

IEOM

International

3rd GCC International Conference on **Industrial Engineering & Operations Management**

Tabuk, Saudi Arabia
December 1 -3, 2025

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Tabuk, Saudi
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IEOM Society

"Achieving and Sustaining Operational Excellence"

www.ieomsociety.org

Industrial Engineering and Operations Management Society International

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

Welcome to the 3rd GCC International Conference on Industrial Engineering and Operations Management

University of Tabuk, Saudi Arabia, December 1-3, 2025

To All Conference Attendees:

On behalf of the IEOM Society International, it is our great pleasure to welcome you to the 3rd GCC International Conference on Industrial Engineering and Operations Management, hosted by the University of Tabuk, Saudi Arabia, from December 1-3, 2025.

This year's conference focuses on key and emerging areas, including artificial intelligence, digital manufacturing, supply chain management, Industry 4.0, the Internet of Things (IoT), lean systems, Six Sigma, simulation, data analytics, automation, and interdisciplinary research. The event serves as a global platform for academics, researchers, and practitioners to exchange ideas, share innovations, and explore recent advancements in the broad field of Industrial Engineering and Operations Management.

The conference aims to foster collaboration, networking, and joint initiatives among participants, advancing both the theory and practice of IEOM while identifying major trends and future directions in the discipline. We are pleased to share that the conference received 400 submissions from 36 countries, with 250 papers and abstracts accepted for presentation.

This conference will address many contemporary issues related to industrial engineering, manufacturing, data analytics, and supply chain digitalization. We are honored to feature a distinguished lineup of keynote speakers who bring global perspectives and expertise to our discussions:

1. Dr. Luis Rabelo, Professor, Department of Industrial Engineering & Management Systems, University of Central Florida, Orlando, FL, USA
2. Dr. Semail ÜLGEN, Chair of Industrial Engineering Department, Antalya Bilim University, Antalya, Turkey
3. Ibrahim Aldakhil, Executive Director, safety & loss prevention, Saudi Electricity Company
4. Hani Wadatullah Alahdal, HR Center of Excellence VP, STC, Riyadh Saudi Arabia
5. Hassan AlHazmi, Group CEO, LADUN Investment Company
6. Eng. Nasser Mohammad Al Osaimi, Operations Executive Director, Rua Al Madinah Holding, Saudi Arabia
7. Dr. Mumen Hasan Rababah, Chairman, Department of Industrial Engineering, Hashemite University, Zarqa, Jordan
8. Prof. Khalifa S. Al-Jabri, Professor, Department of Civil Engineering, Sultan Qaboos University, Muscat, Oman
9. Prof. Abdelkabar Maqsoud, Professor, The Research Institute on, Mines and Environment (RIME), UQAT-Polytechnique, Quebec, Canada
10. Kamran Nazir, Department of Marine Engineering, Military Technological College, Muscat, Oman
11. Dr. Kamran Javed, School of Computing, Pak-Austria Fachhochschule Institute of Applied Sciences and Technology, Pakistan
12. Prof. Gamal Elnashar, Dean of the College of Engineering, King Salman International University (KSIU), Egypt
13. Eng. Moath Abuaysha, Leading 3D Printing, NEOM
14. Dr. Ahmed Azab, Professor, Industrial and Systems Engineering Department, King Fahd Univ. of Petroleum & Minerals, Dhahran, Kingdom of Saudi Arabia

The IEOM Society International operates in 151 countries and supports 295 student chapters across 60 countries, making it one of the most globally active professional organizations in this field. We are deeply committed to promoting student engagement, research excellence, and global collaboration.

We extend our sincere appreciation to our Conference Chairs, Dr. Fares Almeahmadi, Dr. Jasim Alnahas, and Dr. Hassan Mohamed Hijry for his leadership and dedication, as well as to all sponsors, university and organizational partners, authors, reviewers, keynote speakers, panelists, track chairs, advisors, committee members, and the many volunteers whose efforts have made this international event possible.

We are confident that this conference will be an intellectually stimulating, collaborative, and memorable experience for everyone.

Our very best wishes to all participants for a successful and enjoyable conference in Tabuk and visit to Saudi Arabia.



Dr. Fares Almeahmadi
Conference Chair
Dean
College of Engineering
University of Tabuk



Dr. Jasim Alnahas, SSBB
Conference Co-Chair
Chairman – Industrial
Engineering Department
University of Tabuk
Saudi Arabia



Dr. Hassan Hijry
Conference Co-Chair
Industrial Engineering
Department
University of Tabuk
Saudi Arabia



Dr. Ahad Ali
Conference Co-Chair
Associate Professor
Director, DEng in Adv Mfg.
Director of BSIE & MSIE
Lawrence Tech University, USA
CEO, IEOM Society



Prof. Don Reimer
Program Co-Chair
Chief Operating Officer
IEOM Society International
21411 Civic Center Drive,
Suite 205, Southfield
MI 48076, Michigan, USA

Keynote Speakers

Day 1 – December 1, 2025

9:30 – 10:00 - Conference Opening Ceremony

Keynote: 10:00 – 10:30



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

Dr. Luis Rabelo received the BS in Electro-Mechanical Engineer from the Technological University of Panama in 1983, an MS in Electrical Engineering from the Florida Institute of Technology in 1987 Master's and Doctorate in Engineering Management from the University of Missouri. He was a Postdoc at the University of Missouri in Nuclear Engineering. Dr. Rabelo received a dual MS in Systems and Management from the Massachusetts Institute of Technology. He has worked for the Advanced Technology Group (Goodrich) and Honeywell Laboratories. Dr. Rabelo was a NASA Fellow from 2002 to 2005, and a Project Manager at NASA from 2009 to 2011. He is currently Professor in the Industrial Engineering and Management Systems Department at UCF. He is also the Undergraduate Coordinator. He has written more than 300 articles and a book in Artificial Intelligence. He has been the principal advisor for 39 Master's students and 29 PhDs. He received the award

for the Best Scientific Article of the Year 2004 from the Society of Automotive Engineers, received the distinction "ONE NASA" in 2006. He was the recipient of the Fulbright Distinction in 2008. In November 2008, he received the honor of the Technological University of Panama (UTP) of being the 2008 Distinguished Alumni. In 2011, he was the Henaac Award Winner in Education. In 2013 and 2018, he received the Forest R. McFarland Award from the Society of Automotive Engineering (SAE). Lately, he received the SAE Russell S. Springer Award for his article on the modeling of space operations systems in 2017.

Keynote: 10:30 – 11:00



Dr. Semail ÜLGEN
Chair of Industrial Engineering Department
Antalya Bilim University
Antalya, Turkey

Assoc. Prof. Semail Ülgen is the chair of Industrial Engineering Department at Antalya Bilim University where she has been on the faculty since 2012. She received Ph.D. degree in Mathematics at Purdue University in 2005, and B.S. degree at Bilkent University in 1995. In years 2004-2006 she was at University of Mississippi, Oxford, MS as an assistant professor. Then she worked at Grand Valley State University, Allendale, MI, as an assistant professor for one year in 2006 and later she worked as an assistant professor at Northwestern University for three years starting in 2007. She held visiting assistant professor position at Indiana University, Bloomington, IN as an assistant professor for one year in 2011-2012. Dr. Ülgen was a recipient of the Young Scientist Award for Turkish American Scientists and Scholars Association (USA) in 2006. Her research interests are Finsler Geometry; Noncommutative Geometry, Applications to Mathematical Physics. She is also building

research interest in stochastic processes and its applications. She was a researcher in TUBITAK 1001 (the Scientific and Technological Research Council of Turkey) research project (#113F311, Title: Einstein metrics in Finsler Geometry) for two years in 2014. She served as the adviser for the Survey Development and Implementation ATSO Pilot Project for Determining the Industrial 4.0 Status of Companies in Antalya in 2017. She was the academic adviser of the TUBITAK Efficiency Challenge Electric Vehicle Competition for mainly engineering undergraduate students during the years 2016, 2017, and 2020 organized by TUBITAK. Her team built two electric cars (got 25th in the competitions) and attended the competitions.

Keynote: 11:00 – 11:30

TBD

Keynote: 11:30 – 12:00



Ibrahim Aldakhil
Executive Director, safety & loss prevention
Saudi Electricity Company

Keynote: 12:00 – 12:30



Hani Wadatullah Alahdal
HR Center of Excellence VP
STC, Riyadh, Saudi Arabia

Hani W. Alahdal is a distinguished Human Resources leader with nearly two decades of strategic and operational expertise in human capital management, organizational transformation, and executive remuneration. Renowned for his visionary leadership and sharp strategic insight, he has played a pivotal role in reshaping HR governance and building agile, future-ready talent ecosystems that enable sustainable business growth across multiple industries and geographies.

As Vice President of the HR Center of Excellence at stc, Hani spearheads the group's human capital innovation and policy architecture, aligning people strategy with corporate ambition and national transformation objectives. His stewardship has led to the institutionalization of advanced talent frameworks, the design of equitable reward systems, and the elevation of HR as a strategic enabler of business performance. A trusted advisor to boards, executive committees, and regulatory bodies, he has become an authoritative voice on leadership capability, compensation governance, and workforce readiness within the Kingdom's evolving economic landscape.

Prior to his current role, Hani served as General Manager of HR Center of Excellence at stc, where he consolidated the company's HR policies and performance infrastructure, embedding governance discipline and fostering an integrated culture of meritocracy and innovation. Before joining stc, he held several senior positions at national champions such as Saudi Air Navigation Services (SANS), Sadara Chemical Company, TASNEE, and SABIC, where he built a reputation for excellence in organization design, policy formation, and executive rewards management. His experience across these leading institutions has endowed him with deep technical acumen and an exceptional ability to drive transformation at scale.

Hani's professional influence extends beyond corporate boundaries. He currently serves as a member of multiple Nomination and Remuneration Committees across regional markets—including stc Kuwait, stc Bahrain, Aljumaih Holding, Al-Suaedan Real Estate, and Tawal Company—where he provides strategic counsel on corporate governance, board succession, and executive compensation. He also sits on the Board of Dimension Consulting Company and the Advisory Board of Palm HR Technology, reflecting his continuous engagement with the evolving intersection of technology, human capital, and governance.

Previously, he served as an Executive Committee Member at Specialized by stc, and as a Nomination and Remuneration Committee Member at the Health Holding Company, supporting the Ministry of Health's transformation agenda through the restructuring of talent frameworks and leadership pipelines across Saudi health clusters.

Hani holds an MBA in Human Resources and Finance and a Bachelor's degree in Industrial Engineering from King Fahd University of Petroleum and Minerals. His intellectual foundation is complemented by elite executive education experiences from globally renowned institutions: Harvard Business School, Excellence in Management (2019), MIT Sloan School of Management, Business Dynamics (2012) and Cornell University, Top Seat: The Modern CHROs (2022).

Keynote: 12:30 – 1:00



Hassan AlHazmi
Group CEO
LADUN Investment Company

Dr. Hassan S. Alhazmi received his B.Sc. in Civil Engineering from King Fahd University of Petroleum and Minerals in Dhahran (2003), his M.Sc. in Construction Engineering and Management from Griffith University in Australia (2006), and his Ph.D. in Engineering and Project Management with distinction from the same university in 2011. He began his academic career at Jazan University, where he served as Head of the Civil Engineering Department and as Vice Dean of the College of Engineering. During his tenure (2011–2013), he played a leading role in developing the engineering programs and strengthening cooperation between the university and the construction industry. He also supervised several major educational, medical, and infrastructure projects for Jazan University.

In 2013, Dr. Alhazmi joined the Ministry of Higher Education: General Directorate for Projects, before moving to the Ministry of Housing in 2016, where he held several senior positions including Deputy Minister for Land and Technical Affairs. He oversaw urban development, managing infrastructure and construction projects exceeding SAR 50 billion in value. Since October 2021, Dr. Alhazmi has been serving as the Chief Executive Officer of Ladun Investment Company, a publicly listed real estate development firm in Saudi Arabia. His professional experience bridges academia, government, and the private sector—spanning engineering, construction management, public infrastructure, and corporate strategy. He currently serves as a Board Member of Ladun Investment Company, a Member of the Advisory Board of the College of Engineering at Alfaisal University, a Member of the Board of Trustees of Jazan Award for Excellence and Innovation and a Member of the Board of Trustees of the Endowment of the Saudi Electronic University.

Dr. Alhazmi have a rich experience as a member of a number of Bords of Directors, committees and higher committees, i.e. State Properties General Authority, Saudi Food and Drug Authority, Saline Water Conversion Corporation, Saudi Standards, General Authority for Survey and Geospatial Information, Real Estate Development Fund, Real Estate General Authority, Saudi Energy Efficiency Center, State Land Committee of the Council of Ministers, Saudi Building Code National Committee, Off-Plan Sales or Rent National Committee, SAKAN Board of Trustees, National Housing Company, Chairman of the Council of Managers of the National Company for Asset Management, Chairman of the Sabya's Municipal Council, and Griffith University BoD. He has participated in numerous conferences and executive programs in Saudi Arabia and abroad. His research and professional interests focus on project delivery systems, infrastructure management, sustainability, and innovation in engineering education.

