Sattam bin Abdulaziz University, Saudi Arabia

**ID 648 Smart Hydroponic Farming by the Integration of IoT and Machine Learning**

Abdulla Abuswai, Mohammad Saleh, Amir Elhajjar and Mohammad Farhat, Industrial Engineering Students at Rochester Institute of Technology, Dubai, United Arab Emirates



# February 14, 2024 (Wednesday)

## February 14, 2024 (Wednesday) - Session: 8:00 – 9:30 am

8:00 – 9:30, WEDNESDAY

Onsite Room 1

### Global Business Management and PM

Session Chair: Linda L. ZHANG, IESEG School of Management, Univ. Lille, CNRS, UMR 9221 - LEM – Lille Economie Management, Lille, France

Speaker I

Madhusmita Nayak  
Strategy Planning and Corporate Performance Manager  
Imdaad  
United Arab Emirates

Speaker II

Dr. Ananth Rao  
Emeritus Professor – Finance  
University of Dubai  
Dubai – UAE

Speaker III

Dr Myzan Bt Noor  
UniKL MIIT  
Creative Multimedia Technology

Speaker IV

#### **ID 597 Challenges of Healthcare Operations Management: A Literature Review**

Inas Al Khatib, PhD Student in Engineering Management, Department of Industrial Engineering, American University of Sharjah, Sharjah, UAE  
Abdulrahim Shamayleh, Head of Department of Industrial Engineering, Department of Industrial Engineering, American University of Sharjah Sharjah, UAE  
Malick Ndiaye, Professor at Department of Industrial Engineering, Department of Industrial Engineering, American University of Sharjah, Sharjah, UAE

Speaker V

#### **ID 600 A Conceptual Framework for Understanding Impostor Phenomenon in Entrepreneurs**

Mehak and Anjula Gurtoo, Department of Management Studies, Indian Institute of Science, Bangalore, India

Speaker VI

#### **ID 610 Organizational Culture Adaptability by Leaders and its Influence on Firm Performance**

Monira Albogami; Ola Sharawi & Rahatullah Muhammed Khan, Effat University, Saudi Arabia

8:00 – 9:30, WEDNESDAY

Case Studies

Onsite Room 2

Session Chair: Anthony Anosike, Centre for Supply Chain Improvement, University of Derby, Derby, UK

#### **ID 37 A Qualitative Study of Spiritual Intelligence and Work Performance: A Case of a Private Sector in Johor, Malaysia**

Lalitha A/P Periasamy Nathan, Siti Sarah Omar and Mohd Asmadi Bin Mohd Angsor, Faculty of Technology Management and Business University Tun Hussein Onn Malaysia, 86400, Batu Pahat, Johor, Malaysia  
Dahlia Fernandez, Faculty of Economics and Management, Universiti Kebangsaan Malaysia, 43600, Bangi, Selangor, Malaysia

#### **ID 100 A Roadmap for Intelligent Agriculture in Africa - A Case Study of Sub-Saharan Africa**

Anthony Anosike, Centre for Supply Chain Improvement, University of Derby, Derby, UK  
Udoka Silas, Globaia Research, 8 Seke Abimbola Street, Okota, Lagos, Nigeria  
Pouria Liravi, Centre for Supply Chain Improvement, University of Derby, Derby, UK

#### **ID 168 Behind the Curtain of Corporate Restructuring Spin-offs: A Literature Review and Case Study Analysis of Technical Project Based Organizations**

Stephen Davis and Dr. Timothy Kotnour, University of Central Florida, Department of Industrial Engineering & Engineering Management, Orlando, FL, USA

#### **ID 414 The Influence of Pandemic-Induced Workplace Changes on Employee Engagement: A Case Study of Company X in South Africa**

Sambil Charles Mukwakungu, Ncedo Khoza and Charles Mbohwa, Department of Quality and Operations Management, University of Johannesburg, South Africa

**ID 504 The State of Emerging Agro-Processors in South Africa: A Case of Limpopo Province**

Sebonkile Cynthia Thaba, Department of Transport and Supply Chain Management, School of Management, College of Business and Economics University of Johannesburg, Auckland Park, Johannesburg, South Africa  
Lawrance Seseni, Department of Business Management, School of Management, College of Business and Economics, University of Johannesburg, Auckland Park, Johannesburg, South Africa  
Charles Mbohwa and Nelson Madonsela, Department of Quality and Operations Management, School of Engineering Management, College of Business and Economics, University of Johannesburg, Auckland Park, Johannesburg, South Africa

**ID 403 Designing the Resource Allocation System for the Effective Equipment Utilization: Case Study of a Saudi Industry**

Rafeek Bassam Mushtaha, Abdulaziz Yasser Aburahma, Moath Abdullah Alluhidan, Madiha Rafaqat, Osamah Abdulhameed and Naveed Ahmed, Department of Industrial Engineering, College of Engineering and Architecture, Al Yamamah University, Riyadh 11512, Saudi Arabia

**ID 39 Entrepreneurial Orientation and Small and Medium Enterprises Performance in Katsina State: Does Transformational Leadership Behaviour Matters?**

Abdulrahman Abdulrazaq Morenikeji, PhD, Department of Business Management, Federal University Dutsin-Ma, Nigeria  
Mustapha Badamasi, Department of Business Management, Federal University Dutsin-Ma, Nigeria

**ID 135 Epidemiological Aspects and Cause of Deaths of Algerian Doctors during the Period 2010 – 2020**

Wissal Benhassine, Professor, Faculty of Medecine, Head Doctor of Occupational health Service, University Hospital Center of Batna, University of Batna 2, Fesdis, Batna, Algeria  
Amira Khomri, Specialist Doctor in Occupational Medecine, EPSP Elmadher, Batna, Algeria  
Bensakhria Nardjesse, Assistant Professor in occupational Medecine, University of Batna 2, Fesdis, Batna, Algeria  
Benaicha Samia, Assistant Professor in occupational Medecine, University of Batna 2, Fesdis, Batna, Algeria

**8:00 – 9:30, WEDNESDAY****Industry Solutions****Onsite Room 3**

Session Chair: Hilal Yilmaz, Assist. Prof. Dr., Department of Industrial Engineering, Bursa Technical University, Bursa, Turkey

**ID 222 Heterogeneous Bounded Rationality in Service Systems**

Pelin Gulsah Canbolat, Kadir Has University, Turkey

**ID 498 Improving Warehouse Capacity Utilization using Discrete Event Simulation Modelling**

Ahmed Zainul Abideen and Nasiru Zubairu, Lecturer, Faculty of Transport and Logistics, Al Ghubra North, Muscat, Sultanate of Oman

**ID 38 Design Approach for an Environmental Impact Monitoring System of an Industrial Unit**

Khalid Benhida, Noureddine Dahmani and Sanaa El Hidaoui, LAPSSII, EST de Safi, University Cadi ayyad, Morocco

**ID 288 MILP and CP models for the blocking hybrid flow shop sequence dependent group Scheduling problems**

Ahmed Boulahoual and Khalid Benhida, LAPSSII, EST de Safi, University Cadi Ayyad, Morocco

**ID 221 How Do Existing Organizational Theories Help in Understanding the Responses of Food Companies for Reducing Food Waste?**

Ramakrishnan Ramanathan, Professor, College of Business Administration, University of Sharjah, Sharjah, UAE  
Usha Ramanathan, Professor, College of Business Administration, University of Sharjah, Sharjah, UAE

**ID 373 Potential to value-add waste orange peels to produce natural anti-microbial extracts**

N. Muranda, Department of Chemical Engineering, Manicaland State University, Zimbabwe  
M. M. Manyuchi, Department of Chemical Engineering, Manicaland State University, Zimbabwe  
Department of Operations and Quality Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa  
N. Sukdeo, Department of Operations and Quality Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

**ID 15 Unveiling the Super-Hydrophobic and Self-Cleaning Properties of CaO Nanoparticles Derived from Oyster Shell for Electrical Sheathing Insulator Applications**

Victor Sunday Aigbodion, Department of Mechanical Engineering Science, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa  
Africa Centre of Excellence for Sustainable power and Energy Development, ACE-SPED University of Nigeria Nsukka Nigeria  
Department of Metallurgical and Materials Engineering, Faculty of Engineering, University of Nigeria, Nsukka, Nigeria  
Paul Amaechi Ako (formerly Ozor), Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa and Dept. of Mechanical Engineering, University of Nigeria, Nsukka, Nigeria  
Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa

**ID 447 Design and Implementation of an Aerial Mechanical Fish Feeding Drone for Enhancing Aquaculture in Fish Cages**

Daryl Louige A. Tolentino, Professor, Mechanical Engineering Department, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines  
Antoniette T. Mollejon, Professor and Department Chair, Industrial Engineering Department, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines  
Cherry D. Casuat, Professor, Computer Engineering Department, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines  
Roselle P. Alviar, Professor and Dean, College of Engineering, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines  
Mcluginn Sena, Professor and Department Chair, Mechanical Engineering Department, University of Perpetual Help System Dalta, Calamba, Laguna, Philippines

**ID 452 Determining an Optimal Charging Plan for Electric Vehicles Considering Time-of-Use Pricing**

Hilal Yilmaz, Assist. Prof. Dr., Department of Industrial Engineering, Bursa Technical University, Bursa, Turkey  
Betul Yagmahan, Prof. Dr., Department of Industrial Engineering, Bursa Uludag University, Bursa, Turkey

**8:00 – 9:30, WEDNESDAY****Supply Chain Management****Onsite Room 4**

Session Chair: Pinakhi Suvadarsini, Assistant Professor, Indian Institute of Management Amritsar India

**ID 450 Dual-Channel Closed-Loop Supply Chain: Competition and Channel Coordination**

Pinakhi Suvadarsini, Assistant Professor, Indian Institute of Management Amritsar India

**ID 93 Effective Forecasting and VMI for Critical Maintenance Non-Repairable Parts in Residential Facilities in Riyadh, KSA**

Omar AlJuraiyed, Husam AlGhamdi and Mohammed AlKahtani, Department of Industrial Engineering, College of Engineering, King Saud University, P.O. Box 800, Riyadh 11421, Saudi Arabia

**ID 90 Investigating the Applicability of Total Quality Management (TQM) in Improving the Procurement Processes at the Nigerian Railway Corporation**

Ibraheem F. Abdul-Azeez, Senior Lecturer, School of Transport and Logistics, Lagos State University, Ojo, Lagos, Nigeria  
Josephine I. Okosa, Deputy Director, Procurement, Nigerian Railway Corporation, Ebutte-Metta, Lagos, Nigeria

**ID 173 Navigating Supply Chain Platforms: Factors Shaping Adoption in Singapore**

Maria Cecilia Rojas Lopez, Lecturer, Singapore University of Social Sciences, School of Business, Logistics and Supply Chain Program, Singapore  
Tang Zhuo Xin Immanuel, Graduated Student, Singapore University of Social Sciences, Singapore  
Loh Hui Shan, Senior Lecturer, Singapore University of Social Sciences, School of Business, Logistics and Supply Chain Program, Singapore

**ID 148 The Impact of Industry 5.0 on Global Supply Chain**

Walid Khalid Al-Saad, Moayad Al-Talib, Jose Arturo Garza-Reyes and Simon Peter Nadeem, Centre for Supply Chain Improvement, University of Derby, Derby, UK

**ID 47 Traditional to Smart Supply Chains: An Overview of its Significance in Covid-19 and Adoption to Industry 4.0**

Ibrahim Almuheidib and Mohammed Alkahtani, Industrial Engineering Dept., College of Engineering, King Saud University, Riyadh, Saudi Arabia  
Mustafa Haider Abidi, Advanced Manufacturing Institute, King Saud University, Riyadh-11421, Saudi Arabia

**ID 125 Warehouse Features and Activities as the Cornerstone in both the Service and Manufacturing Supply Chain Sectors in the Jordan Market**

Moh'd Anwer AL-Shboul, Business Administration Department, Princess Sumaya University for Technology (PSUT), Amman, Jordan  
Amer Al-shishany, Business Administration Department, Princess Sumaya University for Technology (PSUT), Amman, Jordan

**8:00 – 9:30, WEDNESDAY****Occupational Safety and Health (OSH)****Onsite Room 5**

Session Chair: Aicha Bourahla, Univ Coimbra, CEMMPRE, ARISE, Department of Mechanical Engineering, Portugal

**ID 224 Advanced Risk Analysis and Mitigation Strategies for Domino Effects in Industrial Settings**

Imane Aila, Samia Chettouh and Djamel Haddad, Laboratory of Research in Industrial Prevention, Institute of Health & Safety, University of Chahid Mostepha Ben Boulaid-Batna 2, Batna, Algeria

**ID 123 Analysis of association between work organization and risk of professional Burnout during COVID19 Pandemic: cross-sectional study among HCWs in Intensive Care Unit**

Wissal Benhassine, Professor, Faculty of Medecine, Head Doctor of Occupational health Service, University Hospital Center of Batna, University of Batna 2, Fesdis, Batna, Algeria  
Ismahane Maache, Resident Doctor, Faculty of Medecine, University of Batna 2, Fesdis, Batna, Algeria  
Benaicha Samia, Assistant Professor in occupational Medecine, University of Batna 2, Fesdis, Batna, Algeria  
Bensakhria Nardjesse, Assistant Professor in occupational Medecine, University of Batna 2, Fesdis, Batna, Algeria

**ID 268 Application of a Proactive Workplace Risk Management Strategy**

Ngaka Mosia, Department of Industrial Engineering, College of Science, Engineering and Technology (CSET), University of South Africa  
Kemlall Ramdass, Department of Industrial Engineering, College of Science, Engineering and Technology, University of South Africa

**ID 293 Enhancing Process Industry Safety: Optimizing Safety Barrier Allocation to Prevent Domino Effects in Chemical Plants**

Abdelaziz Saeed Alzaabi, Team Leader Mechanical Maintenance, ADNOC Offshore, Abu Dhabi, 303, UAE  
Andrei Sleptchenko, Associate Professor at the Department of Industrial and Systems Engineering Khalifa University, Abu Dhabi, 127788, UAE

**ID 88 Organizational Learning Capability and Occupational Safety and Health Practices: A Review and Future Research Agenda**

Aicha Bourahla, Gabriela Fernandes and Luis Miguel D. F. Ferreira, Univ Coimbra, CEMMPRE, ARISE, Department of Mechanical Engineering, Portugal

**ID 179 Psychosocial Risks Assessment after Improvement of Working Conditions among Psychiatric Hospital Healthcare Workers**

Wissal Benhassine, Professor, Faculty of Medecine, Head Doctor of Occupational health Service, University Hospital Center of Batna, University of Batna 2, Fesdis, Batna, Algeria  
Mohamedi Siham, Specialist in occupational medicine, Occupational Service - Local Public Health Establishment of Batna, Algeria  
Benaicha Samia, Assistant Professor in occupational Medecine, University of Batna 2, Fesdis, Batna, Algeria  
Bensakhria Nardjesse, Assistant Professor in occupational Medecine, University of Batna 2, Fesdis, Batna, Algeria

**ID 16 Systemic Approach for Risk-Based Third-Party Inspections of Fire Alarm Systems**

Stefan Siegfried Veit, Doctoral Student, Faculty of Electrical Engineering, University of West Bohemia, Pilsen, Czech Republic and TÜV SÜD Industrie Service GmbH, Munich, Germany  
Frantisek Steiner, Professor, Faculty of Electrical Engineering, University of West Bohemia, Pilsen, Czech Republic

**ID 597 Challenges of Healthcare Operations Management: A Literature Review**

Inas Al Khatib, PhD Student in Engineering Management, Department of Industrial Engineering, American University of Sharjah, Sharjah, UAE  
 Abdulrahim Shamayleh, Head of Department of Industrial Engineering, Department of Industrial Engineering, American University of Sharjah, UAE  
 Malick Ndiaye, Professor at Department of Industrial Engineering, Department of Industrial Engineering, American University of Sharjah, UAE

**8:00 – 9:30, WEDNESDAY****Data Science****Online Room 6**

Session Chair: George Pappas, Department of Electrical and Computer Engineering, Lawrence Technological University, Southfield, MI, USA

**ID 138 Improvement of the Business Banking Credit Process Through the Application of Lean Thinking in a Medium-scale Banking Institution**

Alonso Geronimo, Sebastian Grately and Nicolas Salazar, School of Engineering, Dept. of Industrial Engineering, University of Lima, Lima, Perú

**ID 136 Management model applying Lean Six Sigma to improve the performance of an SME in the professional services sector**

Axel Díaz Guevara, Mariel Perez Reyes, and Rafael Chavez-Ugaz, Facultad de Ingeniería, Universidad de Lima, Peru

**ID 318 Improvement of Labor Productivity Through Lean Tools in a Garment Manufacturing Company**

Diego A. Garcia and Leonardo A. Ramirez, Tenth cycle student of the Industrial Engineering degree, University of Lima, Surco, Lima, Peru  
 Rafael M. Villanueva, Professor of the Industrial Engineering career, University of Lima, Surco, Lima, Peru

**ID 41 Improvement proposal model based on 5s, ABC Method and SLP to improve the level of order fulfillment in a company in the commercial sector**

Percy Esteban Bravo-Zuazo, Faculty of Engineering, University of Lima, Peru  
 Vanessa Del Rosario Carmelo-Mendieta, Faculty of Engineering, University of Lima, Peru  
 Martin Fidel Collao-Díaz, Research Professor, Faculty of Engineering, University of Lima, Peru

**ID 340 ChatGPT and artificial intelligence (AI) massive transformation of trainers' education sector revolutionizing how students learn**

Mohamed Edali, Asma Milad and Hanadi Saad, Department of Chemical Engineering, Elmergib University, Elkhoms, Libya  
 Zaed Sahem, Engineering & Creativity Group for technical services, Ottawa, Ontario, Canada  
 Tareq Alajaili, Department of Management, Faculty of Commerce, Elmergib University, Libya  
 Ali Elkamel, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE and Department of Systems Design engineering and Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada

**ID 127 Applying Machine Learning Algorithms Based on Support Vector Machines to Forecast the Patient Volume at an Emergency Room**

Carlos Hernández, Jaime Castillo, Dafne Lagos and Paola Leal, Departamento de Procesos Industriales, Universidad Católica de Temuco, Chile

**ID 345 Risk Management Model Based on 5S and Work Standardization to Increase Efficiency in the process of disengagement in a Banking and Finance Sector Company**

Jose Antonio Cornejo-Linares and Tomas Ferreyros-Sylvester, Facultad de Ingeniería. Universidad de Lima, Perú  
 Martin Fidel Collao-Díaz, Research Professor, Facultad de Ingeniería. Universidad de Lima, Perú

**ID 30 Production Model Based on Lean Manufacturing Tools to Reduce Delivery Times in a Small Manufacturing Enterprise**

Mariafe Olenka Francia-Barba, Faculty of Engineering and Architecture, University of Lima, Perú  
 Erick Linder Rosales-Espinoza, Faculty of Engineering and Architecture, University of Lima, Perú  
 Martin Fidel Collao-Díaz, Research Professors, Faculty of Engineering and Architecture, University of Lima, Perú

**ID 656 The Subjective Idea of the Physical Appearance of a Humanoid Robot**

Steven Brownlee, Department of Electrical and Computer Engineering, Lawrence Technological University, Southfield, MI 48075, USA  
 George Pappas, Assistant Professor and Director MSAI, Department of Electrical and Computer Engineering, Lawrence Technological University, Southfield, MI 48075, USA

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**February 14, 2024 (Wednesday) - Session: 9:40 am – 1:00 pm**


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**Keynote Speakers**

9:40 am Keynote X:

**Dr. Oliver Elbracht**

Managing Director Siemens Advanta Middle East  
 Dubai, United Arab Emirates



**Industrial Metaverse and role for operational efficiency**

10:20 Am Keynote XI:

**Dr. Muthu Mathirajan**

Chief Research Scientist, Department of Management Studies, Indian Institute of Science (IISc), Bangalore, India  
National President of Operational Research Society of India, 2024-2024

11.00 am Keynote XII:

**Dr. Hany Moustapha**

Professor and CEO, SDG Innovation Network  
Siemens' Chair on Industry 5.0 Technology Integration, Pratt & Whitney Canada Chair on Propulsion System  
Sr. Research Fellow, Pratt & Whitney Canada  
University of Québec, Canada

11:40 am Keynote XIII:

**Dr. Albertus Retnanto, Ph.D.**

Program Chair Petroleum Engineering  
Texas A&M University at Qatar

12:20 pm Keynote XIV:

**11:00 – 1:00, WEDNESDAY****Artificial Intelligence****Onsite Room 2**

Session Chair: PRS Sarma, Associate Professor, Indian Institute of Management Visakhapatnam, India

**ID 586 Robust Security System with Toll Free Call Services. Case Study: Adama City**

Shanko Chura Aredo, Hailu Jeldie Wodajo, Muktar Jeylan, Kedir Ilka and Abdulnasir Husein, Adama City Administration, Ethiopia

**ID 533 Machine Learning enabled Surface Quality Inspection of Fabricated Artifacts by Using Unstructured 3D Point Cloud Data**

Juan Du, Smart Manufacturing Thrust, Systems Hub, The Hong Kong University of Science and Technology (Guangzhou), Guangzhou, Guangdong, China  
Department of Mechanical and Aerospace Engineering, The Hong Kong University of Science and Technology, Hong Kong SAR, China

**ID 536 "Modelling the facilitators of Smart operators for industry 4.0 transformation – a study on Indian MSME"**

PRS Sarma, Associate Professor, Indian Institute of Management Visakhapatnam, India

**ID 554 The Role of Artificial Intelligence in Enhancing Supply Chain Resilience**

Moayad Al-Talib, Walid K. Al Saad and Simon Peter Nadeem, Centre for Supply Chain Improvement, University of Derby, Derby, United Kingdom

**ID 97 A Conceptual Framework for Understanding Impostor Phenomenon in Entrepreneurs**

Mehak, Student, Department of Management Studies, Indian Institute of Science, Bangalore, India  
Anjula Gurtoo, Professor, Department of Management Studies, Chairperson, Centre for Society & Policy, Indian Institute of Science, Bangalore, India

**ID 35 Maritime Crime and Security: Pivotal Issues in A Global World**

Engr. Festus Uche Uwadia, Dr. Emmanuel Innocents Edoun, Prof. Anup Pradhan and Prof. Charles Mbohwa, Faculty of Engineering and Built Environment, Department of Quality & Operation Management, University of Johannesburg, Johannesburg, 2028, South Africa

**ID 50 Multicriteria Decision Making Methods for Supplier Selection Problems in Construction**

M. Keerthna and Tookey J.E., Auckland University of Technology, New Zealand  
Rupkatha Ghosh, Indian Institute of Science, Bengaluru, India

**1:00 – 2:00 pm Lunch Break**  
**Buffet Lunch – Ballroom**

**February 14, 2024 (Wednesday) - Session: 2:00 – 3:45 pm****2:00 – 2:45, WEDNESDAY****Onsite Room 1**

**Diversity and Inclusion Panel sponsored by Ford Motor Company +  
Women in Indsutry and Academia (WIIA) Panel**

## Panel Chair

Neetu Choudhary  
Executive Committee Member- Continuous Improvement Subgroup, Dubai Quality Group  
Team Leader – UAE Innovation Awards  
Compliance Analyst, DP World  
Dubai, United Arab Emirates

## Panel Speaker I

Hitashi Malik  
Director of People & Culture, MENAT  
Joi Gifts  
Dubai, UAE

## Panel Speaker II

Dr. Zoubida Benmamoun, PhD  
Assistant Professor  
Industrial and Mechanical Department  
Engineering Faculty  
Liwa College  
Abu Dhabi, UAE

## Panel Speaker III

Reema Akhtar, Forbes HR, Chartered MCIPD, SHRM-SCP  
Official Member, Forbes Human Resources Council  
Group HR Head, SeerSolutionz  
Dubai, United Arab Emirates

## Panel Speaker IV

Roujin Ghamsari (FCIPD)  
Top 10 UK HR Most Influential 2023  
Founder, MappdHR  
Director of HR & OD – Professional Development Programme, NHS England  
Dubai, United Arab Emirates

**2:00 – 2:45, WEDNESDAY****Onsite Room 2****Global Engineering Education****Session Chair**

Dr. Mario Chauca  
Research Professor of Academic Excellence  
Ricardo Palma University  
Surco 15039, PERU

Strategies for increasing student performance based on lighting conditions in learning spaces

**ID 265 A Disruptive Technologies Strategy for Enhancing Experience in Teaching and Learning**

Ngaka Mosia, Department of Industrial Engineering, College of Science, Engineering and Technology (CSET), University of South Africa, Florida, South Africa  
Kemlall Ramdass, Department of Industrial Engineering, College of Science, Engineering and Technology, University of South Africa, Florida, South Africa