Day 2 – December 2, 2025

Keynote: 10:00 – 10:30



Eng. Nasser Mohammad Al Osaimi
Operations Executive Director
Rua Al Madinah Holding
Saudi Arabia

Nasser M. Al Osaimi is a seasoned professional with extensive experience in operations, maintenance, and facility management. He holds a BS in Civil Engineering master's degree in business administration and has held key leadership roles in renowned organizations such as Rua al Madinah holding the Royal Commission of Riyadh City and Saudi Basic Industries Company (SABIC). With a strong track record of success, Nasser has implemented innovative solutions, reduced costs, and improved customer experiences. He has managed multi-billion SAR projects, directed housing services, and supervised various areas including general services, civil engineering, and road maintenance. Nasser is known for his strategic vision, project management skills, and ability to inspire innovation and collaboration.

Keynote: 10:30 – 11:00



Dr. Mumen Hasan Rababah
Chairman, Department of Industrial Engineering
Hashemite University, Zarqa, Jordan

Dr. Mumen Rababah is an Assistant Professor and the current Chairman of the Department of Industrial Engineering at The Hashemite University in Jordan. He earned his Ph.D. and M.S. in Industrial and Systems Engineering from Auburn University, USA, where his research focused on developing and evaluating parcel delivery networks using agent-based simulation. He also holds both M.S. and B.S. degrees in Industrial Engineering from the Jordan University of Science and Technology. Dr. Rababah's research interests include simulation modeling, artificial intelligence, data analytics, logistics, and supply chain optimization. His work bridges academic research with industrial application, focusing on improving system efficiency, resilience, and sustainability. He has collaborated with international research teams on projects addressing the digital transformation of logistics and manufacturing systems. As an educator, Dr. Rababah is committed to

experiential and technology-driven learning. He integrates real-world data, simulation tools, and analytical techniques into his teaching to prepare students for the evolving demands of modern industry. In addition to his academic and administrative roles, he actively supervises graduate research, contributes to academic committees, and provides professional service as a reviewer and collaborator in the field of industrial engineering. Dr. Rababah is a member of the Jordan Engineers Association and Alpha Pi Mu – the Industrial Engineering Honor Society.

Keynote: 11:00 – 11:30



Prof. Khalifa S. Al-Jabri
Professor
Department of Civil Engineering
Sultan Qaboos University
Muscat, Oman

Prof. Khalifa Al-Jabri obtained a bachelor's degree in Civil Engineering from Sultan Qaboos University in 1991. He received his master's (1993) and doctorate (2000) degrees from The University of Sheffield, UK. He was promoted to full Professor in 2011. He was appointed the Assistant Dean for Postgraduate Studies and research, 2006-2010 and the Head of the Department of Civil and Architectural engineering, 2011-2017. He served as a member in the State Council from 2011-2015. Prof. Al-Jabri has research interests in Sustainable Construction Materials, Fire Engineering, and earthquake Engineering. He has around 220 scientific papers published in peer-reviewed journals and international conferences. He is Fellow of ICE and ASCE.

Keynote: 12:00 – 12:30



Prof. Abdelkabar Maqsoud
Professor
The Research Institute on, Mines and Environment (RIME)
UQAT-Polytechnique
Quebec, Canada

Abdelkabar Maqsoud completed his undergraduate studies in the Faculty of Sciences of the University of Hassan II in Casablanca, Morocco in 1989. He earned his MSc. (1991) and PhD (1996) from university of Sciences and Technologies of Lille, France studying the karst development in Paris Basin. During his postdoctoral training in Canada, he studied water movement under unsaturated conditions and was recruited in 2002, as Research Scientist. Currently, he is a professor in mining hydrogeology in the Research Institute – Mines and Environment of the Quebec University in Abitibi-Témiscamingue (UQAT), Canada. Gross' research

areas include: mine site reclamation, water movement under unsaturated condition including hysteresis effects, hydrogeology and hydrochemistry of porous and karstic aquifers.

Day 3 – December 3, 2025

Keynote: 10:00 – 10:30, December 3



Kamran Nazir
Department of Marine Engineering
Military Technological College, Muscat, Oman

Dr Kamran Nazir received his PhD degree from Mechanical Engineering from Kyungpook National University, Daegu, South Korea in 2018. He received his MS in Mechanical Engineering and BE in Industrial and Manufacturing Engineering from Pakistan. His research interests include computational fluid dynamics and heat transfer. Dr Kamran attained the Higher Practices in Teaching and Learning certification from USA in 2024 under the joint program offered by University of Utah and University of Alabama. He is currently serving as Lecturer in Marine Engineering Department at Military Technological College, Muscat, Oman. Along with teaching and research responsibilities, he is member of launching flexible learning strategic plan and curriculum design of MS program in Mechanical Engineering at MTC. Prior to that, he served as assistant professor and Head of Department of Mechanical Engineering program at National University of Technology, NUTECH,

Islamabad, Pakistan for around 6 years. His Major accomplishments include the development of curriculum for Mechanical Engineering Department, launch of Industry & Creativity Activity Term (ICAT) and Industrial Learning Experience (ILE) program in Undergraduate Curriculum.

Keynote: 10:30 – 11:00, December 3



Dr. Kamran Javed
School of Computing
Pak-Austria Fachhochschule
Institute of Applied Sciences and Technology
Pakistan

Keynote: 11:00 – 11:30, December 3



Prof. Gamal Elnashar
Dean of the College of Engineering
King Salman International University (KSIU), Egypt

Gamal A. Elnashar received a B.Sc. degree from the department of electrical engineering at Military Technical College (MTC) in 1988. He received his MSc degree in the field of electrical engineering-automatic control systems from MTC-Egypt in 1994. He received his Ph. D. degree from the department of electrical and computer engineering at the Catholic University of America in Washington, D.C., in 2000. He has been serving on the MTC research faculty since the year 2000 in the areas of identification, design, and intelligent control engineering systems. He worked as a visiting scholar at Virginia Tech-Blacksburg in 2008. He has authored several reports and papers on data acquisition systems, sensors, and automatic control-related short courses at MTC and Colleges of Engineering. Prof. Elnashar's current research interests focus on intelligent systems,

control system engineering, and mechatronics. Moreover, he has great experience in the field of design, tests, and practical measurements of control systems. He participated in the supervision of several doctoral and master's theses in engineering in the field of specialization. He is a committee member of the Engineering, Technological, and Industrial Studies Sector at the Supreme Council of Universities. He is a committee member in the Executive Regulations Committee for Research Centers at the Ministry of Higher Education and Scientific Research. He is the dean of the Engineering Sector at King Salman International University. He was a commandant of the Military Technical College. Also, he was the director of the Egyptian Armed Forces Scientific Research and Development Department.

Keynote: 11:30 – 12:00, December 3



Moath Abuaysha
Head of 3D Printing R&D
NEOM

Moath Abuaysha is an innovation leader spearheading 3D printing and advanced manufacturing R&D within NEOM's Design & Construction sector. Certified by the American Institute of Industrial Engineers and MIT in additive manufacturing, he brings over 15 years of experience in developing and applying cutting-edge 3D printing technologies. He has represented Saudi Arabia in more than 40 international forums, showcasing the Kingdom's leadership in next-generation manufacturing. At NEOM, Moath leads the development of sustainable 3D-printed construction systems — including the region's first fully 3D-printed cabin — alongside projects that span artificial coral reefs, high-performance architectural façades, and sustainable housing prototypes. Before joining NEOM, he led over 70 surgical operations using patient-specific 3D-printed models and implants, pioneering medical applications of additive manufacturing in Saudi Arabia. Moath has received multiple national and international awards, including the Intel ISEF Award, MIT Health Hackathon, Asia Projects Cup, and the Saudi Ministry of Health "Health Pioneers" Award. Recognized by King Abdullah for his contributions to national innovation, and featured at TEDx and the G20, he continues to mentor the next generation of engineers driving Saudi Arabia's transformation in advanced and sustainable manufacturing.

Keynote: 12:00 – 12:30, December 3



Dr. Ahmed Azab
Professor, Industrial and Systems Engineering Department
King Fahd Univ. of Petroleum & Minerals
Dhahran, Kingdom of Saudi Arabia

Dr. Ahmed Azab is an associate professor of Industrial & Manufacturing Systems Engineering and Director of the Production & Operations Management Research Lab. He has a successful record of industrial experience and publications. He has been involved in projects with local industry and has been effective in acquiring funding as sole Principal Investigator and else. He has earned to date funding from both federal and provincial granting agencies and industrial partners in the amount of approximately \$0.4 M. He was one of three researchers to receive a \$1M CFI-LOF/MEDI-ORF grant supporting research infrastructure. He has been recipient and nominee for a number of international and national research excellence awards. He serves as a reviewer for a number of international journals; he also sits on the editorial board for Industrial Engineering & Management. Dr. Azab was awarded in 2009 the Outstanding Graduate Research Award at University of

Windsor, and in 2015 the Faculty of Engineering Medal of Excellence for his role leading the undergraduate Industrial Engineering program's national accreditation efforts from Canadian Engineering Accreditation Board (CEAB).

Six Sigma Yellow Belt Training and Exam

December 1, 2025 (Monday): 5:30 – 7:00-Workshop, 7:00 – 7:30 pm Exam

Six Sigma Workshop



Dr. Ahad Ali

Associate Professor

Director, Doctor of Engineering in Advanced Manufacturing

Director of Industrial Engineering Programs (BSIE & MSIE)

A. Leon Linton Department of Mechanical, Robotics, and Industrial Engineering

Lawrence Technological University, Southfield, Michigan, USA

Executive Director, IEOM Society International

Dr. Ahad Ali is an associate professor, director of doctor of engineering in advanced manufacturing and director of industrial engineering programs (BSIE & MSIE) at A. Leon Linton Department of Mechanical, Robotics, and Industrial Engineering of the Lawrence Technological University (LTU), Southfield, Michigan, USA. He established the Siemens Electro-Matic Industrial Engineering Lab at LTU. Dr. Ali was the primary author of the ABET self-study report of the BSIE Program at LTU in 2022. He earned a BS in Mechanical Engineering from Khulna University of Engineering and Technology (KUET), Bangladesh, a Master's in Systems and Engineering Management from Nanyang Technological University, Singapore, and a Ph.D. in Industrial Engineering from the University of Wisconsin-Milwaukee, USA. Dr. Ali was an Assistant Professor in Industrial Engineering at the University of Puerto Rico - Mayaguez, a Visiting Assistant Professor in Mechanical, Industrial, and Manufacturing Engineering at the University of Toledo, and a Lecturer in Mechanical Engineering at the Bangladesh Institute of Technology, Khulna. He received an Outstanding Professor Award from the Industrial Engineering Department, University of Puerto Rico -Mayaguez. Dr. Ali has been recognized with a Fulbright Award. He has published 75 journal papers and 150 conference papers. Dr Ali conducted research projects with Chrysler, Ford, DTE Energy, New Center Stamping, Whelan Co., Delphi Automotive System, GE Medical Systems, International Truck and Engine Corporation (ITEC), and Rockwell Automation. His research interests include manufacturing systems, quality, lean, six-sigma, simulation, artificial intelligence, supply chain, and optimization. He supervised 11 doctoral students in Doctor of Engineering in Manufacturing Systems (DEMS). He is a founding team member and Chief Executive Officer (CEO) of IEOM Society International. Dr. Ali is a Co-Chair of the International Conference on Industrial Engineering and Operations Management. Dr. Ali organized IEOM conferences around the globe on six continents including Dhaka, Kuala Lumpur, Istanbul, Bali, Dubai, Orlando, Detroit, Rabat, Bristol, Bogota, Paris, Washington, DC, Lima, Johannesburg, Bangkok, Pilsen, Toronto, Costa Rica, Monterrey, Sao Paulo, Riyadh, Manila, Melbourne, New Delhi, Sydney, Augsburg, Tokyo, and Muscat. He is an associate editor of the IJIEOM. Dr. Ali is a member of IEOM, INFORMS, SME, and IEEE.

Six Sigma Certification Topics

Six Sigma Fundamentals

Define

Project Charter

Process Maps, SIPOC, Matrix Diagrams, Critical to Quality (CTQ) Metrics, and DPMO

Pareto Chart

SIPOC

Measure

Process analysis

Probability, Statistics and Distribution

Data collection and analysis

Gage Repeatability and Reproducibility (R&R)

Process capability

X-Bar Charts, Run Charts, Moving Average Charts, EWMA Charts, Attribute Charts, Takt Time, Standardization, Spaghetti Diagrams, and Setup Reductions

Analyze

Value Stream Map

Hypothesis Testing

Goodness of fit test

Regression Analysis

Cause & Effect Diagrams
Scatter Diagrams
ANOVA
Confidence Interval

Improve

Lean Tools to reduce NVA: 5S, Kaizen, Seven Zeros, TPS Principles, FMEA, and Simulation
Design of Experiments (DOE)
Statistical Process Control (SPC)
Analysis of Variance (ANOVA)
Solutions Validation
Control

Control Plan

SPC
Tracking

Workshop from ENOWA

4:00 – 7:00 pm, December 2, 2025

Workshop 3

4:00 – 7:00 pm, December 3, 2025

Innovation and Digital Transformation in Work Environments: From Exploring Opportunities to Leading Change and Shaping the Future



Dr. Mohammed Al Awadh
Associate Professor
Department of Industrial Engineering
King Khalid University (KKU)
Abha, Saudi Arabia

Dr. Mohammed Al Awadh is an Associate Professor in the Department of Industrial Engineering at King Khalid University (KKU) in Abha, Saudi Arabia. He specializes in quality engineering, statistical analysis, Lean Six Sigma, and reliability engineering. Holding a Ph.D. in Industrial Engineering, Dr. Al Awadh is actively involved in academic teaching and research, with a strong focus on continuous improvement, quality systems, and operational excellence. He is a member of professional bodies such as ASQ and SME and has contributed to multiple research publications. He is a member of ASQ and a member of SME.