**ID 266 Showcasing Good Practices in OER-Based Effective Teaching and Learning Methods**

Ngaka Mosia and Kemlall Ramdass, Dept. of Industrial Engineering, College of Science, Engineering and Technology, University of South Africa, Florida, South Africa

**ID 104 Integrating 3D Printing and Reverse Engineering: A Case Study in Engineering Education for Manufacturing Precision**

Salah Elaskari and Muhammad Imran, American International University, Kuwait

**ID 213 Navigating the Educational Frontier: Assessing Engineering Professors' Adoption of Education 4.0 Methods**

Yasir Aljefri, Abdullah Alrabghi and Abdulaziz Altabsh, Department of Industrial and Systems Engineering, University of Jeddah, Saudi Arabia

**ID 448 A Practical Algorithm for Midterm Exam Scheduling in Higher Education Institutions**

Hakan Gultekin and Sayyad Zahid Qamar, Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman  
Hassan Al-Lawati, Department of Electrical and Computer Engineering, Sultan Qaboos University, Muscat, Oman

**ID 607 Digitalized Curriculums in Architecture: Impact on Student Satisfaction and Engagement**

Maram Abuznada, Abdulaziz Basnawi and Rahatullah Muhammed Khan, Effat University – Jeddah – Saudi Arabia

**ID 608 Artificial Intelligence Adoption in Education A Study on Attitudes, Readiness, and Intention**

Iman Musawa, Rasha Almalik and Rahatullah Muhammed Khan, Effat College of Business, Effat University Jeddah, Saudi Arabia

**ID 583 Face-to-Face vs. Synchronous: An Observation in Undergraduate Engineering Classes on Students' Learning Experience**

Albertus Retnanto, Ph.D., Professor and Chair, Petroleum Engineering Program, 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  
Ameen Siddiqui, Graduate Student, Industrial and Systems Engineering, Texas A&M University, College Station, TX, USA

**2:00 – 2:45, WEDNESDAY****Data Analysis****Onsite Room 3**

Session Chair:

**ID 331 Intelligent Alarm Management System: Leveraging AI for Rationalization and Optimization Studies**

Ahmed Jassem Albuainin, Saudi Arabian Oil Company (Saudi Aramco), Dhahran, Kingdom of Saudi Arabia

**ID 365 A data envelopment approach for reallocating green gas emissions in cap-and-trade context**

Reza Farzipoor Saen, Department of Operations Management & Business Statistics, College of Economics and Political Science, Sultan Qaboos University, Muscat, Oman

**ID 98 An Assessment of Artificial Intelligence (AI) On the Job of a Corporate Secretary in Zimbabwe: Threats and Opportunities**

Wilson Takavadii Nyamanhindi, Head of Department: School of Office Management, Harare Polytechnic, Zimbabwe  
Erina Kaunda, Personal Assistant to the Principal, Harare Polytechnic, Zimbabwe  
Moreblessings Chenesai Chiriga, Executive Secretary, Harare Polytechnic, Zimbabwe

**ID 60 A Comparison Study of Fuzzy AHP-Based MCDM Methods on Green Concept Selection Problem**

Zeki Ayağ, Professor, Department of Industrial Engineering, Faculty of Engineering, Piri Reis University, Tuzla, İstanbul, Turkey

**ID 330 A comparison of artificial neural networks, holt-winters, and autoregressive integrated moving averages for predicting Saudi Arabia's energy consumption**

Ali Al Arjani, Department of Industrial Engineering, College of Engineering, Prince Sattam Bin Abdulaziz University, Al Kharj, Saudi Arabia

**ID 420 Modeling and Optimization of UAV VTOL Design Parameters Using Response Surface Methodology**

Ahmed M. Bufares, Omar M. Aldenali and Abdelaziz Badi, Mechatronics Engineering Department, Libyan International Medical University, Benghazi, Libya

**ID 26 Mobile Health (mHealth) Adoption Readiness in Developing Countries: Challenges, Opportunities and Strategies**

Mohammed Maina Modu, Mai Idris Aloomo Polytechnic Geidam, Yobe State, Nigeria

**ID 153 Enabling Collaborative Learning for Industrial Fleets Through Distributed Computing Techniques**

Maharshi Dhada, Research Fellow at Institute for Manufacturing, Department of Engineering, University of Cambridge, Cambridge, UK  
Aishwarya Venkatramani, PhD in Biotechnology, Department of Chemical Engineering and Biotechnology, University of Cambridge, UK

**2:00 – 3:45, WEDNESDAY****Operations Management****Onsite Room 4**

Session Chair: Sumit Kumar, Dept. of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Sangrur, Punjab, India

**ID 129 Air Freight Specialist Evaluation with F-AHP-TOPSIS**

Funda Samanlıoğlu, Efe Coştu, Emin Ali Öztürk, Fırat Yaymanoğlu and Nisa Genç, Department of Industrial Engineering, Kadir Has University, Istanbul, Turkey

**ID 336 Berth Allocation Problem in Container Terminal TangerMed Morocco**

Kissani Ilham, Zine Rabie and Malih Aya, School of Science & Engineering, Al Akhawayn University, 5300, Ifrane, Morocco

**ID 332 Big Data and Machine Learning Methods to Secure the Internet Sites**

Jongwook Sung, Taeho Park, San Jose State University, CA, USA

**ID 58 Capacity Management for Flight Compartments**

Zhichao Feng, Hong Kong Polytechnic University, Hong Kong

**ID 59 Capacity Management for Flight Compartments**

Zhichao Feng, Hong Kong Polytechnic University, Hong Kong

**ID 101 ISM Modeling of Strategic Human Resource Management Practices for Successful Implementation of TQM in an Organization**

Sumit Kumar, Assistant Professor, Dept. of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Sangrur, Punjab, India  
Pardeep Gupta, Professor, Dept. of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Sangrur, Punjab, India

**ID 109 Current Applications and Future Trends of Artificial Intelligence and Machine Learning in the Resilience of Interdependent Critical Infrastructures**

Basem A. Alkhaleel, Department of Industrial Engineering, King Saud University, Riyadh 11421, Saudi Arabia

**ID 543 A GIS-Based Smart Waste Management for Assessing Spatial Distribution of Waste Bins in the City of Bisha, Kingdom of Saudi Arabia**

Ghadah M Khushail, Ghaida Fahad Alqarni, Refan M Alshahrani and Reema M Almotawa, Undergraduate Student in Mechanical Engineering Department-Industrial Engineering Program, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Khaled Ali Abuhasel, Full Professor in Mechanical Engineering, Department-Industrial Engineering Program, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

**2:00 – 3:45, WEDNESDAY****Manufacturing****Onsite Room 5**

Session Chair: Tamer Khalaf, Department of Industrial Engineering, College of Engineering, King Saud University, Riyadh 11421, Saudi Arabia

**ID 333 Application of Lean in Maintenance Processes of Air Compressors and Diesel Welding Machines**

Saed Amer, Khalifa University, United Arab Emirates

**ID 422 Fuzzy Logic-Based Approach for Predicting the Weld Hardness of AISI321 Steel**

Omar Al Denali, Faculty of Engineering, Libyan International Medical University, Libya  
Vail Karakale, Civil Engineering Department, Istanbul Medeniyet University (IMU), Turkey  
Abdelaziz Badi, Faculty of Engineering, Libyan International Medical University, Libya  
Fathi Alfazani, Faculty of Engineering, Libyan International Medical University, Libya

**ID 172 Performance Evaluation and DEAR Based Optimization on machining Leather Specimens to reduce carbonization**

Tamer Khalaf, Department of Industrial Engineering, College of Engineering, King Saud University, Riyadh 11421, Saudi Arabia  
Muthuramalingam Thangaraj, Dept. of Mechatronics Engineering, SRM Institute of Science and Technology, SRM Nagar, Kattankulathur, India  
Khaja Moiduddin, Advanced Manufacturing Institute, King Saud University, Riyadh 11421, Saudi Arabia

**ID 36 Taguchi-GRA Application in Multi-objective Optimization of FSP Variables for AA8011/TiC Composite**

Pankaj Chandna, Professor, Mechanical Engineering Department, National Institute of Technology Kurukshetra, Haryana 136119, India  
Raman and Pawan Bishnoi, Research Scholar, Mechanical Engineering Dept., National Institute of Technology Kurukshetra, Haryana, India

**ID 14 Understanding Asbestos Free Brake-Pad: Using Carbon Nanotube derived from rice husk**

Paul Amaechi Ako (formerly Ozor), Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa  
Department of Mechanical Engineering, Faculty of Engineering, University of Nigeria, Nsukka, Nigeria  
Victor Sunday Aigbodion, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa  
Africa Centre of Excellence, ACE-SPED University of Nigeria Nsukka Nigeria, Department of Metallurgical and Materials Engineering, Faculty of Engineering, University of Nigeria, Nsukka, Nigeria  
Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa

**ID 267 Economic Production Strategy considering energy consumption and recycling constraints in dry machining**

El Mehdi Guendouli and Sofiene Dellagi, Laboratoire de Génie Informatique, de Production et de Maintenance – LGIPM, Université de Lorraine Metz, France  
Lahcen Mifdal and El Mehdi Kibbou, Laboratoire InterDisciplinaire de Recherches Appliquées – LIDRA, Université Internationale d'Agadir – Universiapolis, Agadir, Maroc  
Abdelhadi Moufki, Laboratoire d'Etude des Microstructures et de Mécanique des Matériaux, LEM3, UMR CNRS, Université de Lorraine, Metz, France

**ID 225 Turkish-Russian Cooperation in Procurement S-400 TRIUMF Missile System 2019**

Hendra Maujana Saragih and Agung Tri Laksono, International Relations Department, Universitas Nasional, Jakarta, Indonesia  
Muhammad Zulham, Universitas Pertahanan Republik Indonesia, Jakarta, Indonesia

**ID 156 Ecosystem of goods and value creation**

Eugene Hakizimana, Lecturer and researcher at Escuela Superior de Comercio y Administración (Santo Tomás unit), of the National Polytechnic Institute (IPN), Mexico  
Christian Muñoz-Sánchez, Professor at Instituto Politécnico Nacional (IPN), Escuela Superior de Comercio y Administración (ESCA-STO) in Mexico City, Mexico  
Dulce María Monroy Becerril, Professor-researcher at Escuela Superior de Comercio y Administración (Santo Tomás unit), of the National Polytechnic Institute (IPN), Mexico  
Jorge Alejandro Silva Rodríguez de San Miguel, Professor-researcher at Escuela Superior de Comercio y Administración (Santo Tomás unit), of the National Polytechnic Institute (IPN), Mexico

**2:00 – 3:45, WEDNESDAY****Occupational Safety and Health (OSH)****Virtual Room 6**

Session Chair: N Bensekhria, Faculty of Medicine, University of Batna 2, Algeria

**ID 226 Analysis of The Working Conditions of Paramedical Staff in A Burn Unit Using the Ergonomic Approach**

N. Chenouf, N. Bensekhria, H.K. Hassinet And W. Benhassine, Occupational Health Service - CHU of Batna, Algeria

**ID 276 Assessment of Ionizing Radiation Exposure Risk and Health Implications for Orthopedic Operating Room Personnel**

N Bensekhria and W Benhassine, Faculty of Medicine, University of Batna 2, Algeria

**ID 227 Investigation and Analysis of a Fatal Occupational Accident**

N. Chenouf and W. Benhassine, Occupational Health Service, University Hospital Center Batna, Algeria  
Y. Khettache, Ain Touta Cement Plant – Batna, Algeria  
R. Boussaha and W. Bouhidel, Occupational Health Service, University Hospital Center Batna, Algeria

**ID 291 The Impacts of Increasing Treatment Uptake Rate of Hepatitis C Virus Infection in Indian Punjab on Some Important Societal Parameters**



Soham Das, Ph.D. student, Department of Mechanical Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi, Delhi, India  
 Varun Ramamohan, Assistant Professor, Dept. of Mechanical Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi, India

**ID 446 Examining Gender Perspectives: A Comparative Study of How Male and Female Senior Industrial Engineering Students Engage with Data Visualization Tools in MS Excel Through Usability Testing**

Bea J. Ubod, DOST STRAND N2 Scholar, Masters of Science in Industrial Engineering, Cebu Technological University-Main Campus, Philippines