Workshop Details

This workshop is designed to provide engineering students with a clear and practical understanding of innovation and digital transformation, as well as how these concepts are transforming the way we work, particularly in government jobs and public sector organizations. Students will learn the difference between essential terms like creativity, innovation, development, and continuous improvement, and how each one plays a role in improving systems and solving problems. The workshop will explain how innovation is not just about having new ideas, but also about turning those ideas into real solutions that can be used in the workplace. This is especially important for helping the country achieve the goals of Saudi Vision 2030, including sustainability, smart cities, and a digital government. Students will explore different kinds of innovation, such as minor improvements (incremental), significant changes (disruptive), and long-term plans (strategic innovation). The workshop will also teach a complete step-by-step process of innovation—from finding problems and opportunities, thinking of creative ideas, testing and improving those ideas, to finally putting them into action. One of the main tools used in the workshop will be Design Thinking, a simple yet powerful approach to solving problems by focusing on the people who are affected. Students will follow five clear stages: empathize, define, ideate, prototype, and test. By the end of the workshop, engineering students will have acquired the skills, tools, and mindset necessary to lead innovation projects, enhance services, and implement innovative solutions in the real world.

Conference Committee

Conference Leadership

Conference Chairs

Dr. Fares Almeahmadi, Dean of the College of Engineering, University of Tabuk
 Dr. Jasim Alnahas, SSBB, Chairman – Industrial Engineering Department, University of Tabuk
 Dr. Hassan Mohamed Hijry, Industrial Engineering Department, University of Tabuk, Saudi Arabia
 Dr. Ahad Ali, Associate Professor and Director of Industrial Engineering Program, Lawrence Technological University, Southfield, Michigan, USA and CEO of IEOM Society International

Program Chairs

Professor Don Reimer, Chief Operating Officer, IEOM Society International, USA
 Dr. Mohammad Khadem, Associate Professor, Department of Industrial Engineering and Engineering Management, University of Sharjah, United Arab Emirates (UAE)

Organizing Committee

Dr. Muidh Algahtani, University of Tabuk
 Dr. Shahbaz Khan, University of Tabuk
Program Committee
 Prof. Khaled Ail Abuhasel, Bisha University
 Dr. Abdulaziz Almaktoom, Effat University
 Dr. Abdulhadi Altherwi, Jazan University
 Dr. Basem Alkhaleel, King Saud University
 Dr. Mohammed Al Awadh, King Khalid University
 Dr. Ali AlArjani, Prince Sattam Bin Abdulaziz University
 Dr. Yasser Adel Almoghathawi, KFUPM
 Dr. Ammar Alkahtani, Fahad Bin Sultan University
 Dr. Awad Al-Juaid, Taif University
 Dr. Abderrahim Lakhout, University of Tabuk
 Dr. Husam Samkari, University of Tabuk
 Dr. Zubairu Abubakar, University of Tabuk
 Dr. Abderraouf Gherissi, University of Tabuk
 Dr. Jihen Landolsi, Northern Border University
 Dr. Husam Alrehaili, University of Tabuk

Faculty Advisors – IEOM Student Chapters in Saudi Arabia

Alfaisal University – Dr. Abdalla Alrashdan
 Effat University – Dr. Abdulaziz T. Almaktoom
 King Abdulaziz University (KAU) – Dr. Ammar Al-Qahtani
 King Abdulaziz University (KAU), Rabigh – Dr. Raed Naebulharam
 King Fahd University of Petroleum and Minerals (KFUPM) – Dr. Anas Al-Ghazi
 King Saud University (KSU), Jeddah – Dr. Mohammed Alkahtani
 Umm Al-Qura University (UQU) – Dr. Ayman Alfaleh
 Princes Nourah University (PNU) – Dr. Kaouthar Ghachem
 Prince Sattam Bin Abdulaziz University (PSAU) – Dr. Ali S. AlArjani
 Prince Sultan University (PSU) – Dr. Abdelhakim Abdelhadi
 Taibah University – Dr. Rayan Omar
 University of Tabuk – Dr. Hassan Hijry
 University of Business and Technology – Dr. Ahmed Mohamed Attia
 King Khalid University, Abha – Dr. Ali Saeed Almuflhi
 University of Bisha – Mohammed M. Alquraish
 Taif University – Dr. Farhan Atallah Salem
 Al-Yamamah University – Dr. Wadea Ameen
 Al Yamamah University, Al Khobar – Dr. Osama T. Al Meanazel
 Mustaqbal University – Mohammed H. Alhaag

Competition Chairs

Undergraduate Student Paper Competition Sponsored by SIEMENS –Dr. Abdullah Alghuried
 Graduate Student Paper Competition Sponsored by EATON Corporation –Dr. Omar Albalawi
 Master's Thesis Competition – Dr. Muidh Algahtani
 Doctoral Dissertation Competition sponsored by Airbus – Dr. Moahd Alghuson
 Final Year Project (FYP)/Senior Design Project Competition – Dr. Abderrahim Lakhout
 Undergraduate Research Competition sponsored by Daikin Applied – Dr. Ahmed Hassan
 High School STEM Competition – Eng. Abdullah Al Masoudi
 AI-ML Competition – TBD
 Human Factors and Ergonomics Competition – Eng. Muhammad AlAtawi
 Simulation Competition – Mostafa Ahmed Kamel Abdel Ghaffar
 Lean Six Sigma Competition – Hamad Raja Dafer Almujiab
 Supply Chain Management Competition sponsored by aThingz – Dr. Shahbaz Khan
 Poster Competition – TBD

Global Design Competition sponsored by Amatrol – Dr. Abdulaziz Alotaibi

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Dr. Ali Ahmadian, Visiting Professor, Department of Chemical Engineering, University of Waterloo, Canada
Dr. Sachin Solanke, Assistant Professor, General Engineering Department, Institute of Chemical Technology, Mumbai
Edit

Submissions Received from Countries and Territories

- | | | |
|---------------|------------------|-----------------|
| 1. Algeria | 15. Lebanon | 29. South Korea |
| 2. Australia | 16. Malaysia | 30. Thailand |
| 3. Bahrain | 17. Morocco | 31. Tunisia |
| 4. Bangladesh | 18. Nigeria | 32. Turkey |
| 5. Canada | 19. Oman | 33. UAE |
| 6. Chad | 20. Pakistan | 34. UK |
| 7. Croatia | 21. Palestinian | 35. USA |
| 8. Egypt | 22. Peru | 36. Zimbabwe |
| 9. Ethiopia | 23. Philippines | |
| 10. France | 24. Portugal | |
| 11. India | 25. Qatar | |
| 12. Indonesia | 26. Saudi Arabia | |
| 13. Jordan | 27. Singapore | |
| 14. Kuwait | 28. South Africa | |

Conference Schedule

Monday, December 1, 2025

	Room 1	Room 2	Room 3	Virtual Zoom Room
08:00 - 17:00	Registration			8:00 – 11:00 Undergraduate Research Undergraduate Student Paper Competition
10:00 - 10:30	Opening Keynote: Luis Rabelo, Professor, Department of Industrial Engineering & Management Systems, University of Central Florida, Orlando, FL, USA			
10:30 - 11:00	Keynote: Semail ÜLGEN, Chair of Industrial Engineering Department, Antalya Bilim University, Antalya, Turkey			
11:00 - 11:30	Keynote:			11:00 – 14:00 High School STEM Competition Grad Paper
11:30 - 12:00	Keynote: Ibrahim Aldakhil, Executive Director, safety & loss prevention, Saudi Electricity Company			
12:00 - 12:30	Keynote: Hani Wadatullah Alahdal, HR Center of Excellence VP, STC, Riyadh, Saudi Arabia			
12:30 - 13:00	Keynote: Hassan AlHazmi, Group CEO, LADUN Investment Company			
13:00 - 14:00	Lunch & Prayer			14:00 – 16:00 Supply Chain and Logistics
14:00 - 15:30	Artificial Intelligence and Data Science	Sustainability, Green Systems and Energy	Undergraduate Competitions	
15:30 - 16:00	Break			16:00 – 18:00 Lean Six Sigma Competition
16:00 - 18:00	Human Factors, Ergonomics and Healthcare Systems	Lean Six Sigma and Operations Excellence	Competitions	
16:00 - 18:00	Posters			18:00 – 20:00 Senior Design Competition
18:00 - 20:00	Six sigma yellow belt training and exam by Ahad Ali			

Tuesday, December 2, 2025

	Room 1	Room 2	Room 3	Virtual Zoom Room
08:00 - 17:00	Registration			8:00 – 11:00 Master's Thesis Competition Posters Human Factors Competition
10:00 - 10:30	Keynote: Eng. Nasser Mohammad Al Osaimi, Operations Executive Director, Rua Al Madinah Holding, Saudi Arabia			
10:30 - 11:00	Keynote: Mumen Hasan Rababah, Chairman, Department of Industrial Engineering Hashemite University, Zarqa, Jordan			
11:00 - 11:30	Keynote			11:00 – 14:00 AI-ML SCM
11:30 - 12:00	Keynote: Prof. Khalifa S. Al-Jabri, Professor, Department of Civil Engineering, Sultan Qaboos University, Muscat, Oman			
12:00 - 12:30	Keynote: Prof. Abdelkabar Maqsoud, Professor, The Research Institute on, Mines and Environment (RIME), UQAT-Polytechnique, Quebec, Canada			
12:30 - 13:00				
13:00 - 14:00	Lunch & Prayer			
14:00 - 15:30	Simulation, Optimization and Productivity Improvement	Engineering Management and Project Management	Sustainability, Green Systems and Energy	14:00 – 16:00 Quality, Reliability and Maintenance
15:30 - 16:00	Break			
16:00 - 18:00	Supply Chain and Logistics	Manufacturing, Assembly and Design	Workshop from ENOWA	16:00 – 18:00 Artificial Intelligence and Data Science
19:00 – 22:00	Awards Dinner			
				18:00 – 20:00 Simulation and Optimization

Wednesday, December 3, 2025

	Room 1	Room 2	Room 3	Virtual Zoom Room
08:00 - 17:00	Registration			8:00 – 11:00 Lean Six Sigma and Operations Excellence
	Networking			
10:00 - 10:30	Keynote: Kamran Nazir, Department of Marine Engineering, Military Technological College, Muscat, Oman			
10:30 - 11:00	Keynote: Kamran Javed, School of Computing, Pak-Austria Fachhochschule Institute of Applied Sciences and Technology, Pakistan			11:00 – 14:00 Automation, Robotics and Autonomous Systems
11:00 - 11:30	Keynote: Prof. Gamal Elnashar, Dean of the College of Engineering King Salman International University (KSIU), Egypt			
11:30 - 12:00	Keynote: Eng. Moath Abuaysha, Leading 3D Printing, NEOM			
12:00 - 12:30	Keynote: Ahmed Azab, Professor, Industrial and Systems Engineering Department King Fahd Univ. of Petroleum & Minerals, Dhahran, Kingdom of Saudi Arabia			
12:30 - 13:00				
13:00 - 14:00	Lunch & Prayer			14:00 – 16:00 Supply Chain and Logistics
14:00 - 15:30	Digital Manufacturing, Industry 4.0 and IoT	Business Management and Operations Management	Sustainability, Green Systems and Energy	
15:30 - 16:00	Break			
16:00 - 18:00	Automation, Robotics and Autonomous Systems	Automation, Robotics and Autonomous Systems	Workshop - Innovation and Digital Transformation	16:00 – 18:00 Sustainability, Green Systems and Energy
				18:00 – 20:00 Business Management and Operations Management

December 1, 2025 (Monday) - Session: 10:00 – 13:00**Opening, Welcome and Keynotes**

08:00 - 17:00 Registration

09:30 - 10:00 Opening Ceremony

10:00 - 10:30 Opening Keynote: Luis Rabelo
 Professor, Department of Industrial Engineering & Management Systems
 University of Central Florida, Orlando, FL, USA

10:30 - 11:00 Keynote: Semail ÜLGÜN
 Chair of Industrial Engineering Department
 Antalya Bilim University
 Antalya, Turkey

11:00 - 11:30 Break

11:30 - 12:00 Keynote Ibrahim Aldakhil
 Executive Director, safety & loss prevention
 Saudi Electricity Company

12:00 - 12:30 Keynote: Hani Wadatullah Alahdal
 HR Center of Excellence VP
 STC, Riyadh Saudi Arabia

12:30 - 13:00 Keynote: Hassan AlHazmi
 Group CEO
 LADUN Investment Company

13:00 - 14:00 Lunch & Prayer

December 1, 2025 (Monday) - Session: 14:00 – 15:30**14:00 – 15:30, Monday****Onsite Room 1**

Session Chair:

Artificial Intelligence and Data Science

ID 14 Energy Storage Materials Advances and Industrial Approach
 Shahid Hussain Abro, University of Arkansas at Little Rock, USA