**ID 71 An Innovative Strategy to Reduce Carbon Dioxide Emissions Resulting from Stopping at Traffic Lights: A Case Study in Bisha, Saudi Arabia**

Maha N Alshehri, Hadeel A Alshahrani, Maali Sh Alshahrani, Sheikha M Alshehri and Abeer H Alaklobi, Undergraduate Student in Mechanical Engineering, Department-Industrial Engineering Program, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia  
 Khaled Ali Abuhasel, Full Professor in Mechanical Engineering, Department-Industrial Engineering Program, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

**ID 612 Product design reliability improvement using lifetime distribution functions**

M.A.S. Monfared and S. Malekpour Kolbadi Nezaad, Department of Industrial Engineering, Faculty of Engineering, Alzahra University, Tehran, Iran

**ID 615 Optimizing Quality Management Systems in Manufacturing: Strategies for Minimizing Internal and External Defects**

Mokete Zondo, Sambil Charles Mukwakungu, Nita Sukdeo and Charles Mbohwa, Department of Quality and Operations Management, University of Johannesburg, South Africa

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**February 14, 2024 (Wednesday) - Session: 4:00 – 5:45 pm**

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**4:00 – 5:45, WEDNESDAY**

**Onsite Room 1**

**Project Management Workshop  
 Leading with Emotional Intelligence: A Seminar for Industrial Engineers  
 Dr. Tony Prensa, PhD, MBA, PMP, CB-PMO, CCP, ITIL, 6σ  
 Chief Executive Officer & Founder, TP Global Business Consulting, LLC, Orlando, Florida, USA**

**4:00 – 5:45, WEDNESDAY**

**Onsite Room 2**

**GEE Forum – IE & OM Education and Curriculum Panel**

Panel Chair:

Professor Abu Masud, Ph.D., P.E.  
 Professor Emeritus and Past Chair, Department of Industrial and Manufacturing Engineering  
 Past Dean of Graduate School  
 Wichita State University, Kansas, USA

Panel Speakers

Dr. Ahad Ali  
 Associate Professor  
 Director of Bachelor of Science in Industrial Engineering  
 Director, Master of Science in Industrial Engineering  
 Director of Smart Manufacturing and Lean Systems Research Group  
 Director, Graduate Certificate in Lean Six Sigma  
 Coordinator, Siemens Electro-Matic Industrial Engineering Lab  
 A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering  
 Lawrence Technological University  
 Southfield, Michigan, USA

Dr. Erialdi Syahrial  
 Senior Lecturer  
 Faculty of Management  
 Universiti Teknologi Malaysia (UTM)  
 Johor Bahru, Malaysia

Prof. ( Dr.) Devinder Kumar Banwet , FIE.  
 Vice Chancellor ( Founding )  
 University of Engineering & Management  
 Kolkata 700160, India  
 Former Professor Emeritus IIT Delhi  
 HOD DMS IITD, Professor HAG IITD  
 Chairman PEC of ASRP & Entrepreneurship Interdiscip. Programs

**4:00 – 4:45, WEDNESDAY****Prediction, Risk Assessment and Optimization****Onsite Room 3**

Session Chair: Rahul Saha, Chemical Engineering Department, National Institute of Technology Hamirpur, Hamirpur, Himachal Pradesh, India

**ID 334 Developing an anomaly diagnostic and predictive maintenance strategy using machine learning**

Jen-Ming Chen, Institute of Industrial Management, National Central University, Taoyuan, Taiwan

**ID 128 Ergonomic Risks in University Staff Using RULA and REBA**

Fereydoun Aghazadeh, Nabila Chowdhury and Vamsi Pusapati, Department of Mechanical and Industrial Engineering, Louisiana State University, Baton Rouge, LA 70803, USA

**ID 270 Evaluating advantages and limitations of implementing Risk Based Inspection and Maintenance (RBIM)**

Ngaka Mosia, Lecturer, Department of Industrial Engineering, School of Engineering, College of Sciences Engineering and Technology University of South Africa (UNISA), Pretoria, South Africa

Kemlall Ramdass, Professor, Department of Industrial Engineering, School of Engineering, College of Sciences Engineering and Technology University of South Africa (UNISA), Pretoria, South Africa

**ID 261 Identifying the Role of Emulsion and Nano-emulsion for Predicting the Residual Heavy Oil Recovery**

Rahul Saha, Assistant Professor, Chemical Engineering Dept., National Institute of Technology Hamirpur, Hamirpur, Himachal Pradesh, India

**ID 24 Maintainability Analysis of a Wheel Loader Engine in the Construction Industry**

Victor and Chukwuemeka Ajah, Bachelor's of Engineer, Department of Mechanical Engineering, Faculty of Engineering, University of Nigeria Nsukka, Enugu State Nigeria

Paul A. Ako and formerly Ozor, Department of Mechanical Engineering, Faculty of Engineering, University of Nigeria Nsukka, Nigeria

Department of Quality and Operations Management, Faculty of Engineering and The Built Environment, University of Johannesburg, South Africa

Prof Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and The Built Environment, University of Johannesburg, South Africa

**ID 131 Duration Estimation of Steel Framing Activities Using an Artificial Intelligent Algorithm and Top Risk Scores for High-Rise Buildings**

Dima Jawad, Associate Professor, Engineering Management Graduate Program, Faculty of Engineering and Applied Science, Ontario Tech University, Oshawa, Ontario, Canada

Seiyed Hamid Mousavi, Master of Engineering in Engineering Management, Engineering Management Graduate Program, Faculty of Engineering and Applied Science, Ontario Tech University, Oshawa, Ontario, Canada

**ID 627 Technology-Organisation-Environment Framework Theory for Adopting and Implementing Big Data Analytics: A Bibliometric Analysis Study**

Lawrance Seseni, Department of Business Management, College of Business and Economics, University of Johannesburg, Auckland Park, Johannesburg, South Africa

Charles Mbohwa and Nelson Sizwe Madonsela, Department of Quality and Operations Management, Postgraduate School of Engineering Management, University of Johannesburg, Auckland Park, Johannesburg, South Africa

**4:00 – 5:45, WEDNESDAY****Logistics****Onsite Room 4**

Session Chair: Hareem Arshad, Nord University, Norway

**ID 51 Electric Vehicle Routing Problem with On-Demand Charging System**

İhsan Sadati, Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey

Smart Mobility and Logistics Lab, Sabanci University, Istanbul, Turkey

Bülent Çatay, Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey

Smart Mobility and Logistics Lab, Sabanci University, Istanbul, Turkey

**ID 487 Empowering Parcel Delivery Logistics: The Role of Customer Journey Mapping in Driving Innovation and Customer-Centric Solutions**

Mehrdad. Fagher, Cofounder, COB and Logistic Cluster Chief Executive at Fagher Holding, CEO at Tipax, PhD in strategy &amp; Entrepreneurship from London Business School, Tehran, Iran

**ID 67 Logistics and Supply Chain Management in Landlocked Countries: An In-depth Study on the Application and Obstacles (Case of Ethiopia)**

Mebrat Aregawi Weldemichael, Liverpool John Moores University, Liverpool, L3 5UX, U. K.

Simon Peter Nadeem, Centre for Supply Chain Improvement, University of Derby, Derby, DE22 1GB, U.K.

**ID 134 Logistics of EV Batteries in Germany - State of the Art**

Max Plotnikov, Department of Software &amp; Information Engineering, Research Associates, Fraunhofer Institute for Material Flow and Logistics, Dortmund 44263, Germany

**ID 342 Transforming Military Logistics: Development of a Mobile Requisition System Application for Improved Effectiveness and Operational Preparedness and Management**

Antoniette T. Mollejon, Professor &amp; Department Chair, Industrial Engineering Department, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines

Cherry D. Casuat, Professor, Computer Engineering, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines

Roselle P. Alviar, Professor and Dean, College of Engineering, University of Perpetual Help System Dalta, Calamba. Laguna, Philippines

LTC Alan P. Sillacay and MAJ Carlo Deniego, Military Servicemen, Philippine Army, Fort Bonifacio, Taguig City, Philippines

**ID 263 An investigative examination of subscription models in the service industry**

Mohit Tyagi, Indian Institute of Technology Delhi, India

**ID 592 Presenting a Framework of Contributing factors on Generation of Bullwhip Effect Phenomenon in the Supply Chain Using Principal Component Analysis (PCA) (Case study: The National Iranian oil products Distribution Company (NIOPDC) of Tehran Region)**  
Amir Alavifar, Phd in Energy economics, Moscow State university, CEO and Co-founder of ArtinAzmaMehr, Tehran, Iran  
Parisa Romouzi, DBA at Tehran University, Iran

**ID 623 Beyond bondaries- circular economy in Plastics**  
Hareem Arshad, Nord University, Norway

**4:00 – 5:45, WEDNESDAY****Modeling, Simulation and Optimization****Onsite Room 5**

Session Chair: Osamah Abdulhameed, Industrial Engineering Department, Al-Yamamah University, Riyadh-11512, Saudi Arabia

**ID 49 A Comparative Study on Heuristic Methods for Transportation Problem**  
Rupkatha Ghosh and M. Mathirajan, Department of Management Studies, Indian Institute of Science, Bangalore 560012, India

**ID 234 Approximating Markov Chains via Weak Perturbation Theory**  
Badredine Issaadi, Laboratoire LITAN, École supérieure en Sciences et Technologie de l'Informatique et du Numérique, RN 75, Amizour 06300, Bejaia, Algérie

**ID 207 Approximation of the Stationary Distribution for the Retrial Queueing System**  
Nabil Ait Yala, Mathematics Department, Faculty of Sciences and Applied Sciences, University of Bouira, 10000 Bouira, Algeria  
Badredine Issaadi, Laboratoire LITAN, Ecole Supérieure en Sciences et Technologies de l'Informatique et du Numérique, RN 75, Bejaia, Algeria  
Karim Abbas, Research Unit LaMOS – Laboratory of Modeling and Optimization of Systems, Faculty of Exact Sciences, University of Bejaia, Algeria

**ID 286 Balancing Chaos and Order: A Comprehensive Literature Review on the Tradeoffs of Chaotic Storage in Warehouse Management**  
Alyaziya Al Jaber, Department of Engineering Systems and Management, Khalifa University, Abu Dhabi, UAE  
Saed Amer, Department of Engineering Systems and Management, Khalifa University, Abu Dhabi, UAE  
Ahmad Mayyas, Department of Engineering Systems and Management, Khalifa University, Abu Dhabi, UAE

**ID 203 Fault Diagnosis Using Neural Nets: Application to Gas Turbine**  
Yahia Kourd, University of Souk Ahras, Algeria

**ID 107 Optimization of Czochralski Process (Cz) Process Using Cooling Tube Thermal Shield: Simulation Approach**  
Amir R. A. Dezfoli, Assistant Professor, Department of Intelligent Automation Engineering, National Chin-Yi University of Technology, Taichung, Taiwan

**ID 437 Accelerating Sodium-Ion Electrode Material Development Through Artificial Intelligence**  
Sara Arif Alzaabi, MSc student, Department of Civil and Environmental Engineering, Khalifa University, Abu Dhabi, UAE  
Ali Elkamel and Ali Alhammedi, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE  
Georgios Karanikolos, Department of Chemical Engineering, University of Patras, Greece

**ID 140 Topology optimization of Turbine blade using two types lattice structures with different parameter**  
Osamah Abdulhameed, Industrial Engineering Department, College of Engineering and Architecture, Al-Yamamah University, Riyadh, Saudi Arabia

**4:00 – 5:45, WEDNESDAY****Lean and Quality****Virtual Room 6**

Session Chair: Ogerta Elezaj, Birmingham City University, United Kingdom

**ID 290 The Industries Lean Maturity Level in Luanda – Angola**  
Agostinho A., C-MAST, University of Beira Interior, Convento de Santo António, 6200-358, Covilhã, Portugal  
Ricardo M. Silva, C-MAST, University of Beira Interior, Convento de Santo António, 6200-358, Covilhã, Portugal  
Federal University of Paraíba, Campus I, Cidade Universitaria, PB, 58051-900, Brazil  
Fernando Charrua-Santos, C-MAST, University of Beira Interior, Convento de Santo António, 6200-358, Covilhã, Portugal

**ID 335 Failure Mode and Effects Analysis to Improve Locomotive Subsystem Reliability**  
Bheki B.S Makhanya, Postgraduate School of Engineering Management, Faculty of Engineering and the Build Environment, University of Johannesburg, PO Box 524, Auckland Park 2006, South Africa