ID 16 Harnessing Neuroadaptive Technologies and AI in Personalized Education: The PD AkademiX Approach Towards Resilient Educational Operations
 Semail Ülgün, Department of Industrial Engineering, Antalya Bilim University, Ciplakli Mahallesi Farabi Caddesi No: 23 Dosemealti, Antalya, Turkey

ID 26 Small Area Estimation of Class-Specific Proportions in Ordinal Categories Using Mixed Effect Cumulative Link Mixed Models
 Muhammad Hamza, Department of Bio & Medical Big Data, Gyeongsang National University, Jinju-si, South Korea
 Shakeel Ahmed, Department of Molecular and Translational Medicine in the Paul L. Foster School of Medicine at Texas Tech University Health Sciences Center El Paso, United States
 Department of Mathematics, School of Natural Sciences, National University of Science and Technology, Islamabad, Pakistan
 Cho Sungbin, Department of Information and Statistics, Gyeongsang National University, Jinju-si, South Korea
 Youngsoon Kim, Department of Information & Statistics and Department of Bio & Medical Big Data, Gyeongsang National University, Jinju-si, South Korea

ID 34 Developing a new Water Quality Index through an ingenious integration of DEA and Machine Learning
 Amar Oukil, Department of Operations Management & Business Statistics, Sultan Qaboos University, Al Khoud, Oman
 Ahmed Amin Soltani, VEHDD Laboratory, Hydraulic Department, University of M'sila, M'sila, Algeria
 Nabil Belacel, National Research Council Canada, 1200 Montreal Road, Ottawa, Ontario K1A 0R6, Canada

ID 59 The Emerging Role of Artificial Intelligence to Improve Inventory Management of Pharmaceuticals Products and Medical Supplies in Gulf Countries

Mohamed Akl, Strathclyde Business School, University of Strathclyde, Glasgow, G1 1XQ, UK
 Mohamed Musa, Strathclyde Business School, University of Strathclyde, Glasgow, G1 1XQ, UK
 Monthir Alzadjali, Strathclyde Business School, University of Strathclyde, Glasgow, G1 1XQ, UK
 Dr Mouhamad Shaker Ali Agha, Department of Management Sciences, University of Strathclyde, Glasgow, G1 1XQ, UK

ID 124 Artificial Intelligence for Mechanical Property Prediction of Multi-Material Gyroid Structures

Faizul Islam, Asif Iqbal Malik and Syed Mujahid, Industrial and Systems Engineering Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

ID 292 AI-Driven EMS Optimization: Smart Routing and IoT-Based Patient Monitoring

Omar H Albalawi, Department of Industrial Engineering, Faculty of Engineering, University of Tabuk, Innovation and Entrepreneurship Center, University of Tabuk, Tabuk 47512, Saudi Arabia

ID 307 A Hybrid LSTM–XGBoost Approach with SHAP Explainability Using the NASA C-MAPSS Dataset

Asma Sardar, Computer Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia
 Sara M. Al Ghalayini, Industrial Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia
 Saba Alkhalifah, Industrial Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia
 Rana Alwabel, Industrial Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia
 Conrado Vizcarra, Computer Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia
 Osama T. Al Meanazel, Industrial Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia

December 1, 2025 (Monday) - Session: 14:00 – 15:30**14:00 – 15:30, Monday****Onsite Room 2**

Session Chair:

Sustainability, Green Systems and Energy**ID 11 Comparative Assessment of PEM and SOEC Electrolyzers for Green Hydrogen Production**

Shroog Taher, Renewable Energy Engineer, Saudi Arabia

ID 15 The Production of Hydrogen from Sea Water by Using Nano-Photocatalyst Based on Cobalt and Sulphite ion Oxides in the Presence of Cadmium

Mohamed Abdelfattah Ibrahim, Aisha N. Albalwi, Mazen A. Alsolamy, and Jayda Goma, Biology Department, Haqil University College, University of Tabuk, Tabuk, Saudi Arabia
 Marzouka Albalwi, Chemistry Department, Alwajha University College, University of Tabuk, Tabuk, Saudi Arabia
 T. A. Hanafy, Department of Physics, Faculty of Science, University of Tabuk, Tabuk, Saudi Arabia
 Mohamed Alndemari, Artificial intelligence and sensing technologies center, University of Tabuk, Tabuk, Saudi Arabia

ID 29 A Novel Combined Solar System for Drying Food and Water Extraction by Zero Power Consumption

Amr Elbrashy, Department of Mechatronics Engineering, Horus University-Egypt (HUE), New Damietta, Egypt
 Department of Mechanical Engineering, Kafrelsheikh University, Kafrelsheikh, Egypt

ID 30 New Novel Thermal Insulation and Sound-Absorption Materials Extracted from Agro/medical Waste materials: Toward Green Cities of Zero Waste

Mohamed E. Ali, King Saud University, College of Engineering, Mechanical Engineering Department, P. O. Box 800, Riyadh 11421, Saudi Arabia

ID 61 Enhancing Urban Water Distribution through Smart Infrastructure and Sustainable Supply Chain Solutions in Oman

Sulafa Al-Hashmi, Sara Al-Turk, Khalid Al-Farsi and Mazoon Al-Kalbani, Jouhara Al-Habsi, The University of Technology and Applied Sciences, Muscat, Oman

ID 80 Strategic Mineral Recovery from Seawater Brine

Mohamed Abdelaziz, Project Manager, NEOM, Saudi Arabia

ID 367 Smart Vehicle Glazing Using W-Doped VO₂ and TiO₂ for Sunlight-Responsive Tinting

Mohammad Alsuhaibany, Al-Forsan International School, Dammam, Kingdom of Saudi Arabia
 Muhammad Ahmad Iqbal, Department of Industrial Engineering, Al Yamamah University, Khobar, Kingdom of Saudi Arabia
 Abdalmageed Almotari, Department of Industrial Engineering, Al Yamamah University, Khobar, Kingdom of Saudi Arabia

December 1, 2025 (Monday) - Session: 14:00 – 15:30**14:00 – 15:30, Monday****Onsite Room 3**

Session Chair:

Undergraduate Research Competition sponsored by Daikin Applied

ID 50 The Potential of Integrating Artificial Intelligence in Industrial Quality Control

Akio S. Alnajjar, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Hamdan Saeed Almeqbaali, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Waleed Ahmed, Engineering Requirement Unit, United Arab Emirates University, Al Ain, UAE

ID 166 The Potential of Integrating Artificial Intelligence in Industrial Quality Control

Akio S. Alnajjar, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Hamdan Saeed Almeqbaali, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Waleed Ahmed, Engineering Requirement Unit, United Arab Emirates University, Al Ain, UAE

ID 206 The Potential of Integrating Artificial Intelligence in Industrial Quality Control

Akio S. Alnajjar, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Hamdan Saeed Almeqbaali, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Ahmed Mohammed Darwish, Mechanical and Aerospace Engineering Department, United Arab Emirates University, Al Ain, UAE
Waleed Ahmed, Engineering Requirement Unit, United Arab Emirates University, Al Ain, UAE

ID 220 Circular Supply Chain Optimization for Sustainable Packaging: Insights, Methods, and Emerging Research Directions

Amirjon Atoev, Student, BS in Industrial Engineering, Mechanical and Industrial Engineering Department, RIT Dubai, Dubai Silicon Oasis, Dubai, United Arab Emirates
Dua Weraikat, PhD, Assistant Professor & MEIE Department Coordinator, Mechanical & Industrial Engineering Department, RIT Dubai, Dubai, Silicon Oasis, Dubai, United Arab Emirates

Undergraduate Student Paper Competition sponsored by Siemens

ID 169 Circular Supply Chain Optimization for Sustainable Packaging: Insights, Methods, and Emerging Research Directions

Amirjon Atoev, Student, BS in Industrial Engineering, Mechanical and Industrial Engineering Department, RIT Dubai, Dubai Silicon Oasis, Dubai, United Arab Emirates
Dua Weraikat, Assistant Professor & MEIE Department Coordinator, Mechanical & Industrial Engineering Department, RIT Dubai, Dubai Silicon Oasis, Dubai, United Arab Emirates

ID 276 Determining Thermal Conductivity of Building Materials Using the Single – Plate Method

Ahmed Elzafir Ahmed, Eissa Hoderi, Bandar Abu Saq, Hassan Al harithy and Saeed Alqaed, Department of Mechanical Engineering, Najran University, Najran, Saudi Arabia

ID 310 Mechanical Characterisation of Nano-Hydroxyapatite Reinforced PLA Composites Prepared by Dry Blending for Biomedical Applications

Omar A. Al Rumhi, Reem S. Al Mamari, Nassr A. Al Kiyumi, Issa M. Al Sibani, Elyas H. Al Abbadi, Mohammed S. Al Owiemri and Moosa S.M. Al Kharusi, Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman

ID 315 Evaluating Mispronunciation Assessment for Children Arabic Learners Using Azure Pronunciation Assessment

Jalal Zainaddin, Computer Engineering Department, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Mohammad Amro, Interdisciplinary Research Center for Intelligent Secure Systems, Information and Computer Science Department, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia
Wasfi G. Al-Khatib, Information and Computer Science Department, Interdisciplinary Research Center for Intelligent Secure Systems, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia

ID 381 Evaluating Thermal Insulation of 3D-Printed Polymeric Materials with Varying Infill Patterns

Shaima Alhammadi, Mariam Abusaima, and Salma Saeed, Students, Mechanical and Aerospace Engineering Department, UAE University, Al Ain, UAE
Rihab Hamza, Instructor, Mechanical and Aerospace Engineering Department, UAE University, Al Ain, UAE
Waleed Ahmed, Associate Professor, Engineering Requirements Unit, UAE University, Al Ain, UAE

Break 15:30 – 16:00

December 1, 2025 (Monday) - Session: 16:00 – 18:00

16:00 – 18:00, Monday

Onsite Room 1

Session Chair:

Human Factors, Ergonomics and Healthcare Systems

ID 79 A Comprehensive Performance Scorecard for Sustainable Ergonomics Assessment of Textile-based Organizations

Asim Amjad, Institute of Industrial Engineering and Management, University of the Punjab, Lahore 54590, Pakistan
School of Mechanical and Manufacturing Engineering, National University of Sciences and Technology, Islamabad 44000, Pakistan
Shahid Ikramullah Butt, School of Mechanical and Manufacturing Engineering, National University of Sciences and Technology, Islamabad, Pakistan
Muftaba Hassan Agha, Cardiff School of Management, Cardiff Metropolitan University, Western Avenue, Cardiff CF5 2YB, UK

ID 84 Occupational Exposure to Flour Dust and Its Mitigation Through Portable Ventilation: Evidence from a Case Study

Ibrahim Almuheidib, Industrial Engineering Department, College of Engineering, King Saud University, Riyadh-11421, Saudi Arabia

ID 200 Does It Really Worth to Work Extra Hours: Working Hours as Quality of Life Indicator Using WHOQOL

Shahed Obeidat, Department of Industrial Engineering, College of Engineering, University of Jordan, Amman 11942, Jordan
Mustafa Rawshdeh, Industrial Engineering Department, College of Engineering, Hashemite University, Jordan

ID 207 The Mediating Role of National Culture Dimensions Between Human Capital and FDI Attraction in Chad

Khalil Abakar Moussa Kaya, Faculty of Economics and Management, Universiti Kebangsaan Malaysia (The National University of Malaysia), Malaysia
Mohd Azlan Shah Zaidi, Faculty of Economics and Management, Universiti Kebangsaan Malaysia (The National University of Malaysia), Malaysia
Rohayu Abdul Ghani, Faculty of Economics and Management, Universiti Kebangsaan Malaysia (The National University of Malaysia), Malaysia

ID 297 From Assistant to Teammate: Building Collaborative Agentic AI for Interactive Clinical Workflows in Low-Resource Environments

Marvellous Moyo, Department of Biomedical Informatics and Biomedical Engineering, Faculty of Medicine and Health Sciences, University of Zimbabwe, PO BOX MP167, Mount Pleasant, Harare, Zimbabwe

ID 313 Experimental Analysis of Human Dexterity Using the Purdue Pegboard Test

Khalid Sofyani, Abdulrahman Alghofaili and Hassan Hijry, Industrial Engineering Department, University of Tabuk, Tabuk, Saudi Arabia
Abdullah Albalwi, Mohammed Alzubaydi, Ahmed Najmi, Waleed Aljohani and Masheal Alamrani, Faculty of Nursing, University of Tabuk, Tabuk, Saudi Arabia

December 1, 2025 (Monday) - Session: 16:00 – 18:00

16:00 – 18:00, Monday

Onsite Room 2

Session Chair:

Lean Six Sigma and Operations Excellence

ID 6 Scaling Impact Through Continuous Improvement: Insights from Wave 2 at the University Medical City, Oman

Yousuf Al Khamisi, Chair, Continuous Improvement Committee, University Medical City, Oman

ID 70 A Conceptual Framework for Implementation of Lean Manufacturing in RMG Sector of Bangladesh

Md. Shahidul Islam and Shamsuddin Ahmed, Department of Mechanical and Production Engineering (MPE), Islamic University of Technology (IUT), Gazipur, Bangladesh

ID 308 A Case Study of Improving the Processes at Al Jazeera Paint Company by Applying Lean Six Sigma tools in (KSA)