**ID 279 Challenges Associated with The Maintenance of ISO 9001 Quality Assurance System: The Case of Two Small South African Companies**  
Mokhine K. Lentsoana, Metal Casting Technology Station, University of Johannesburg, Johannesburg, South Africa

**ID 216 Exploring the Constraints of Implementing Total Quality Management in Civil Engineering Consulting Companies – A Case Study**  
Utloa, T. M., Ogbeifun, E. and Pretorius, J. H. C., Postgraduate School of Engineering Management, Faculty of Engineering and the Built Environment, University of Johannesburg, South Africa

**ID 550 Intelligent Automation in the Operational Processes of a Collection Company in Mexico: A Strategic Approach for Pharmaceutical Companies**  
Victor Martin Maldonado Benitez and Gabriela Guadalupe Escobedo Guerrero, ESCA Santo Tomás, Instituto Politécnico Nacional, México City, México  
Brenda Esmeralda Moreno Garduño, ESCA Santo Tomás, Instituto Politécnico Nacional, México City, México

**ID 555 Hotel Laundry Optimization**

Seçil Gülbudak Dil, Aybüke Şahin and Semail Ülgen, Antalya Bilim University, Turkey

**ID 581 Unleashing AI Potential: Transforming Customer Shopping Experiences in Indian Retail**

Anusha Dixit, Dhanshri Bahiram, Ishi Shukla and Mr. R Kaja Batha Navas, NIFT, Gandhinagar, India

**ID 466 Automation in Construction Cost Budgeting using Generative Artificial Intelligence**Pouyan Parsafard, Ogerta Elezaj, Damilola Ekundayo and Edlira Vakaj, Birmingham City University, United Kingdom  
Milan Parmar, 21 Borrowdale Close, Ilford, England, IG4 5LS, United Kingdom  
Mudasir Ahmad Wani, Prince Sultan University, Saudi Arabia

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**February 14, 2024 (Wednesday) - Session: 7:00 – 10:00 pm**

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**Conference Awards Gala Dinner - Buffet**

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**Virtual**

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**February 11, 2024 (Sunday) - Session: 8:00 – 9:45 am**

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**8:00 – 9:45 am, SUNDAY****Virtual Room 1**

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**Undergraduate Student Paper Competition sponsored by Siemens**

Session Chair: Dr. Mohammad Shamsuzzaman, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah

**ID 339 A Time-Discretized Linear Integer Programming Model for Vacation Route Planning**Luca Romagnoli, University of Waterloo Department of Chemical Engineering, University of Waterloo, Waterloo, ON, Canada  
Ali Elkamel, Department of Chemical Engineering, Khalifa University, Abu Dhabi, UAE and Department of Systems Design Engineering and Department of Chemical Engineering, University of Waterloo, Waterloo, ON, Canada**ID 171 Optimization and Standardization of the Sales Process in a Service Sector Company through Lean Tools**Alonso Parodi and Sergio Montañez, University of Lima, Industrial Engineering Career, Lima, Peru  
Rafael Chavez Ugaz, University of Lima, Faculty of Engineering, Lima, Peru**ID 314 Analyzing Key Drivers for Sustainable Energy Development in Saudi Arabia: A DEMATEL Methodology Perspective**

Sultan J. Enani, Bader A. Alalshaik, Majed M. Fallata, Albaraa R. Gazzaz and Ammar Y. Alqahtani, Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia

**ID 469 Architectural Design for a Summer House**

Remas Mohammed AlHils, Taif University, Saudi Arabia

**ID 262 Elderly Flood Rescues in Marikina City: Development and Evaluation of Smart Floating Rescue Equipment**

Duane Marc Malonda, Technological Institute of the Philippines, Philippines

**ID 459 Depreciation of transport vehicles and their impact on Performance in the land transport sector in the Kingdom of Saudi Arabia**

Hassan Nasser and Dr. Karim Soliman, Department of Supply Chain in The University of Business and Technology, UBT, Saudi Arabia

**ID 493 Facility Layout Optimization for Electric Two-Wheeler Conversion Workshop in Indonesia: A Systematic Layout Planning Approach**Christ Ivan Hasudungan Simanjuntak, Muhammad Hanif Fathan Putra, Nabil Ahmad Zaky and Rizquallah Dewandono, Undergraduate Students, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java 16424, Indonesia  
Rahmat Nurcahyo, Professor, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia  
Ardhy Lazuardy, Doctoral Student, Dept. of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia**ID 490 Drive-Thru Fixture Design**

Fahad AlHadyan, Faris AlMosa, Khalid AlKhateeb, Musaad AlHobayb, Tareq AlMohawis and Dr. Wasim AlShammary, Industrial Engineering Department, College of Engineering and Architecture, Al Yamamah University, Riyadh, Saudi Arabia

**ID 624 Korean Trends as A Factor Affecting Academic Performance Among Students in Higher Education Institutions**

Carigma, Daphne Francine M., Cruzado, Elizabeth S., Hagos, Michael Josh B., Perater, Kenneth S., Ramos, Denise M., Navarro, Maricar, Galinganm and Romalyn, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines



**ID 311 Analysis of bolt failure locations for Predictive Maintenance**

Yasmin Musa, Department of Career Readiness- Mechatronics, Motlow State Community College, Smyrna, TN, USA  
 Khalid H. Tantawi, Assistant Professor, Department of Engineering Management and Technology, University of Tennessee, Chattanooga, TN, USA  
 Omar Tantawi, Department of Career Readiness- Mechatronics, Motlow State Community College, Smyrna, TN, USA

**8:00 – 9:45 am, SUNDAY****Virtual Room 2****Graduate Student Paper Competition sponsored by Eaton Corporation**

Session Chair: Dr. Abdulrahim Shamayleh, Associate Professor, Department of Industrial Engineering, American University of Sharjah

**ID 329 Enhancing Quality of Life for Individuals with Cerebral Palsy through Personalized Robotic Assistance and Advanced Computer Vision Technology**

Billy Peter Munyenembe, Department of Engineering, Information and Communications University, Lusaka, Zambia  
 Penjani Hopkins Nyimbili, Lecturer, Department of Geomatic Engineering, University of Zambia, Lusaka, Zambia  
 Erastus Misheng'u Mwanaumo, Ag. Director – Directorate of Research and Graduate Studies, University of Zambia, Lusaka, Zambia  
 Professor Emeritus, University of South Africa (UNISA), Pretoria, South Africa  
 Wellington Didibhuku Thwala, Full Professor, Department of Civil Engineering, College of Science, Engineering and Technology, University of South Africa (UNISA), Pretoria, 0003, South Africa

**ID 13 Improving Picking Efficiency of On-demand Grocers When Customers and Order Pickers Co-exist**

Reeju Guha, PhD Candidate, Operations Management, IE Business School, IE University, Madrid, Spain

**ID 89 Quality Assurance Machine for Software Using Machine Learning**

Shane Downing and M. Affan Badar, Bailey College of Engineering and Technology, Indiana State University, Terre Haute, IN 47809, USA  
 Christopher J. Kluse, Faculty of College of Technology, Architecture and Applied Engineering, Bowling Green State University, Bowling Green, OH 43403 USA

**ID 415 The effects of blockchain technology on traceability and efficiency in supply chain management: A Systematic Literature Review**

Luis Quispe Cullampe, Facultad de Ingeniería, Universidad de Lima, Lima, Peru  
 Brandon Yang Lima, Facultad de Ingeniería, Universidad de Lima, Lima, Peru  
 Rafael Chavez-Ugaz, Profesor de Investigación, Universidad de Lima, Lima, Peru

**ID 565 The Strategy of PT XYZ Supporting the Indonesian Army Logistics Transportation**

Chadziqatun Najilatil Mazda and Yandra Rahadian Perdana, Department of Industrial Engineering, State Islamic University (UIN) Sunan Kalijaga, Yogyakarta, Indonesia  
 I Nengah Putra Apriyanto, Department of Defense Industry, The Republic of Indonesia Defense University, Jakarta, Indonesia

**ID 589 Marketing Strategy Analysis of PT XYZ Product Using Important Performance Analysis Method**

Yusuf Saputro, Graduate Student, Industrial Engineering, State Islamic University of Sunan Kalijaga, Yogyakarta, Indonesia  
 Yandra Rahadian Perdana, Lecturer, Industrial Engineering, State Islamic University of Sunan Kalijaga, Yogyakarta, Indonesia

**ID 609 Design Development of Catfish Chips using the Kano Model and Quality Function Deployment (QFD) at the Pelemadu Rempeyek Industrial Center**

Muhammad Arif Prasetyo, Chadziqatun Najilatil Mazda, Taufiq Aji and Khusna Dwijayanti, Department of Industrial Engineering, Faculty of Science and Technology, Universitas Islam Negeri Sunan Kalijaga, Indonesia

**8:00 – 9:45 am, SUNDAY****Supply Chain Management****Virtual Room 3**

Session Chair: Mona Haji, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 119 Assessing Smart Green Supply Chain Management Practices in Manufacturing Companies of Saudi Arabia**

Ali Saeed Almuflih, Chair, Industrial Engineering department, College of Engineering, King Khalid University, Saudi Arabia

**ID 114 Effectively Managing Supply Chain Practices, Financial Performance and Competitive Advantage to Enhance a Robust Retail Supply Chain Management in Sierra Leone: Case Study- Freetown**

Sahr Fillie and Alimamy Kamara, Former Students of the Faculty of Industrial Technology, Department of Industrial Engineering, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia

**ID 215 Enhancing Risk Management and Mitigation Strategies for the Infant Formula Milk Supply Chain through Hybrid AHP-TOPSIS Analysis**

Mona Haji, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

**ID 113 The Impact of Supply Chain Management Practices on The Performance of Indigenous Banks in Sierra Leone: A Case Studies of The Rokel Commercial Bank and Sierra Leone Commercial Bank**

Alimamy Kamara and Philip Sulaiman Koroma, Department of Accounting and Finance, Fourah Bay College, University of Sierra Leone

**ID 315 Warehouse Performance Improvement Using the Value Stream Mapping Method to Reduce Response Time for Third-Party Logistics Company**

Rizki Akbar Sofyan and Teuku Yuri M. Zagloel, Department of Industrial Engineering, Universitas Indonesia, Depok, Jawa Barat 16424, Indonesia

**ID 54 Application of Life Cycle Assessment (LCA) in the Fast Moving Consumer Goods Sector**

Elahe Atarisharghi, Michaela Golser, Erwin Rauch and Dominik T. Matt, Industrial Engineering and Automation (IEA), Faculty of Engineering

Free University of Bozen-Bolzano, Bolzano, Italy

Dominik T. Matt, Innovation Engineering Center (IEC) Fraunhofer Italia Research scarl, Bolzano, Italy

**ID 604 Systematic review of advancements in sustainable solid waste management system in the era of industry 4.0**

Smeetasree Pati, Research Scholar, Department of Management Studies, Indian Institute of Technology, Roorkee, India

Rajat Agrawal, Professor, Department of Management Studies, Indian Institute of Technology, Roorkee, India

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## February 11, 2024 (Sunday) - Session: 10:00 – 11:45 am

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10:00 – 11:45 am, SUNDAY

Virtual Room 1

### Undergraduate Student Paper Competition sponsored by Siemens

Session Chair: Dr. Mohammad Shamsuzzaman, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah

**ID 344 Energizing the Desert: Strategic Multi-Criteria Decision-Making Approaches to Saudi Arabia's Renewable Transition**

Ahmed S. Bujeir, Abdulaziz M. Junaid, Sharaf A. Alshareef and Ammar Y. Alqahtani, Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia

King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia

**ID 375 Enhancing Operational Efficiency and Reducing Production Costs Using Value Stream Mapping**

Ghina Khalid Attieh, Under graduate Program, Department of Operations & Supply Chain Management, Effat University, Kingdom of Saudi Arabia

**ID 440 Framework of Lean tools which are the key to increasing scheduled production planning capacity**

Ahmed M. Abed, Department of Industrial Engineering, College of Engineering, Prince Sattam bin Abdulaziz University, Alkharj, Saudi Arabia

Dept. of Industrial Engineering, Zagazig University, Egypt

Alqahtani, Mohamed Altamimi and Mohamed Aldossary, Department of Industrial Engineering, College of Engineering, Prince Sattam bin

Abdulaziz University, Alkharj, P.O. Box 16273, Saudi Arabia

**ID 272 Integrated Time Series Analysis for Long Term Demand Planning and Capacity Expansion**

Ibrahim M.G. Khayat, Mohammed F. Hariri, Mohammed H. Baggazi, Yousef J. Bassyoni and Ammar Y. Alqahtani

Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia

**ID 416 Multivariate Regression Analysis of Sleep Deprivation Through Academic Performance of Architecture Students**

Mart Lorenz R. Agravante, John Rei C. Garchitorea, Johanh Gabrielle C. Julian, Carl Joseph C. Quintana, Miguel G. Tabirao, Maricar Navarro,

Juan Miguel Dinglasan, Industrial Engineering Program, College of Engineering and Architecture, Technological Institute of the Philippines,

Quezon City, Philippines

**ID 346 Operations Management Practices of McDonald's**

Hasan Balfaqih, Raghd Mahyoub, Amera Khan, Ibtihal Bakhsh and Hammdah Almoalad, Effat, Saudi Arabia

**ID 317 Overcoming IoT Implementation Challenges in the Saudi Healthcare Supply Chain: An Integrated ISM-MICMAC Analysis**

Abdulrahman A. Jamaluddin, Ibrahim A. Alkathiri, Waleed A. Alghmadi, Hamza A. Khadawardi and Ammar Y. Alqahtani, Department of Industrial

Engineering, Faculty of Engineering, King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia

**ID 360 Perceived Impact of Mandatory SIM Card Registration to Cybersecurity and Data Privacy Among Engineering Students in Technological Institute of the Philippines**

John Michael V. Dela Cruz, Bryant Anthony G. Islao, Guiller E. Lalan, Stephen Shadrach P. Marcos and Michael John B. Valerio, Department of

Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Philippines

Maricar M. Navarro, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines –

Quezon City, Cubao, Quezon City, Philippines

**ID 562 Analysis of Fintech Peer-to-Peer Lending as an Alternative Financing for MSMEs in Palembang City**

Dewi Sartika, Faculty of Social Humaniora, Universitas Bina Darma, Palembang, Indonesia

Muji Gunarto, Faculty of Social Humaniora, Universitas Bina Darma, Palembang, Indonesia

Puja Maduri, Student of Accounting Program, Universitas Bina Darma, Palembang, Indonesia

Wuri Handayani, Student of Accounting Program, Universitas Bina Darma, Palembang, Indonesia

Ratri Septianasari, Student of Accounting Program, Universitas Bina Darma, Palembang, Indonesia

**ID 625 Effects of Quality Sleep Cycle, Application of Physical and Cognitive Ergonomics to the Impacts of Quality Sleep Cycle to Call Center Agents Lifestyle working on Night Shift in Quezon City**

Maricar M. Navarro and Jan Louis Cruz, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of

the Philippines - Quezon City, Cubao, Quezon City, Philippines

10:00 – 11:45 am, SUNDAY

Virtual Room 2

Session Chair: Mahmooda Azizah Bhatti, Bulacan State University, Philippines

### Master Thesis Competition

**ID 533 Analysis of Organizational Change in Private Universities with a Focus on Employee Behavior Moderated by Management Support**

Muji Gunarto, Master of Management Program, Universitas Bina Darma, Palembang, Indonesia

Sri Yusriani, Student of Master of Management Program, Universitas Terbuka, Grindsted, Denmark  
Nunung Nurbaeti, Student of Master of Management Program, Universitas Terbuka, Jakarta, Indonesia

**ID 514 Application of Swarm Intelligence in System Optimization**

Obembe Deborah Temitayo, Department of Mathematics, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria  
Dr. Michael Agarana, Department of Mathematics, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria

**ID 468 Marketing Communication Strategy Through TikTok to Promote Indonesian Local Brand x Barbie (2023)**

Bella Angelina Susanto, Universitas Multimedia Nusantara, Jalan Scientia Boulevard Gading, Curug Sangereng, Serpong, Kabupaten Tangerang, Banten, Indonesia

**ID 102 Reducing Risks in Maintenance of High-Voltage Transmission Lines**

Nuttanicha Panich and Jitra Rukijkanpanich, Department of Industrial Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok, Thailand

**ID 354 Centrifugal Pump Reliability Improvement in the Pulp and Paper Industry**

Nontuthuko Shabane, Bheki B.S Makhanya and Jan-Harm Pretorius, Postgraduate School of Engineering Management, Faculty of Engineering and the Build Environment, University of Johannesburg, PO Box 524, Auckland Park 2006, South Africa

## Doctoral Dissertation Competition sponsored by Airbus

**ID 151 Revolutionizing Last-Mile Delivery: Integrating Social Media and Deep Learning for Optimized Traffic Prediction in E-Commerce**

Valeria Laynes Fiascunari and Luis Rabelo, Department of Industrial Engineering and Management Systems, University of Central Florida, Orlando, Florida, USA  
Edgar Gutiérrez-Franco, Center for Transportation and Logistics, Massachusetts Institute of Technology, Cambridge, MA, USA

**ID 463 Surface Modification through Friction Stir Processing (FSP)**

Pooja Dwivedi and Sachin Maheshwari, Department of Mechanical Engineering, Netaji Subhas University of Technology, New Delhi-110078, India  
Arshad Noor Siddiquee, Department of Mechanical Engineering, Jamia Millia Islamia, New Delhi-110025, India  
Qutubuddin S.M., Department of Industrial & Production Engineering, P.D.A. College of Engineering, Kalaburagi, Karnataka, India

**10:00 – 11:45 am, SUNDAY****Operations Management****Virtual Room 3**

Session Chair: Mashaël Zayed, Taif university, Saudi Arabia

**ID 411 Developing Total Factor Productivity Measurement Model at Company Level: A Case of Finfinnee Furniture Factory**

Abdi Birhanu, Lecturer and researcher at Bule Hora University, Department of Industrial Engineering, Bule Hora Ethiopia  
Tariku Tamiru (PhD), Assistant Professor, Department of Industrial Engineering, Hachalu Hundessa Campus (Institute of Technology), Indigenous Knowledge, Appropriate Technology and Innovation Directorate Director, Ambo University, Ethiopia

**ID 515 Does Leadership have an Impact on Employee Productivity and Sustainability?**

Ipfii Nemudzivhadi and Emmanuel Edoun, Department of Quality and Operations Management, University of Johannesburg, South Africa

**ID 106 A Revised Formulation for the Airline Fleet Assignment Problem**

Alaa Ahmed, Bassant Nabil, Hadi Fors and Ahmad E. Elhabashy, Production Engineering Department, Alexandria University, Alexandria, Egypt

**ID 94 A Calculation Method of the Dish Similarities Based on Ingredients and Seasonings for Automatic School Lunch Menu Creation**

Yating Liu, Department of Industrial Engineering and Management, Graduate School of Engineering, Kanagawa University, Kanagawa, Japan  
Yuki Mekata and Hideki Katagiri, Department of Industrial Engineering and Management, Faculty of Engineering, Kanagawa University, Kanagawa, Japan

**ID 219 Allocation Optimization of An Electrical Vehicle Charging Station Using Ant Colony Algorithm**

Sulistyo Prabowo Adhi Karno, Sadi and Apriani Soepardi, Department of Industrial Engineering, Faculty of Industrial Engineering Universitas Pembangunan Nasional Veteran, Yogyakarta, Indonesia

**ID 56 Nature-Inspired Optimization: Exploring the Capabilities of Physarum Polycephalum in Addressing Complex Transportation problems**

Lena M. Alzhrani and Malak H. Elghali, Department of Operations and Supply Chain Management, Effat University, Jeddah, Saudi Arabia

**ID 512 Architectural Design**

Mashaël Zayed, Taif university, Saudi Arabia

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## February 11, 2024 (Sunday) - Session: 12:00 – 1:45 pm

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**12:00 – 1:45 pm, SUNDAY****Virtual Room 1**

## Undergraduate Student Paper Competition sponsored by Siemens

Session Chair: Dr. Mohammad Shamsuzzaman, Professor, Dept. of Industrial Engineering and Engineering Management, University of Sharjah

**ID 491 Architectural design of a summer house**

Sadeem Nasser, Taif University, Saudi Arabia

**ID 501 Redesign of Facility Layout and Material Handling in A Cake Production Factory Using Systematic Layout Planning**

Adisti Shafira, Davinna Maritza Putri, Diniarvina Lulu Aisha and Safina Ghassani Zattiwani, Undergraduate Students, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java 16424, Indonesia  
Rahmat Nurcahyo, Professor, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia  
Muhammad Habiburrahman, Doctoral Student, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java 16424, Indonesia

**ID 48 Smart aquaponic for leafy vegetables**

Ashish Khodve, Jspm college of engineering, pune, India

**ID 513 Architectural Design For a Summerhouse**

Dana Alsofyani, Taif University, Saudi Arabia

**ID 370 Supply Chain and Industry 4.0: A Review of Literature**

Georgia Prado de Moura de Faria, Undergraduate Student, Federal Institute of Education. Science and Technology of Sao Paulo - IFSP Sorocaba Campus Sorocaba, Brazil

**ID 453 The Effects of Shorter Product Lifecycles on Efficient Transportation in the Food Industry in Saudi Arabia**

Abdulaziz Alsaedi, university of business and technology, Saudi Arabia

**ID 410 The Strategic Planning Approach for Hotel Franchises - A Case Study of 'Atlantis The Palm' in Jeddah, Saudi Arabia**

Maya AlHashedi, Department of Entrepreneurship Effat University, Saudi Arabia

**ID 52 Auto Insurance Fraud Detection using Machine learning Contrasting US and Moroccan Companies**

Sidi Aly Mouna and Kissani Ilham, School of Science & Engineering, Al Akhawayn University, 5300, Ifrane, Morocco

**ID 25 Digital Kanban for Agile Production Planning and Scheduling in Automotive Supplier Industry**

Johanna Lang, Undergraduate Study Program in Logistics and Digitalization, University of Applied Sciences Amberg-Weiden, Weiden in der Oberpfalz, Germany  
Andreas Dörner, Industrial Engineering and Management, University of West Bohemia, Pilsen, Czech Republic  
Electrical Engineering, Media and Computer Science, University of Applied Sciences Amberg-Weiden, Amberg, Germany  
Stephanie Abels-Schlösser, Weiden Business School, University of Applied Sciences Amberg-Weiden, Weiden in der Oberpfalz, Germany

**ID 563 Analysis of Financial Distress on Tax Avoidance Mediated by Transfer Pricing**

Dewi Sartika, Master of Accounting Program, Universitas Bina Darma, Palembang, Indonesia  
Muji Gunarto, Master of Management Program, Universitas Bina Darma, Palembang, Indonesia  
Feliantika Wijayanti, Student of Accounting Program, Universitas Bina Darma, Palembang, Indonesia  
Sukumati, Student of Accounting Program, Universitas Bina Darma, Palembang, Indonesia  
Yolan Saparingga, Student of Accounting Program, Universitas Bina Darma, Palembang, Indonesia

12:00 – 1:45 pm, SUNDAY

Virtual Room 2

## Human Factors and Ergonomics Competition sponsored by CINTAS

Session Chair: Dr. Suzan Alaswad, Chair, College of Business, Zayed University

**ID 27 Development of an Ergonomic Framework for a Sustainable Cost-Effective Process in a Clothing Industry**

Gracious Amarachukwu Nwafor, Department of Mechanical Engineering, Faculty of Engineering, University of Nigeria, Nsukka, Enugu, Nigeria  
Paul Amaechi Ako (formerly Ozor), Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa  
Department of Mechanical Engineering, Faculty of Engineering, University of Nigeria, Nsukka, Nigeria  
Charles Mbohwa, Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, Auckland Park, South Africa

**ID 287 Modeling the Impact of Sitting Posture and Duration on the Health and Safety of Remote Learning**

Louai Maghrabi, Mariam Mohammed and Alia AlAydaros, MSc. Students Mechanical Engineering Department, Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates  
Maryam Almarzooqi, MSc. Student Biomedical Engineering Department, Khalifa University of Science and Technology, Abu Dhabi, UAE  
Yasmina Alseksek, MSc. Students Chemical Engineering Department, Khalifa University of Science and Technology, Abu Dhabi, UAE  
Dr. Saed Amer, Faculty Member Industrial and Systems Engineering Department, Khalifa University of Science and Technology, Abu Dhabi, UAE

**ID 214 Meditation for human integration**

Som R. Soni and Gita D. Soni, AdTech Systems Research Inc., 1342 North Fairfield Road, Beavercreek, Ohio 45432, USA

**ID 599 Ergonomic Issues in Indian Small-Scale Industries: A Comprehensive Review on Challenges and Solutions**

Anas Ali, Department of Mechanical Engineering, All Saints' College of Technology, Bhopal, Madhya Pradesh, India  
Qutubuddin S.M., Department of Industrial & Production Engineering, P.D.A. College of Engineering, Kalaburagi, Karnataka, India  
Syed Adnan Ali, United Arab Emirates University, UAE

**ID 622 Sole Solutions: Redefining Comfort and Safety for Elderly Women with Cutting-Edge Ergonomic Footwear**

Qabas Al-Jumaili, Mariam Elghobashi and Fatma Alshamsi, Department of Industrial Engineering & Engineering Management, University of Sharjah, Sharjah, UAE, Ergonomics & Work & Process Improvement, United Arab Emirates



## Senior Design Project / FYP Competition sponsored by Tooling Tech Group

### ID 178 Performance Upgrade: Optimizing Weighing and Dispensing Processes at EMC

Yarieli Davila Flores, BSIE, LSSYB, LSSGB, Luis A. Lopez Iglesias, BSIE, LSSYB, LSSGB and Jannette Perez Barbosa, MSIE, PE, PhD.C, Department of Industrial Engineering and Management, Universidad Ana G. Méndez-Gurabo Campus, Gurabo, Puerto Rico, United States

### ID 338 An Optimized Ball and Plate System Based on a PID Controller

Abdullah Tahir, Student, University of Dubai, Dubai 14143, United Arab Emirates

Maisam Wahbah and Husameldin Mukhtar, College of Engineering and Information Technology (CEIT), University of Dubai, Dubai, UAE

### ID 369 Design and fabrication of overspeed governor with triple protection system (Project Based Learning in Mechanical Design)

Bader Ghazi Sabyah, Department of Mechanical Engineering Technology, Yanbu Industrial College, Yanbu Al-Sinaiyah, Saudi Arabia

Khalid Ababtain and Muhammad Ajmal, Dept. of Mechanical Engineering Technology, Yanbu Industrial College, Yanbu Al-Sinaiyah, Saudi Arabia

### ID 551 Development of Solar-Powered Reverse Osmosis Installation Based on The Internet of Things for Drinking Water Treatment at Pptq Al-Madinah, Ngemplak, Boyolali

Rahmad Rizki Nur Arifin, Sebelas Maret University, Indonesia

### ID 553 Designing an Adjustable Fixture for Use on Surface Roughness Tester

Achmad Putra Sapujagad, Azyufito Azra Nasution and Naufal Hilman Syafiq, Industrial Engineering Department, School of Industrial Engineering, Telkom University, Bandung, Indonesia

12:00 – 1:45 pm, SUNDAY

Manufacturing

Virtual Room 3

Session Chair: Qutubuddin S.M., Department of Industrial & Production Engineering, P.D.A. College of Engineering, Kalaburagi, Karnataka, India

### ID 461 A Comprehensive Exploration of Hybrid Reinforced Surface Composite fabricated through Friction Stir Processing on AA5083 Alloy

Pooja Dwivedi and Sachin Maheshwari, Department of Mechanical Engineering, Netaji Subhas University of Technology, New Delhi-110078, India

Arshad Noor Siddiquee, Department of Mechanical Engineering, Jamia Millia Islamia, New Delhi-110025, India

Qutubuddin S.M., Department of Industrial & Production Engineering, P.D.A. College of Engineering, Kalaburagi, Karnataka, India

### ID 201 Characterization of Industrial Garment Waste reinforced with epoxy composite for structural applications

K M Vinay, Department of Industrial and Production Engineering, Faculty, University B.D.T college of Engineering, Davanagere, Karnataka, India

Bangarappa L, Department of Mechanical Engineering, Faculty, University Visvesvaraya College of Engineering, Bengaluru, Karnataka, India

M. Prasanna Kumar, Department of Mechanical Engineering, Faculty, VTU-CPGS, Mysuru, Karnataka, India

### ID 508 Design and Fabrication of Attachable Automated Wheelchair Equipment

NBV Lakshmi Kumari, Rajab Ali Jawkar, Mustafa, Quazi Adyan Ahmad and Bandagi Shadab Ahmed, Muffakham Jah College of Engineering and Technology, Hyderabad, Telangana, India

### ID 319 Design and Facility Layout of Traditional Boatbuilding Based on the Regression Model

Yugowati Praharsiand Devina Puspita Sari, Business Management, Shipbuilding Institute of Polytechnic Surabaya, Surabaya, Indonesia

Muhammad Abu Jami'in, Electrical Engineering Department, Shipbuilding Institute of Polytechnic Surabaya, Surabaya, Indonesia

### ID 341 Developing Design Rules for Fused Deposition Modeling Technology

Wadea Ameen, Murtadha Aldoukhi, Abdullah Alsalem, Rayan Alkhatabi, Ibrahim Albabtain, Abdullah Abahussain and Wasim Alshammary,

Industrial Engineering Department, College of Engineering and Architecture, Alyamamah University, Riyadh-11512, Saudi Arabia

### ID 328 Prioritizing the key capabilities for nurturing the post-war recovery and sustainable competitiveness of SMEs: Fuzzy Delphi Approach

Mebrahtom Teklehaimanot Tesfa, Quality and Operations Management chair, School of Mechanical and Industrial Engineering, Ethiopian Institute of Technology -Mekelle, Mekelle University, Mekelle, Ethiopia

Hailekiros Sibhato Gebremichael, Industrial Systems Engineering chair, School of Mechanical and Industrial Engineering, Ethiopian Institute of Technology -Mekelle, Mekelle University, Mekelle, Ethiopia

Kinfe Tsegay Beyene, Yonas Berhanu and Leteslassie Gebreazgi, Quality and Operations Management chair, School of Mechanical and Industrial Engineering, Ethiopian Institute of Technology -Mekelle, Mekelle University, Mekelle, Ethiopia

February 11, 2024 (Sunday) - Session: 2:00 – 3:45 pm

2:00 – 3:45 pm, SUNDAY

Virtual Room 1

## Undergraduate Research Competition sponsored by Daikin Applied

Session Chair: Dr. Mahmoud Awad, Associate Professor, Department of Industrial Engineering, American University of Sharjah, UAE

### ID 379 "Maturity Model for measuring Industry 4.0 level adoption in the automotive industry: A case study for an automotive part Supplier Company"

Ana Fernanda Salinas Escalera, Andrea Guadalupe Cantú Magallanes, Ayesha De Anda Yáñez and Valeria Contreras Fernandez, Students in Engineering Management, University of Monterrey, Nuevo León, México

Luz María Valdez-de la Rosa, Professor, Engineering Management Program, Department of Engineering & Technology, University of Monterrey, Nuevo León, México

**ID 496 Enhancing Automotive After-Sales Service Shop Layout: Shop & Drive Systematic Layout Planning for Facility Design and Workflow Optimization**

Juni Fransisca Onggani Winata, Lulu Afifa, Meutiara Nisyafietdhia Setiawan and Sarah Dwi Aliya, Undergraduate Students, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java 16424, Indonesia  
 Rahmat Nurcahyo, Professor, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia  
 Ardhy Lazuardy, Doctoral Student, Dept. of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia

**ID 165 Industrial Design Structure (IDeS) For A New Hybrid Sport Coupé Car**

Pontieri Francesco, Sgubbi Daniele, Pecoraro Lorenzo and Pagliari Curzio, Department of Industrial Engineering, Alma Mater Studiorum University of Bologna, Bologna, Italy

**ID 361 IoT as an Ally in Connectivity and Industrial Security**

Georgia Prado de Moura de Faria, Undergraduate Student, Federal Institute of Education. Science and Technology of Sao Paulo - IFSP Sorocaba Campus Sorocaba, Brazil

**ID 495 Optimizing the Facility Layout and Material Handling System Using the Systematic Layout Planning Method: A Case Study at PT EDS Manufacturing Indonesia**

Ahmad Nauval Ariq Ms, Baidilla Anamta Bimasakti, Felix Ferdinand Laureng and Setya Ady Wicaksono, Undergraduate Students, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java 16424, Indonesia  
 Rahmat Nurcahyo, Professor, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia  
 Arief Nurdini, Doctoral Student, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, West Java, Indonesia

**ID 402 Post Pandemic Factors Influencing Continued Usage of E-payment in Higher Education Institution: Integrating Extended Technology Acceptance Model**

Jan Marielle I. Bidayan, Abigail G. Cambay, Arjen Guila C. Cruz, Neil Leandro G. Fajardo, Erika Mae P. Ople and Maricar M. Navarro, Industrial Engineering Program, College of Engineering and Architecture, Technological Institute of the Philippines, Quezon City, Philippines

**ID 366 The Use of Little's Law as a Crowd Management Tool in Fast Food Restaurants**

Lamar K. Rizk, Operations and Supply Chain Management student, Effat University, Jeddah, Kingdom of Saudi Arabia

**ID 559 Determining Factors Affecting Perceived Safe-Driving Behavior of Filipino Private Car Drivers**

John David Bicera, Nestor Paul Casipit, Abigaile De Jesus and Yoshiki B. Kurata, Department of Industrial Engineering, Faculty of Engineering, University of Santo Tomas, España Blvd., 1015, Manila, Philippines

**ID 617 Zeolite as an Alternative Exhaust Filter**

Rachel D. Avila, Noel Franz F. Caluba, Jacob T. Evangelista, Raymel Jorenz F. Hamor, Iraz Miguel F. Liwag, Maricar M. Navarro and Evelyn M. Eviota, Department of Industrial Engineering, College of Engineering and Architecture, Technological Institute of the Philippines – Quezon City, Cubao, Quezon City, Philippines

**ID 598 Design and Implementation of an Industrial Information System for Enhancing Educational Workshop Efficiency: A Case Study at Sultan Qaboos University**

Firas Al-Zadjali, Saud Al-Bulushi, Ahmed Al-Abdali, Nasr Al-Hinai and Ahmed Shaban, Department of Mechanical and Industrial Engineering, College of Engineering, Sultan Qaboos University, Al-Khoud, Muscat 123, Oman

**ID 629 SafeCALL; Implementing Deepfake Audio Detection in an Open-Source Communication App**

Akshita Sushil Bhatia, Aleena Rashid, Joseph Ivan John, Mazin Sherif and Shriram Sekar Gounder, Final Year Students of B.Sc. in Computer Science, Members of Team Breakthrough, Capstone Project, University of Wollongong in Dubai, UOWD Building, Dubai Knowledge Park, P.O. Box 20183, Dubai, United Arab Emirates  
 Dr. Patrick Mukala, Assistant Professor, Department of Faculty of Engineering, and Information Sciences, University of Wollongong in Dubai UOWD Building, Dubai Knowledge Park, P.O. Box 20183, Dubai, United Arab Emirates

**ID 632 Virtufit: An AI Powered Virtual Fitness application**

Dani Ternanni, Fatima Aya Tchantchane and Ali Mela Ali, Bachelor of Computer Science Big Data, University of Wollongong in Dubai, UAE  
 Noor Ahmed, Bachelor of Computer Science Cyber Security, University of Wollongong in Dubai, UAE  
 Abdullah Raffiei, Bachelor of Computer Science, University of Wollongong in Dubai, UAE  
 Patrick Mukala, Faculty of Engineering and Computer Science, University of Wollongong in Dubai, Dubai, UAE

2:00 – 3:45 pm, SUNDAY

Virtual Room 2

**Supply Chain and Logistic Competition**

Session Chairs:

Dr. Abroon Qazi, Associate Professor of Operations Management, School of Business Administration, American University of Sharjah, UAE  
 Eno Udoh, Herbert College of Business - Auburn University, Alabama, USA

**ID 103 A cost-effective approach for inventory- transportation to address carbon tax policy**

Zheng Wang, Ayham Jaaron and Reza Eslamipour, Faculty of Business and Law, De Montfort University, Leicester, UK

**ID 164 Assessing Centralized and Decentralized 3D Printing Manufacturing: A Comparative Study of Customer Demand Allocation and Delivery Distance Optimization in Egypt**

Mohamed Osman, Transport systems and logistics, Faculty of Engineering, University of Duisburg-Essen, 47058 Duisburg, Germany  
 Fengkai Xu, Faculty of Engineering, University of Duisburg-Essen, 47058 Duisburg, Germany