Ali Almuflih, Assistant Professor in the department of Industrial Engineering at King Khalid University (KKU), M.Sc. degree in the Department of Mechanical & Industrial Engineering at Northeastern University
Abrar Alamri, Afnan Asiri, Reema Alshahrani, Ruwayda Shawkhan and Samar Alshahrani, Industrial Engineering from King Khalid University (KKU)

ID 108 From Human Error Reduction to Operational Excellence: Human Reliability Assessment in Metal Casting Operations

Mohammed Khalid Almatani, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

ID 326 Integrating Supply Chain 4.0 and Quality 4.0: A Conceptual Model for Resilient and Sustainable Operations

Haitham Bahaitham, Department of Industrial and Systems Engineering, College of Engineering, University of Jeddah, Jeddah, Saudi Arabia

December 1, 2025 (Monday) - Session: 16:00 – 18:00

16:00 – 18:00, Monday

Onsite Room 3

Session Chair:

Master's Thesis Competition

ID 263 Bridging the Performance Gap: Transforming South African Refineries Through Global Best Practices

SR Makaung, BBS Makhanya and JH Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

Senior Design Competition

ID 141 Solar Energy Supply Gap Prediction in UAE

Fatima Mohamed Alhemeiri, College of Technological Innovation, Zayed University, Abu Dhabi, United Arab Emirates
Salama Eissa Al zaabi, College of Technological innovation, Zayed University, Abu Dhabi, United Arab Emirates
Meera Hamad Aljneibi, College of Technological Innovation, Zayed University, Abu Dhabi, United Arab Emirates
Nadia Dahmani, College of Technological Innovation, Zayed University, Abu Dhabi, United Arab Emirates

ID 142 Designing a Smart Wearable System with an Armband for Wireless Power Transfer to Implantable Medical Devices

Raghad S. Al-Ghamdi, Juri K. Al-Muidh, Futun S. Al-Shahrani, Nouf M. Al-Shahrani and Mzoon F. Al-Ghamdi, Undergraduate Students in Industrial Engineering Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Khaled Ali Abuhasel, Full Professor in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

ID 145 Designing a Smart System for Geo-Planting and Vegetation in Arid Mountain Terrains: A Pilot Study on Aqabat Al Sulbat region, Kingdom of Saudi Arabia

Joud Sayaf AL-shahrani, Noura Nasser Al-Shahrani, Bushra Mohamed Alharthi, Shorouq Gormallah M Alalyani and Ahood Mohammed ALhazri Undergraduate Student in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Khaled Ali Abuhasel, Full Professor in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Graduate Student Paper Competition sponsored by Eaton Corporation

ID 136 Designing a Smart System for Detecting Leaks in Desalination Water Networks for the National Water Company, Kingdom of Saudi Arabia

Reem N Alsaadi, Asrar A Alshahrani, Jawharah A AlQasebah and Manar M Alshahrani, Undergraduate Student in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

Khaled Ali Abuhasel, Full Professor in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

ID 216 A Reliability-Centered Statistical Framework for Resilience Quantification and Investment Optimization of Energy Infrastructure under Uncertainty

Saheed Abiodun, Afolabi and Hasan Masrur, Industrial and Systems Engineering Department, King Fahd University of Petroleum and Minerals Dhahran, Saudi Arabi

High School STEM Competition

ID 52 Smart Assistive Cane for the Visually Impaired Using Ultrasonic Sensor and Haptic Feedback

Thamer Saleh Al-Yami, Al-Deffi Secondary School, Jubail, Saudi Arabia

Yousef Khaled Alnajim, Al-Deffi Secondary School, Jubail, Saudi Arabia

ID 60 Smart Irrigation System Using Soil Moisture Sensor for Optimized Water Management

Meshal ismail abugazaah, Al-Dhafi Secondary School, Jubail, Saudi Arabia

Yousef Al-Najim, Al-Dhafi Secondary School, Jubail, Saudi Arabia

Human Factors and Ergonomics Competition

ID 112 An Intelligent Mobile Phone Stand for Posture Correction and Musculoskeletal Discomfort Reduction

Nacer Eddine Hammami, AIMD Laboratory, Computing College, Fahad Bin Sultan University, Tabuk City, KSA

Mohammed H. Alhaag and Brahim Fernini, Department of Industrial Engineering, Faculty of Engineering and Computer Science, Mustaqbal University, Buraydah, Qassim, 51411, Kingdom of Saudi Arabia

Renad Bandar AlMutairi, Department of Computer Engineering, Faculty of Engineering and Computer Science, Mustaqbal University, Buraydah, Qassim, 51411, Kingdom of Saudi Arabia

Osamah A.M. Ghaleb, AIMD Laboratory, Computing College, Fahad Bin Sultan University, Tabuk City, KSA

Moustafa Al-hajj, Lebanese University, Lebanon

ID 143 Usability, User experience, and Workload of Augmented Reality vs. Paper Based instruction in Maintenance and Assembly Application

Faisal M. Alessa, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

ID 319 A Multi-Criteria Car Evaluation Method with User-Relevant Comfort Measures

Mojahed Mohammad Alkhateeb, Industrial Engineering Department, King Abdulaziz University – Rabigh, Rabigh, Saudi Arabia

December 1, 2025 (Monday) - Session: 16:00 – 18:00

Poster Session

16:00 – 18:00, December 1, 2025 (Monday)

You can display posters for three days, and poster evaluation during this session

ID 32 Classification of Spare Parts Criticality: A Multi-Criteria Decision-Making Framework with Application in an Oil & Gas Company

Tahra Al Rawahi, Tahra Al Rawahi, and Amar Oukil, Sultan Qaboos University, Oman

ID 55 Real-Time Patient Triage System in the Emergency Department

Hamad Halwani, King Saud Bin Abdulaziz University For Health Science, Saudi Arabia

ID 57 New Technology of Self-Checkout Systems Based on Stakeholder and Customer Satisfaction and Artificial Intelligence Frameworks

Abdulrahman Aldumainy and Salem Al-Buraiki, Department of Industrial Engineering, College of Engineering, Prince Sattam Bin Abdulaziz University, Saudi Arabia

Abdulrahman Alhaider, Department of Industrial Engineering, College of Engineering, Prince Sattam Bin Abdulaziz University, Saudi Arabia

Mohammed Algahtani, Department of Industrial Engineering, College of Engineering, Prince Sattam Bin Abdulaziz University, Saudi Arabia

ID 67 Placement Prediction System Using Machine Learning and Ensemble Learning Techniques

Prof. Manasi Ghamande, Kaustubh Ghamande, Piyush Mishra, Aum Mishra, Vedant Mehar, Mayur Chikhale and Harshal Marathe, Department of

Information Technology, Vishwakarma Institute of Technology, Pune, India

ID 69 Artificial Intelligence (AI) Benefits, Safety Privacy and Traffic Control

Sheikh Ashraful Islam Ani, AIUB, Dhaka, Bangladesh

ID 71 Energy Modeling and Experimental Validation of a Stepped Double Slope Solar Still: A Simulation, Optimization, and Productivity Improvement Approach

Brahim Dennai, Ahmed Laidi and Boumediene Touati, Sciences Mater Department, University of Tahri Mohammed Bechar, Bechar, Algeria

ID 74 Smart Motorcycle Delivery System: Enhancing Food Quality, Rider Safety, and Efficiency in Saudi Arabia

Noura A. Homedi, Asrar S. Makin, Lama E. Mujairdi, Amal M. Alnami and Elaf A. Abutaleb, Abdulhadi Altherwi Department of Industrial Engineering, Jazan University, Saudi Arabia

ID 78 Enhanced catalytic performance of Co/Ce Gd O in MDR for hydrogen production from Methane

Fajr Hamzi, Saudi Arabia

ID 103 Operations Research in Healthcare Simulation Modeling of Emergency Department Patient Flow

Raghad Nazal Alruwaili, A. College of Engineering, Industrial Engineering Department, Northern Border University

ID 116 A Conceptual Framework for CRISPR-Cas9-Mediated Precision Gene Correction of Inherited Cardiomyopathies via AAV and LNP Delivery

Yakine Ghrib, New World International School, Saudi Arabia

ID 120 An Integrated Lean Approach: Value Stream Mapping and Fishbone Diagram in Logistics Operations

Yusraa Abdul Majid, Zen Alabden Khadour, Samiyah Mohammed Ahmed and Hasan Balfaqih, Operations and Supply Chain Management Department, Effat University, Jeddah, Saudi Arabia
Haneen Saqr Jawi, Marketing Department, Effat University, Jeddah, Saudi Arabia

ID 128 Automation Adoption in Saudi Arabia's Fashion Retail Supply Chain: The Saudi Abaya

Maryam A. Alawlaqi and Sarah Y. Osailan, Operations and Supply Chain Department, Effat University, Jeddah, Saudi Arabia

ID 129 Parking at University of Tabuk, Saudi Arabia, Problems and Solutions

Saad Ali, Abdullah Alghuried, and Talal Alanazi, University of Tabuk, Saudi Arabia

ID 140 Designing and Manufacturing a Protective and Interactive Helmet for Children

Sultanah Abdulrahman Al Mutairi and Wajd Sulaiman Al Mehaileb, Computer Engineering Department, University of Mustaqbal, Buraidah, Saudi Arabia
Faisal Saud Al Harbi, Industrial Engineering Department, University of Mustaqbal, Buraidah, Saudi Arabia

ID 142 Designing a Smart Wearable System with an Armband for Wireless Power Transfer to Implantable Medical Devices

Raghad S. Al-Ghamdi, Juri K. Al-Muidh, Futun S. Al-Shahrani, Nouf M. Al-Shahrani and Mzoon F. Al-Ghamdi, Undergraduate Students in Industrial Engineering Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia
Khaled Ali Abuhasel, Full Professor in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

ID 145 Designing a Smart System for Geo-Planting and Vegetation in Arid Mountain Terrains: A Pilot Study on Aqabat Al Sulbat region, Kingdom of Saudi Arabia

Joud Sayaf AL-shahrani, Noura Nasser Al-Shahrani, Bushra Mohamed Alharthi, Shorouq Gormallah M Alalyani and Ahood Mohammed ALhazri Undergraduate Student in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia
Khaled Ali Abuhasel, Full Professor in Industrial Engineering, Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

ID 153 A Blockchain-Integrated Framework for Secure and Efficient Container Release in the Smart Port of NEOM, Saudi Arabia

Arij Alfai, Department of Computer Sciences, University College of Dubai, University of Tabuk, Tabuk, Saudi Arabia

ID 160 Implementation of the 5S Methodology in Warehousing: A Multi-Company Case Study of Ten Sites

Ali Al-Muflih, Assistant Professor, Industrial Engineering Department, King Khalid University, Abha, Saudi Arabia
Shaima Mesfer Alharmali, Reema Khalid Alshahrani, Rana Falah Alshahrani, Emtenan Saeed Al-Munassir, Mona Fahad Al-Ghasib and Danya Hadi Muatrd, Junior Industrial Engineering Students, King Khalid University, Abha, Saudi Arabia

ID 161 Utilizing School Food Waste as a Nutrient Source for Sustainable Hydroponic Systems with Integrated Smart Farming Technology

Bisan Baha Rizik Diek, and Amal Bassam Daraiseh, Educational Age International School, Riyadh, Saudi Arabia

ID 163 Enhancing Pilgrim Services During Hajj: A Service Quality Framework Approach

Othman Talal Kurdi, Faculty of Engineering Management and Technology Master Programs, Islamic University of Madinah, Madinah, Saudi Arabia
Rahmat Nurcahyo, Prof., Department of Industrial Engineering, Islamic University of Madinah, Madinah, Saudi Arabia

ID 203 Optimizing Logistics Operations for Vision 2030: Strategies to Reduce Costs and Improve Competitiveness

Alaa Almohamadi, Deema Algafr, Abeer Alathwari, Ebtisam Alqudaimi and Hasan Balfaqih, Operations & supply chain management, Effat University, Jeddah, Saudi Arabia

ID 204 Establishing Strategic Regional Value Chains in Africa's Industrial Parks & Special Economic Zones For Advancemnt Of The Africa Free Trade Agreement Regional Value Chain Strategy

Thakaramahlaha Lehohla, South Africa

ID 218 Intelligent Flight Optimization System Using Predictive AI for Real-Time Fuel Efficiency and Carbon Minimization

Taliyah Alsharif, Saudi Arabia

ID 225 Integrating Internet of Things (IoT) Technologies for Smart Warehousing and Operational Efficiency

Anas Benaissa, Operations and Supply Chain Management Department, Effat University, Jeddah, Saudi Arabia

ID 226 Digital Transformation in Saudi Ministries under Vision 2030

Abubaker Al-Saggaf and Sarah Osailan, Operations and Supply Chain Management Department, Effat University, Jeddah, Saudi Arabia

ID 228 Sustainable Fabrication of Unmanned Aerial Vehicle (UAV) Blade using Composite PLA and Woven fabric of Date Palm Fiber (DPF)

Ahmed Mohammed Ahmed Alshehri, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

Abdulmonem Feras Abdulmonem Alhosen, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

Omar Sulaiman Y Albalawi, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

Abderraouf Gherissi, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

ID 257 The Possible Protective Effects of Hericium erinaceus (Lion's Mane Mushroom) on Autism-Like Behavioral Alterations Induced by Valproic Acid in Mice