**ID 105 Evaluation inventory forecasting techniques a case study in Saudi Airlines**

Alhanouf Alshammari, Effat University, Saudi Arabia

**ID 374 Improving Medicine Supply and Availability Using Simulation. A Case Study of Uganda**

Hellen Nabayiga, Professor Robert Van Der Meer and Dr. Mouhamad Shaker Ali Agha, Department of Management Science, Strathclyde Business School, University of Strathclyde, Glasgow, G1 1XQ, United Kingdom

**ID 445 Internet of Things and Circular Economy: Operational Excellence for Sustainable Warehouse Management Performance**

Asmae El jaouhari and Jabir Arif, Laboratory of Technologies and Industrial Services, Sidi Mohamed Ben Abdellah University, Fez, Morocco

**ID 438 The Lean-Branch-and-Bound Structure Effectiveness in Enhancing the Logistic Stowage Methodology for the Regular Shapes**Ahmed M. Abed, Department of Industrial Engineering, College of Engineering, Prince Sattam Bin Abdulaziz University, Al Kharj, Saudi Arabia  
Industrial Engineering Department, Zagazig University, Zagazig 44519, EgyptLaila F. Seddek, Department of Mathematics, College of Science and Humanities in Al-Kharj, Prince Sattam bin Abdul-Aziz University, Al-Kharj  
P.O. Box 11942, Saudi Arabia

Department of Engineering Mathematics and Physics, Faculty of Engineering, Zagazig University, Zagazig 44519, Egypt

**ID 557 Hotel Supplier Selection for Fresh Vegetables and Fruit**

Seçil Gülbudak Dil, Fatoumata Soumare and Semail Ülgen, Antalya Bilim University, Turkey

**ID 602 Data Science Application in Hybrid Additive Manufacturing of Spacecraft to Optimize Supply Chain in Spacecraft Manufacturing**

Mohammed Raihan Uddin, Department of Industrial &amp; Production Engineering, Bangladesh University of Textiles (BUTEX), Dhaka-1208, Bangladesh

Prof. Dr. Mohammad Asif Salam, Faculty of Economics and Business Administration, King Abdulaziz University, Jeddah, Saudi Arabia

## Simulation Competition

**ID 406 Process Management and Improvement Practices in Healthcare Systems**

Ahmet Anil Kaya, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

Gülce Karaçay, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

Özgür Erol-Yeşilsirt, Industrial Engineering Department, School of Engineering and Natural Sciences, Istanbul Medipol University, Istanbul, Turkey

## High School STEM Competition

**ID 605 Mission Migraine: Cracking the Code to Headache Heroes**

Haya Saif, JESS, United Arab Emirates

**2:00 – 3:45 pm, SUNDAY****AI and OM****Virtual Room 3**

Session Chair: Khaled Ali Abuhasel, Department-Industrial Engineering Program, University of Bisha, Bisha, Saudi Arabia

**ID 502 Enhancing Spare Parts Inventory Management through Machine Learning Based Classification**

Shefaa Baik, Assistant Professor, Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, Jeddah, Saudi Arabia

Lama Alasmari, Mashael Alamoudi, Dana Akmal and Lujain Alobaidi, Senior Industrial Engineering Students, Department of Industrial Engineering

Faculty of Engineering, King Abdulaziz University, Jeddah 21589, Saudi Arabia

Waleed Mirdad, Assistant Professor, Dept. of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, Jeddah, Saudi Arabia

**ID 175 Unknow Machine Learning**

Bob Lubs, unknow, Saudi Arabia

**ID 154 Exploring Information System Disruptions in Government Operations**

Mohammed M. AlHajri, Graduate Student Engineering Management Program, Department of Mechanical and Industrial Engineering, Qatar University, Doha, Qatar

**ID 70 A GIS-Based Smart Waste Management for Assessing Spatial Distribution of Waste Bins in the City of Bisha, Kingdom of Saudi Arabia**

Ghadah M Khushail, Ghaida Fahad Alqarni, Refan M Alshahrani and Reema M Almotawa, Undergraduate Student in Mechanical Engineering

Department-Industrial Engineering Program, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Khaled Ali Abuhasel, Full Professor in Mechanical Engineering, Department-Industrial Engineering Program, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

**ID 166 Factors influencing students' success in first-year accounting modules at a private higher education institution (PHEI) in Gqeberha, South Africa**

Name: Salaama Parker and Kim Van Rooyen, University/Organization: IIE Varsity College, Nelson Mandela Bay, South Africa

**ID 628 Advancing Multi-Material Repair through Hybrid Additive Manufacturing: A Novel Approach for Enhanced Component Restoration**

Mohammed Raihan Uddin, Department of Industrial &amp; Production Engineering, Bangladesh University of Textiles (BUTEX), Dhaka, Bangladesh

Prof. Dr. Mohammad Asif Salam, Faculty of Economics and Business Administration, King Abdulaziz University, Jeddah, Saudi Arabia

**ID 630 Occupational Safety Model in Maintenance Operations: A Case Study of a Service Company**

Marolim Marcela Chavez Vasquez, Mateo Bresani Doig and Rafael Mauricio Villanueva Flores, Universidad de Lima, Peru

## Lean Six Sigma Competition sponsored by Tooling Tech Group

Session Chair: Dr. Mohamed Alblooshi, Assistant Professor, College of Business/Operations Management, Zayed University

### **ID 596 Using lean manufacturing approach for improvement in food manufacturing: Case study from Egypt**

Noha A. Mostafa, Associate Professor, Mechanical Engineering Department, Faculty of Engineering, The British University in Egypt, Shorouk, Cairo, Egypt and Industrial Engineering Department, Faculty of Engineering, Zagazig University, Zagazig, Sharkia, Egypt  
Karim Ahmed, Associate Professor, Mechanical Engineering Department, Faculty of Engineering, The British University in Egypt, Shorouk, Cairo, Egypt

### **ID 567 Application of Lean in Maintenance Processes of Air Compressors and Diesel Welding Machines**

Yasser Alahmad, Abdulla Aljaberi, Khwla Alkatheeri and Maithah Alyaarbi, Students, Department of Management Science and Engineering, College of Engineering, Khalifa University, Abu Dhabi, UAE  
Saed Amer, Assistant Professor, Dept. of Management Science and Engineering, College of Engineering, Khalifa University, Abu Dhabi, UAE

### **ID 531 Lean operations optimization model under the TQM and SLP in the carwash sector: Case of a SME in Peru**

Alberto Muñoz Pachas, Andrea Briceño Carrion and Alberto Flores-Perez, Facultad de Ingeniería, Universidad de Lima, Lima, Perú

Session Chair: Aryaveer Pradeepkumar Nair, Department of Chemical Engineering, Maharaja Sayajirao University, Vadodara, India

### **ID 182 Analysis of Hemp Stem Reinforced Concrete Composites**

Som R. Soni, AdTech Systems Research Inc., 1342 North Fairfield Road, Beavercreek, Ohio 45432, USA  
Craig Schluttenhofer and Subramania I. Sritharan, Agricultural Research and Development Program (ARDP), Central State University, 1400 Brush Row Road, Wilberforce, OH 45384, USA

### **ID 530 Investigating the effect of varying surrounding conditions on the degradation of Starch/Nylon-1010 blend**

Aryaveer Pradeepkumar Nair, Department of Chemical Engineering, Maharaja Sayajirao University, Vadodara, India

### **ID 564 Synergy of Industry & Society 5.0**

Mohammad Muneeb and Semail Ülgen, Antalya Bilim University, Turkey

### **ID 588 Industry 4.0 Readiness: From Concept to Implementation**

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

### **ID 548 Entrepreneurial Competencies for Business Success**

Martha Lucia Pachon Palacios, Professor, Associate professor of the Faculty of Administration, Finance and Economic Sciences of the EAN University, Bogotá – Colombia  
J. Divitt Ed. Velosa Garcia, Associate Professor. Production Engineering Program, Faculty of Engineering, EAN University, Bogotá - Colombia

### **ID 160 Enhancing Learning Analytics in Mailing Archives using Machine Learning and Process Discovery Techniques**

Patrick Mukala, Faculty of Engineering and Computer Science, University of Wollongong in Dubai, Dubai, UAE  
Obaid Ulah, Faculty of Engineering and Computer Science, University of Wollongong in Dubai, Dubai, UAE

Session Chair: Hatim Bukhari, Department of Industrial and Systems Engineering, University of Jeddah, Saudi Arabia

### **ID 540 Module-based Convolutional Neural Network Structure Optimization**

Evan Sutrisno and Michael Abednego, Undergraduate Student, Department of Industrial Engineering, University of Surabaya, Indonesia  
Ivan Kristianto Singgih, Assistant Professor, Department of Industrial Engineering, University of Surabaya, Indonesia  
The Indonesian Researcher Association in South Korea (APIK), Seoul, 07342, South Korea  
Kolaborasi Riset dan Inovasi Industri Kecerdasan Artifisial (KORIKA), Jakarta, Indonesia  
Dina Natalia Prayogo, Lecturer, Department of Industrial Engineering, University of Surabaya, Indonesia

### **ID 556 Hay Anksii!: A cCBT Application for Adolescents with Anxiety**

Hazal Bulut, Data engineer-bachelor student, Oslo Metropolitan University, Faculty of Technology, Art and Design, Trimveien 6, Oslo, Norway  
Tuğba Karalar Enginel, Damla Özdemir and Haktan Şahin, Antalya Bilim University, Electrical and Electronics and Computer Engineering, (Senior Student), Computer Engineering (Senior Student), Computer Engineering, (Senior Student), Ciplakli Mahallesi Farabi Caddesi, No: 23 Dosemealti, Antalya, 07190, Turkey

Veli Kağan Muratoğlu, MSc Student, Clinical Psychology, Institute of Post-Graduate Education, Antalya, 07190, Turkey

Muhammed Ali Özden, Computer Engineering Bachelor's Degree, Süleyman Demirel University, Çünür, Muratpaşa, Antalya, 07040, Turkey  
Alev Topçu, Psychologist, Balıkesir Provincial Health Directorate, Balıkesir, 10700, Turkey

Semail Ülgen, Department of Industrial Engineering Antalya Bilim University, Ciplakli Mahallesi Farabi Caddesi, Antalya, Turkey

### **ID 558 Career Incentives of Nonprofit Sector: Case of Religious Tourism Sector in Saudi Arabia**

Hatim Bukhari, Assistant Professor, University of Jeddah, College of Engineering, Department of Industrial and Systems Engineering, Jeddah, Saudi Arabia

### **ID 552 Developing A Protein Skimmer In Shrimp Ponds at Ngombol Village Purworejo**

Muhammad Tiddad Wahyu P., Najib Salim, Diah Nurul Istiqomah, Cucu Tiara, Salsadila Meita Vanessa and Yusnita Rizki Firdaus, Industrial Engineering UIN Sunan Kalijaga Yogyakarta, Indonesia



**ID 606 Enhancing Productivity Through the Utilization of a Work-Measuring Methodology**

Mohammed A Awadh, Department of Industrial &amp; Systems Engineering, College of Engineering, King Khalid University, Abha, Aseer, Saudi Arabia

**ID 613 The reality and prospects of caring for patients in medical and surgical emergency department**

S. Benaicha and W. Benhassine, University of Batna2, Algeria

**ID 614 A descriptive study of psychological aggression among nursing staff members at work**

S. Benaicha and W. Benhassine, University of Batna2, Algeria

**ID 545 Application of AI for Detection of Urban Heat Island Effect via Semantic Segmentation of Satellite Images**Hosam Elgendy, Department of Computer Vision, Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi, UAE  
Patrick Mukala, Faculty of Engineering and Computer Science, University of Wollongong in Dubai, Dubai, UAE

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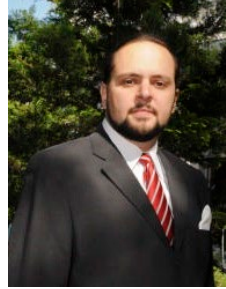
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**5<sup>th</sup> South American Conference on Industrial Engineering & Operations Management**  
**Bogota, Colombia, May 7-9 2024**  
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**9<sup>th</sup> North American Conference on Industrial Engineering and Operations Management**  
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**Host: University of the District of Columbia (UDC)**  
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**7<sup>th</sup> European Conference on Industrial Engineering & Operations Management**  
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**July 16-18, 2024**  
**Host: Augsburg Technical University**



**5<sup>th</sup> Asia Pacific Conference on Industrial Engineering and Operations Management**  
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**3<sup>rd</sup> Australian Conference on Industrial Engineering and Operations Management**  
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