Sharifa Saad Alenezi and Ashwaq Hassan Batawi, Department of Biological Science, Faculty of Science, King Abdulaziz University

ID 266 Critical Equipment QA/QC Toward Enhancing Maintenance and Reliability

Ibrahim Almatrood, Manifa Department, Saudi Aramco, Saudi Arabia

ID 271 Optimisation of Smart Grid Technology for Clean & Sustainable Rail Electrification

Clement Odukwe, NEOM, Saudi Arabia

ID 298 Federated Edge AI Earables for Real-Time Physiological Monitoring and Predictive Safety Analytics in Construction Workforces

Nayef Aljhani, Basil Alshehri, Ahmed Albalawi, Waleed Abdulghani, Talal Alfawzan and Dr Ahmed Alkhodair, Computer Engineering, Faculty of Computers and Information Technology, University of Tabuk, Tabuk, Saudi Arabia

ID 309 Vulnerability-based Optimal Selection of Quantum-secured Links for Resilient and Energy-Efficient Smart Grids

Norah Elkherayef, Jori Albaqmi, Rahaf Alharbi, Lubna Alsaeed and Yazan Allawi, Department of Electrical Engineering, College of Engineering,

Princess Nourah bint Abdulrahman University, P.O. Box 84428, Riyadh 11671, Saudi Arabia

Alawi Alsaggaf, Department of Information & Computer Science, IRC-Advanced Quantum Computing, King Fahd University of Petroleum and Minerals, Dhahran, Eastern Province 31261, Saudi Arabia

ID 314 Machine Learning-Based Optimization of Officer Assignment and Inspection Time in Vehicle Entry Process

Lina Alharthi, Maram Shubber and Rokaya Aldaif, Industrial Engineering Department, College of Engineering, Al Yamamah University, Al Khobar, Saudi Arabia

ID 324 Evaluation 5S Implementation Across Automated Industrial Environments

Rana Falah Al Shahrani, Danya Hadi Mutared, Mona Fahad, Emtenan Al Munassir, Reema Khalid Alshahrani and Shaima Alharmali, Department of Industrial Engineering, College of Engineering, King Khalid University, Abha, Saudi Arabia

ID 328 Designing Trust: A Human-Centered Communication Model for Autonomous Vehicle Adoption in Saudi Arabia

Ali Alhawiti, Civil Engineering Department, Faculty of Engineering, University of Tabuk, Tabuk 71491, Saudi Arabia

ID 346 Air Aware

Ghanem Aljohini, Tabuk University, Saudi Arabia

ID 347 Design and fabrication of Eco-Pulse Engine Components Cleaning System: An Eco-Friendly Electrolysis Based Technology Using Non-Toxic Chemicals

Rami Sharahi, Ali Alqudaihi and Anil Kumar Deepati, Department of Electrical Engineering Technology, College of Applied Industrial Technology - Jazan University, Jizan, KSA

ID 353 Enhancing Environmental Efficiency in Industrial Facilities Through a Multi-Dimensional ISO 14001- Based Methodology

Wejdan Al Saif, King Khalid University, Saudi Arabia

ID 382 Predictive Maintenance of Industrial Machines Using the Extreme Value Model: An Applied Study (Water Pumps)

Nawaf Manahi Al-Shahrani, Mohammed AlRifai Al-Shahrani, Abdulrahman Ahmed Alfarhah, Saleh Mohammed Alqarni, and Turki Mohammed Alaklobi, Undergraduate Student in Industrial Engineering Department, College of Engineering, University of Bisha Bisha 61922, Saudi Arabia

Mohammed Alquraish, Industrial Engineering Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

ID 368 Optimized and Energy-Efficient Desalination Using Renewable Energy Integration

Hamzah Alsadoun, Energy Flexibility (Grow Specialist), NEOM, Saudi Arabia

Lama Alsadoun, (Grow Specialist), NEOM, Saudi Arabia

Seham Alqubali, (Grow Specialist), NEOM, Saudi Arabia

Faraz Rasheed Mir, ENOWA NEOM, Saudi Arabia

ID 377 Designing and Manufacturing a Protective and Interactive Helmet for Children

Faisal Alharbi, Sultanah Almutairi, and Wajd Almehaileb, Computer Engineering Department, Mustaqbal University, Buraydah, Saudi Arabia

ID 383 A home medical device that measures cardiovascular and diabetes biomarkers using an under-skin implanted chip

Amira Al Mufarrah, Saudi Arabia

December 1, 2025 (Monday) - Session: 18:00 – 20:00

16:00 – 18:00, Monday**Onsite Room 3**

Session Chair:

Six Sigma Workshop
Ahad Ali, LTU, USA

December 2, 2025 (Tuesday) - Session: 10:00 – 13:00

Keynotes

08:00 - 17:00 Registration

Networking

10:00 - 10:30 Keynote Eng. Nasser Mohammad Al Osaimi
Operations Executive Director
Rua Al Madinah Holding, Saudi Arabia10:30 - 11:00 Keynote Mumen Hasan Rababah
Chairman, Department of Industrial Engineering
Hashemite University, Zarqa, Jordan

11:00 - 11:30 Keynote

Prof. Dr. Mukti M. Rana
Engineering Division of Physical and Computational Sciences &
Director and Principal Investigator, Optical Science Center for Applied Research
Delaware State University
Dover, DE, USA11:30 - 12:00 Keynote Prof. Khalifa S. Al-Jabri
Professor, Department of Civil Engineering
Sultan Qaboos University, Muscat, Oman12:00 - 12:30 Keynote Prof. Abdelkabar Maqsoud
Professor, The Research Institute on, Mines and Environment (RIME)
UQAT-Polytechnique, Quebec, Canada

12:30 - 13:00 Keynote

Ahad Ali, Ph.D.
Associate Professor
Director, Doctor of Engineering in Advanced Manufacturing
Director of Industrial Engineering Programs (BSIE & MSIE)
A. Leon Linton Department of Mechanical, Robotics and Industrial Engineering
Lawrence Technological University, Southfield, Michigan, USA
Chief Executive Officer of IEOM Society International

13:00 – 14:00 Prayer and Lunch Break

December 2, 2025 (Tuesday) - Session: 14:00 – 15:30**14:00 – 15:30, Tuesday****Onsite Room 1**

Session Chair:

Simulation, Optimization and Productivity Improvement**ID 9 Experimental Modeling and Simulation of Zero-Surface Temperature of Controlled Water Jet Impingement Cooling System for Hot-Rolled Steel Plates**

Onah T. O and Egwuagu M.O, Department of Mechanical and Production Engineering, Enugu State University of Science and Technology, Enugu, Enugu Nigeria

ID 22 Efficiency of Ab-Initio Total Energy Calculations for Metals and Semiconductors Using A Plane-Wave Basis Set

Idris Muhammad Chiromawa, Mikailu Abdullahi, Ibrahim Garba Shitu and Aminu Muhammad, Department of Physics, Sule Lamido University Kafin-Hausa, Jigawa State, Nigeria

ID 85 Digital Triage Training, Spatial Optimization and Color-Coded Prioritization: A Simulation Study to Improve Emergency Department Efficiency

Mumen Rababah, Ayman Al-Hayek, Yazan Jaradat, Tamara Alnawaiseh and Razan Aldowry, Department of Industrial Engineering, Faculty of Engineering, The Hashemite University, P.O. Box 330127, Zarqa 13133, Jordan

ID 127 INDEngine Suite: A Modular Platform for Integrated Industrial Engineering Applications

Ahmed Hani Abdelaal and Abdullah Tameem, Industrial Engineering Department, Jeddah International College, Jeddah, Saudi Arabia

ID 152 Mixed-Integer Linear Programming (MILP) model for Transportation Cost OptimizationYasmen Ghonim, Industrial and Mechanical Engineering Department, Rochester Institute of Technology- Dubai Campus, Dubai, UAE
Dua Weraikat, Industrial and Mechanical Engineering Department, Rochester Institute of Technology- Dubai Campus, Dubai, UAE
Sharfuddin Khan, Industrial Engineering Department, University of Regina, CA, Regina, Canada**ID 162 Design of a Customized Lower Limb External Fixator with Different Geometrical Patterns**

Mohammed S. Alqahtani, Mechanical Engineering Department, King Saud University, Riyadh, Saudi Arabia

ID 168 Optimization of Yogurt Filling Process using a Novel Unified Nozzle Head and Mathematical Modeling

Razaullah Razaullah, Saudi Arabia

ID 233 Measuring Research Efficiency and Societal Impact of Private Universities in the UAEDua Weraikat, Mechanical & Industrial Engineering Department, Rochester Institute of Technology, Dubai Campus, Dubai, UAE
Bushra Soummakie, Business Administration Department, Antalya Bilim University, Antalya, Türkiye
Kristina Šorić, Business Department, Rochester Institute of Technology, RIT Croatia, Zagreb, Croatia**ID 402 An Efficient Heuristic for Single Machine Scheduling with Release Dates**

Khaled Bamatraf and Anis Gharbi, Department of Industrial Engineering, College of Engineering, King Saud University (KSU), Riyadh, Saudi Arabia

December 2, 2025 (Tuesday) - Session: 14:00 – 15:30**14:00 – 15:30, Tuesday****Onsite Room 2**

Session Chair:

Engineering Management and Project Management**ID 62 Risk Assessment and Management in Saudi Construction Projects: Evidence from Tabuk and NEOM**

Muidh Algahtani, Saudi Arabia

ID 94 How to efficiently use BPMN for stakeholders of Product Development ProcessYoon, Kyong Ryol, Hyundai Motors R&D, South Korea
Teresa Montrone, Esteco, South Korea**ID 281 Leveraging Bayesian Belief Networks to Model Digital Transformation and Project Success Interdependencies**

Abroon Qazi, School of Business Administration, American University of Sharjah, Sharjah, United Arab Emirates

ID 349 Demand Flexibility in Green Hydrogen Production with Integration to Renewable Sources

Hadeel Mohammed Algosi Shatha Salman Albalawi Reem Sultan Albalawi Shahd Ahmad Alsharif and Faraz Mir, ENOWA-NEOM, Saudi Arabia

Entrepreneurship and Innovation**ID 96 An Empirical Study on The Effect of Learning Orientation on The Performance of Small and Medium Enterprises in Kano State, Nigeria**

Haliu Belo Rogo, PhD, Department of Management Science, Nigeria Police Academy, Wudil-Kano, Nigeria

ID 97 Bridging Finance and Sustainability: The Role of Network Availability in SMEs Success in Kano State

Abdullahi Hassan Gorondutse, Department of Management Science, Nigeria Police Academy, Kano Nigeria/ Research Fellow INTI International Universiti Malaysia, Malaysia

ID 135 Strengthening Problem-Solving and Research Competencies in Postgraduate Business Research through Design Thinking
Norizah Mohamad, Associate Professor, Center for Postgraduate Studies, University Malaysia of Computer Science and Engineering (UNIMY), Malaysia

ID 177 Entrepreneurial Innovation and Sustainable Development: Conceptualization And Perspectives on Nigeria As A Developing Nation

Ibrahim Danjuma PhD, Professor, Department of Business Administration, Faculty of Social and Management Sciences, Modibbo Adama University, Yola, Adamawa State, Nigeria

December 2, 2025 (Tuesday) - Session: 14:00 – 15:30

14:00 – 15:30, Tuesday

Onsite Room 3

Session Chair:

Sustainability, Green Systems and Energy

ID 224 Maximizing Lifetime Value: A Techno-Economic Analysis of Degradation-Aware Operating Strategies for Solar-Powered Alkaline Electrolyzers

Hossam AbdelMeguid, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

Department of Mechanical Power Engineering, Faculty of Engineering, Mansoura University, El-Mansoura, Egypt

Abdulrahman Alshaman, Abdullah Almubarak, Omar Alotaibi and Hussam Alrhili, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

ID 229 A Scoping Review of Optimization methods for Optimizing Hybrid Renewable Energy Sources in a Developing Economy

Imoleayo Abraham Awodele, Post Doctoral Research Fellow, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, South Africa

Molusiwa S. Ramabodu, Head of Department, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, 4001, South Africa

Nathaniel Ayinde Olatunde, Post Doctoral Research Fellow, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, South Africa

Alice Taiwo Ogunlolu, Assistant Professor, Department of Quantity Surveying and commercial management, Coventry University, United Kingdom

Clementina Uzoma, Lecturer II, Department of Quantity Surveying, University of Abuja, Nigeria

ID 264 Eco-Design of Distribution Transformer using Natural Ester Insulation: Benefits for Renewable Integration and Sustainability

Amer Alanazi, Principal Engineer, ENOWA-NEOM, Tabuk, Saudi Arabia

ID 265 Optimizing Oman's Green Hydrogen Export Corridor: A Multi-Scenario Spatial Equilibrium Model for Policy Analysis and Infrastructure Planning

Gordhan Das Valasai, Department of Environment Engineering, Quaid -e- Awam University of Engineering, Science and Technology, Nawabshah, Paksitan

ID 272 Recycling and Reuse of Automotive Plastics for Sustainable Manufacturing

Almutaz Obaid Tannaf Alsaadi and Pooyan Rahmanivahid, Oman

ID 273 Aquatherm: A Smart Shower Control System for Eco-Friendly and Efficient Water Heating

Nawal Salamah, Hasnain Sheikh, Hania Sheikh, Ahmed Jameel, Nahr Mukhtar, Zohair Zaki, and Hamza Imran, Effat University, Saudi Arabia

Break 15:30 – 16:00

December 2, 2025 (Tuesday) - Session: 16:00 – 18:00

16:00 – 18:00, Tuesday

Onsite Room 1

Session Chair:

Supply Chain and Logistics

ID 65 Enhancing Additive Manufacturing through Optimized Task Scheduling

Majed Hadid, Division of Engineering Management and Decision Sciences, College of Science and Engineering, Hamad Bin Khalifa University, Doha, Qatar

ID 68 Enhancing Forecast Accuracy in the Automotive Industry: A Comparative Study

Leow Si Ting, School of Business, Singapore University of Social Sciences, Singapore

Sugoutam Ghosh, School of Business, Singapore University of Social Sciences, Singapore

ID 86 Balancing Lean–Green–Agile Trade-offs for Sustainable Performance: A Digital Twin Model

Akram El Korchi, Industrial Engineering Department, Ibn Zohr University, ENSA Agadir, Agadir, Morocco

ID 93 When Emergencies Arise: An Experimental Study of Supply Chain Recourse

Mohd Mujahid Khan, Department of Management Sciences, Indian Institute of Technology, Kanpur, India

Vipin B, Department of Management Sciences, Indian Institute of Technology, Kanpur, India

Department of Management Studies, Indian Institute of Technology Madras, Chennai 600036, India

ID 119 Bottleneck Identification and Process Improvement in Outbound Logistics: An Integrated Work Study and Simulation Framework

Wesal Melibari and Abdullah Tameem, Industrial Engineering Department, Jeddah International College, Jeddah, Saudi Arabia

ID 131 Systematic Review of DDMRP Parameterization: From Planner Judgment to Static and Dynamic Optimization

Abdullah Maghrabi, and Mohammed Alkahtani, Industrial Engineering Department King Saud University, Riyadh, Saudi Arabia

ID 154 Supply chain patent landscaping: Identifying trends, innovations, and competitive insights in emerging supply chain technologies

Iskander Zouaghi, Industrial Engineering Department, Ecole Nationale Polytechnique, Algeria

Mourad Makaci, LEGO Lab, Université de Bretagne Occidentale, Brest, France

Abderrazak Laghouag, Business Administration Department, College of Business, King Khalid University, Kingdom of Saudi Arabia

Stanley Kowalski, Franklin Pierce School of Law, University of New Hampshire, USA

ID 155 Optimization of Coffee Roasting Operations: A Case Study of Saudi Roastery

Khalid Almutairi, Department of Industrial and Systems Engineering, King Fahd University of Petroleum & Minerals (KFUPM), Dhahran, Saudi Arabia

Omar Alsawafy, Department of Industrial and Systems Engineering, King Fahd University of Petroleum & Minerals (KFUPM), Dhahran, Saudi Arabia

Interdisciplinary Research Center for Smart Mobility and Logistics (IRC-SML), King Fahd University of Petroleum & Minerals (KFUPM), Dhahran

31261, Saudi Arabia

ID 345 Critical Success Factors and Barriers in Applying Supply Chain Risk Management: A Case Study of the South African Railway Industry

T. Mangquku, B. B. S. Makhanya and JHC Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, South Africa

December 2, 2025 (Tuesday) - Session: 4:00 – 6:00 pm**16:00 – 18:00, Tuesday****Onsite Room 2**

Session Chair:

Manufacturing, Assembly and Design**ID 2 An Assessment of Error influencing Factors in Manual Assembly Operations: Literature Review-Based Study**

Abubakar. M.I., Department of Mechanical Engineering, Binyamin Usman Polytechnic, Hadejia, Jigawa State, Nigeria

ID 3 Integrated Advancement of Pitting and Milling Machineries for Sustainable Date Fruit Processing and Value-Addition

Nwankwojike Bethrand Nduka, Department of Mechanical Engineering, Michael Okpara University of Agriculture, Umudike, Nigeria

Nwogu Chukwunonso Nweze, Department of Mechatronics Engineering, Michael Okpara University of Agriculture, Umudike, Nigeria

ID 27 Synthesis and Analysis of PANI/Fe₃O₄ nanocomposites materials for S & X-band Microwave Absorption Application

Z. I. Takai, Department of Physics, Faculty of Science, Northwest University, Kano, Nigeria

Hassan Mohamed Hijry, Microelectronic and Nanotechnology-Shamsuddin Research Centre (Mint-SRC), Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia

Kamarul Zaki Mustafa, Microelectronic and Nanotechnology-Shamsuddin Research Centre (Mint-SRC), Universiti Tun Hussein Onn Malaysia (UTHM), Department of Physics and Chemistry, Faculty of Applied Sciences and Technology, Universiti Tun Hussein Onn Malaysia, Pagoh

Educational Hub, 86400, Muar, Johor, Malaysia

ID 54 Reduction of the Time of Product's Development, Assembly and Serviceability through Design Simplification Methodology

Daw Alwerfalli, Professor of Mechanical / Manufacturing Engineering, Director of Master of Engineering Management Program (MEM),

Lawrence Technological University, 21000 W. Ten Mile Road, Southfield, Michigan, USA

Ahmad Yame, Systems Test Engineer, Stellantis Auto Drive CVADAS & PEPS, Comfort and Driving Assistance at VALEO NORTH AMERICA INC, 150 Stephenson Highway Troy, MI 48083, United States

ID 82 Generative Design AI of the Car's Front Suspension Lower Control Arm

Abderraouf Gherissi, Mechanical Engineering Department, Faculty of Engineering, University of Tabuk, Tabuk, Saudi Arabia

ID 102 Mechanically Integrates and Cost-Effective Additive Manufacturing

Hussam H. Noor, Department of Mechanical Engineering, College of Engineering, Taibah University, Madinah, Saudi Arabia

ID 175 Low-Cost, Enclosed Wire-Arc Additive Manufacturing Platform with Unified G-Code Control

Husam Mohsen Alrehaili, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia

Nawaf Muhannad Bedaiwi, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia

Muath Ahmed Alsudais, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia

Surur Adel Habashi, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia

Fisal Yahya Alsumaily, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia

ID 222 Mechanical Characterization of Hybrid Composites Using Resin for Sustainable Applications

Kamran Nazir, Yousaf Pasha, Liaquat Ali khan, Aasim Murtaza, Hisham Al Hadidi and Salim Nasir Al Nairi, Marine Engineering Department, Military Technological College, MTC, Muscat, Oman

ID 279 Impact of Post Weld Heat Treatment on Structural and Mechanical Properties of Dissimilar High Strength Steels

Lerato Shoke, Defense and Security (Landward Sciences), Council of Scientific and Industrial Research (CSIR), Pretoria, South Africa
 Kalenda Mutombo, Advanced Materials and Manufacturing, Council of Scientific and Industrial Research (CSIR), Pretoria, South Africa
 Peter Olubambi, School of Mining, Metallurgy and Chemical Engineering, University of Johannesburg, Johannesburg, South Africa
 Mthobisi Clyde Zondi, Sandock Austral, Johannesburg, South Africa

ID 321 High Strain Rate Compressive Behaviour of Additively Manufactured Nylon 12

Karabelo Sekhuthe, Busisiwe Ngema, Olwethu M Mokone and Vulinhlanhla Mchunu, Defense and Security, Council of Scientific and Industrial Research, Pretoria, South Africa

December 2, 2025 (Tuesday) - Session: 16:00 – 18:00**16:00 – 18:00, Tuesday****Onsite Room 3**

Session Chair:

Workshop**December 3, 2025 (Wednesday) - Session: 10:00 – 13:00****Keynotes**

08:00 - 17:00 Registration

Networking

10:00 - 10:30 Keynote Kamran Nazir

Department of Marine Engineering
 Military Technological College
 Muscat, Oman

10:30 - 11:00 Keynote Kamran Javed

School of Computing
 Pak-Austria Fachhochschule
 Institute of Applied Sciences and Technology
 Pakistan

11:00 - 11:30 Keynote Prof. Gamal Elnashar

Dean of the College of Engineering
 King Salman International University (KSIU), Egypt

11:30 - 12:00 Keynote Eng. Moath Abuaysha

Leading 3D Printing
 NEOM

12:00 - 12:30 Keynote Ahmed Azab

Professor, Industrial and Systems Engineering Department
 King Fahd Univ. of Petroleum & Minerals
 Dhahran, Kingdom of Saudi Arabia

12:30 - 13:00

13:00 – 14:00 Prayer and Lunch Break

December 3, 2025 (Wednesday) - Session: 14:00 – 15:30**14:00 – 15:30, Wednesday****Onsite Room 1**

Session Chair:

Digital Manufacturing, Industry 4.0 and IoT**ID 51 From Promise to Practice: Modelling Industry 4.0 Challenges in Emerging Economies**

Weyinmi Blankson, Middlesex University Business School, Middlesex University, London NW4 4BT, UK
 Ibrahim Oluwole Raji, School of Business and Law, Leeds Trinity University, Leeds LS18 5HD, UK
 Babatunde Odedairo, Industrial & Production Engineering Department, University of Ibadan, Nigeria
 Department of Industrial Engineering, College of Engineering in Al-Kharj, Prince Sattam bin Abdulaziz University, Al-Kharj 11942, Saudi Arabia
 Oluseyi Afolabi Adeyemi, The Engineering and Design Institute (TEDI), London, UK

ID 111 Enhancing Workplace Safety through Smartwatch and Bluetooth-based PPE Tracking

Ahmed Aljohani, Ammar Albalawi, Mshari Alatawi and Hassan Hiry, Department of Industrial Engineering, University of Tabuk, Tabuk, Saudi Arabia

ID 130 A Conceptual Framework for AI-Enabled Autonomous Maintenance and Efficiency Optimization in IoT-Connected Variable Frequency Drives

Humza Raja and Abdullah Tameem, Industrial Engineering Department, Jeddah International College, Jeddah, Saudi Arabia

ID 306 Survey-Based Evaluation of Industry 4.0 Adoption and Industry 5.0 Transition Capability in Saudi Arabia

Hisham Alkhalefah, Advanced Manufacturing Institute, King Saud University, Riyadh-11421, Saudi Arabia

ID 322 An Ensemble AI Framework for Anomaly Detection and Remaining Useful Life Estimation in Predictive Maintenance

Fahad Tariq, Computer Engineering Department, National University of Technology, Islamabad, Pakistan
 Kamran Javed, School of Computing Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Haripur, Pakistan

ID 370 A Novel Trimmed Mean Absolute Deviated Local Ternary Patterns for Sports Video Summarization

Ahmad Alhabib, Electrical and Computer Engineering Department, Wayne State University, MI, USA
 Muteb Aljasem, Electrical and Computer Engineering Department, Bowling Green State University, Ohio, USA
 Auner Gregory, Surgery and Biomedical Engineering Department, Wayne State University, MI, USA
 Zaid Aldoulah, Electrical and Electronics Engineering Department, Alasala Colleges, Dammam, Saudi Arabia

ID 375 ReLU-EfficientNet: A Robust Deep Learning Framework for Copy-Move Forgery Detection

Fasiha Fatma, Department of Software Engineering, University of Engineering and Technology Taxila, Punjab, Pakistan
 Ali Javed, Department of Software Engineering, University of Engineering and Technology Taxila, Punjab, Pakistan
 Ahmad Alhabib, Department of Electrical Engineering, Wayne State University, Detroit, MI, USA
 Muteb Aljasem, School of Engineering, University of Bowling Green State University, Bowling Green, OH, USA
 Muidh Awadh Algahtani, Department of Industrial Engineering, Faculty of Engineering, University of Tabuk, Tabuk 47512, Saudi Arabia

December 3, 2025 (Wednesday) - Session: 14:00 – 15:30**14:00 – 15:30, Wednesday****Onsite Room 2**

Session Chair:

Business Management and Operations Management**ID 5 Analyzing the performance of Robo-Advisors: A study from the Indian financial landscape**

Imlak Shaikh, Associate Professor, MDI-Gurgaon, Gurugram, Haryana, India
 Sayed Mohammad Ali Hasan, Research Scholar, MDI-Gurgaon, Gurugram, Haryana, India

ID 18 Impact of Digital Technology in Facilitating Sustainable Growth for SMEs in Nigeria

Mustapha Hussaini, Department of Economics, Sule Lamido University Kafin Hausa, Nigeria
 Muhammad Abdulkadir, Department of Geography, Sule Lamido University Kafin Hausa, Nigeria

ID 77 Sustainable Development through ISO standards: A Systematic Practical Approach for Saudi Organizations

Mohamed Aichouni, Industrial Engineering Department, College of Engineering, University of Hail, Hail, Saudi Arabia
 Ahmed Baha Eddine Aichouni, CEMMPRE, ARISE, Department of Mechanical Engineering, University of Coimbra, 3030-788 Coimbra, Portugal
 Saud A. Alshamari, Faculty of Finance and Administrative Sciences, Al-Madinah International University, Kuala Lumpur, Malaysia

ID 81 Strategy for the Adaptation of Electric Vehicles in Saudi Arabia Using Fuzzy based Model

Alaa Fouad Momena, Department of Industrial Engineering College of Engineering, Prince Sattam Bin Abdulaziz University, Al-Kharj 11942, Saudi Arabia

ID 262 Islamic Women Entrepreneurship in the Age of Rapid Technological and Cultural Change: A Sustainable Perspective through the Lens of Institutional Theory

Mehwish Bhatti, HoD Mgt Science, NUML Hyd, Pakistan

ID 342 The Impact of Iran-Israel Conflict on the Development of Global Economy

Sani Shehu, Isyaku Adamu and Mukhtar Atiku Kurawa, Department of History and International Studies, Northwest University, Kano, 3220, Nigeria

ID 366 Financial Modelling Standards and Data Analytics

Muhammad Chaudhry, ENOWA Commercial Hub, Saudi Arabia

ID 386 The Impact of Iran-Israel Conflict on the Development of Global Economy

Sani Shehu, Isyaku Adamu, and Mukhtar Atiku Kurawa, Department of History and International Studies, Northwest University, Kano, Nigeria

ID 374 Demand Flexibility in Green Hydrogen Production with Integration to Renewable Sources

Shatha Salman Albalawi, Reem Sultan Albalawi, Shahad Ahmad Alsharif, Hadeel Mohammed Algosi, Renewable Energy Engineers, NEOM, Saudi Arabia

ID 387 Study of the Accessibility for Students with Disabilities to Faculty of Engineering Buildings at University of Tabuk

Abdullah Abdulkarem, Khaled Turki Alanzi, Ead Fahad Alanazi and Ahmed Hassan Ahmed Yassin, Industrial Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

Eltayeb H. Onsa Elsadig, Civil Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

December 3, 2025 (Wednesday) - Session: 14:00 – 15:30

14:00 – 15:30, Wednesday

Onsite Room 3

Session Chair:

Sustainability, Green Systems and Energy

ID 151 Building Consumer Trust Through Ethical Alignment: How Sustainable Logistics Validates Green Marketing Claims

Hanene Hammami, Marketing Department, University of Tabuk, Tabuk, Saudi Arabia

ID 199 Developing New Realities Beyond Traditional Boundaries: Enhancing African Renewable Energy Transition

Imoleayo Abraham Awodele, Post Doctoral Research Fellow, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, 4001, South Africa

Molusiwa S. Ramabodu, Head of Department, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, 4001, South Africa

Nathaniel Ayinde Olatunde, Post Doctoral Research Fellow, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, 4001, South Africa

ID 211 Decoupling Solar Intermittency: A Performance Evaluation of a Battery-Buffered Green Hydrogen Production Unit for Sustainable Energy Systems

Hossam AbdelMeguid, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

Department of Mechanical Power Engineering, Faculty of Engineering, Mansoura University, El-Mansoura, Egypt

Omar Alotaibi, Abdulrahman Alshaman, and Abdullah Almubarak, and Husam Alrehaili, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

ID 217 Data-Driven Prediction of Desiccant Wheel Performance for Sustainable Climate Control

Djamal Eddine Ghersi, Laboratory of Theoretical and Applied Fluid Mechanics, Faculty of Physics, University of Science and Technology Houari Boumediene, Algiers, Algeria

Nour Elislam Mougari, Laboratoire Energétique, Mécanique et Ingénieries (LEMI), Faculté de Technologie, Université de M'Hamed Bougara Boumerdes, Boumerdes, Algeria

ID 219 Data-Driven Prediction of Desiccant Wheel Performance for Sustainable Climate Control

Djamal Eddine Ghersi, Laboratory of Theoretical and Applied Fluid Mechanics, Faculty of Physics, University of Science and Technology Houari Boumediene, Algiers, Algeria

Nour Elislam MOUGARI, Laboratoire Energétique, Mécanique et Ingénieries (LEMI), Faculté de Technologie, Université de M'Hamed Bougara Boumerdes, Boumerdes, Algeria

ID 223 Quantifying the System-Level Impact of Alkaline Electrolyzer Degradation on Solar-to-Hydrogen Efficiency and Lifetime Performance

Hossam AbdelMeguid, Mechanical Engineering Department, University of Tabuk, Tabuk, Saudi Arabia and Department of Mechanical Power Engineering, Faculty of Engineering, Mansoura University, El-Mansoura, Egypt

Abdullah Almubarak, Omar Alotaibi, Abdulrahman Alshaman and Hussam Alrhili, Mechanical Engineering Department, University of Tabuk, Saudi Arabia

Break 15:30 – 16:00

December 3, 2025 (Wednesday) - Session: 16:00 – 18:00**16:00 – 18:00, Wednesday****Onsite Room 1**

Session Chair:

Automation, Robotics and Autonomous Systems**ID 118 A Comparative Study of LQR and FHLQT for Ground Vehicle Lane Change Maneuvers**

Hassan Hijry, Saad Ali and Omar Albalawi, Department of Industrial Engineering, Faculty of Engineering, University of Tabuk, Tabuk, Saudi Arabia
 Ali Alhawiti, Civil Engineering Department, Faculty of Engineering, University of Tabuk, Tabuk 71491, Saudi Arabia
 Saeed Mohsen, Department of Electronics and Communications Engineering, Al-Madinah Higher Institute for Engineering and Technology, Giza 12947, Egypt
 Department of Artificial Intelligence Engineering, Faculty of Computer Science and Engineering, King Salman International University (KSIU), South Sinai 46511, Egypt
 Gamal A. Elnashar, Department of Artificial Intelligence Engineering, Faculty of Computer Science and Engineering, King Salman International University (KSIU), South Sinai 46511, Egypt

ID 146 DSP Optimization vs FPGA Performance: A Study of FIR Filter Implementations

Farid Benaida, Computer Engineering Dept., College of Engineering and Computer Sciences, Mustaqbal University, Buraydah, Qassim, Saudi Arabia
 PHD Student, Computer Science Department, Badji Mokhtar University, Annaba, Algeria
 Habiba Beleili, Computer Science Department, Badji Mokhtar University, Annaba, Algeria
 Nacer Eddine Hammami, AIMD Laboratory, Computing College, Fahad Bin Sultan University, Tabuk City, KSA
 Radia Touahri, Computer Engineering Dept., College of Engineering and Computer Sciences, Mustaqbal University, Buraydah, Qassim, Saudi Arabia

ID 176 A UAV Platform for Rapid, Remote Detection of Toxic Gases and Radiation in Crisis Response

Husam Mohsen Alrehaili, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia
 Talal Atallah Alamrani, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia
 Shaker Sulaiman Alatawi, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia
 Ahmed Shabaan Alkathiri, Department of Mechanical Engineering, University of Tabuk, Tabuk, Saudi Arabia

ID 234 Examining the Barriers to Automation and Robotics in Construction: A Scientometric Approach

Hammed O. Hussain, Molusiwa S. Ramabodu, Samuel HP. Chikafalimani and Imoleayo A. Awodele, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban, South Africa

ID 344 Fusion-Based Sensor Data Processing and Visualization Framework for Autonomous Vehicle Testing in GCC Terrains

Ismail Hamieh, Department of Electrical and Computer Engineering, The University of Western Ontario, 1151 Richmond St, London, ON, Canada
 Mazen Kiki, Department of Mechanical Engineering, The University of Akron, 244 Sumner Street, Akron, OH 44325, United States

Supply Chain and Logistics**ID 372 Electrifying Saudi Logistics: A TCO and Risk Based Roadmap for Battery Electric Truck Fleets under Vision 2030**

Irfanullah Khan, and Yujia Zhai, Department of Information Systems and Operations Management, and Interdisciplinary Research Center for Smart Mobility and Logistics, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia
 Muhammad Tayyab, Department of Information Systems and Operations Management and Interdisciplinary Research Center for Finance and Digital Economy, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia

ID 373 Green Hydrogen Supply Chain Network Design for Saudi Arabia's Energy Transition under Vision 2030

Muhammad Tayyab, and Isma Javed, Department of Information Systems and Operations Management, and Interdisciplinary Research Center for Finance and Digital Economy, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia
 Irfanullah Khan, Department of Information Systems and Operations Management, King Fahd Business School, and Interdisciplinary Research Center for Smart Mobility and Logistics, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia

ID 385 Building a Resilient Semiconductor Supply Chain: A Stress Testing Framework

Jasim Alnahas, Shahbaz Khan, Khalid Awad Alatawi, Hussain Ahmed Albalawi, Azzam Nasir Bazaid, Faisal Maeesh Alharbi, and Yousaf Bader Aljohani, Department of Industrial Engineering, College of Engineering, University of Tabuk, Tabuk 47512, Saudi Arabia

December 3, 2025 (Wednesday) - Session: 4:00 – 6:00 pm**16:00 – 18:00, Wednesday****Onsite Room 2**

Session Chair:

Case Studies and Best Practices**ID 158 Bridging Tradition and Innovation: Barriers to Process Mining in Family-Run SMEs**

Abderrazak Laghouag, Business Administration Department, College of Business, King Khalid University, Saudi Arabia
 Tarek Guendouz, Department of Marketing, College of Business, University of Tabuk, Saudi Arabia

ID 23 Concept Generation and Evaluation Techniques in Product Design

Sayyad Zahid Qamar, Tasneem Pervez, Nasra Al Maskari and Moosa Al Kharusi, Department of Mechanical and Industrial Engineering, Sultan Qaboos University, Muscat, Oman

ID 270 Advancing Engineering Drawing Education for Design and Manufacturing Through the Flipped Classroom Approach: Evidence From Saudi Female Engineering Students

Faisal J. Alzahrani, Faculty of Engineering – Rabigh, King Abdulaziz University, Jeddah, Saudi Arabia

ID 287 Optimized energy use & demand flexibility in seawater desalination

Faraz Rasheed Mir, ENOWA-NEOM, Tabuk, Saudi Arabia

Aamir Ali Khan, ENOWA-NEOM, Tabuk, Saudi Arabia

ID 288 Recovery and Purification of CO₂ from Exhaust gases

Faraz Rasheed Mir, ENOWA-NEOM, Tabuk, Saudi Arabia

Saad Ghous, ENOWA-NEOM, Tabuk, Saudi Arabia

ID 296 Geothermal exploration by utilizing slim hole drilling systems - Cost and GHG emission reductions

Peter Kazar, Saudi Arabia

ID 329 CFD-Based Optimization of Geothermal Greenhouse Climate Control Systems in Arid Regions

Talal Nasser Al-Riyami, Mechanical Engineering Department, Student, Global College for Engineering and Technology, Muscat, Sultanate of Oman

Hajer Khalfan Al Naabi, Mechanical Engineering Department, Assistant Professor, Global College for Engineering and Technology, Muscat, Oman

Pooyan Rahmanivahid, Mechanical Engineering Department, Associate Professor, Global College for Engineering and Technology, Muscat, Oman

ID 348 Optimized and Energy-Efficient Desalination Using Renewable Energy Integration

Hamzah Alsadoun, Seham Alqubali and Lama Alsadoun, Department of Renewable Energy Engineering, Fahad Bin Sultan University (FBSU)

Tabuk, Saudi Arabia

Faraz Mir, Energy Flexibility Department, ENOWA/NEOM, NEOM, Saudi Arabia

December 3, 2025 (Wednesday) - Session: 4:00 – 6:00 pm

16:00 – 18:00, Wednesday

Onsite Room 3

Session Chair:

Workshop

**Innovation and Digital Transformation in Work Environments:
From Exploring Opportunities to Leading Change and Shaping the Future**

Mohammed Al Awadh
Associate Professor
Department of Industrial Engineering
King Khalid University (KKU)
Abha, Saudi Arabia

Virtual Zoom Sessions

December 1, 2025 (Monday) – Virtual Zoom Session: 8:00 – 11:00

8:00 – 11:00, Monday

Virtual Zoom Room 4

Session Chair:

Mizanur, IEOM Australia

Undergraduate Research Competition sponsored by Daikin Applied

ID 157 Hospital Supply Chain Management: A Review of Research Gaps and Decision Support Opportunities

Sarah Al Zaid, Tala Hassouna, Rokia Elshahhat, Mohamad Chaaban, Seifeldin Faidallah, Omar Abdelmoaty and Dua Weraikat, Rochester Institute of Technology, Dubai, United Arab Emirates

ID 221 Applying Lean Six Sigma to Enhance Supply Continuity and Service Efficiency in a Quick-Service Bubble Tea Operation in Saudi Arabia

Abdulmohsen Alali, Sanad Tawili and Hasan Balfaqih, Operations and Supply Chain Management Department Effat University, Jeddah, Saudi Arabia

ID 289 Factors Affecting Job-Hopping and Its Impacts on Career Growth and Job Performance Among Millennials and Gen Z

Professionals

Aaron Frederick R. Agustin, Carlos Nathaniel F. Dee, Ezekiel Richardson P. Dipasupil, Isaac Philip F. Eraga, John Aaron Nicholas A. Llovido, Ralfh Rowie S. Montañño, John Rod Jarrel DM. Palencia, Jeroncil L. Sanchez, Jayson Zamir Ivan B. Zamora, Jose Marie Carrillo, Jan Louis Cruz and Maricar M. Navarro, Industrial Engineering Program, College of Engineering and Architecture, Technological Institute of the Philippines, Quezon City, Philippines

ID 352 Sustainable Data Centers for Smart Cities: Optimized Energy Operation through AI-based Algorithms and Renewables

Najah Elnaïrab, B.Sc. in Computing and Information Systems Student, College of Engineering & IT (CEIT), University of Dubai, Dubai, UAE
 Jana Amairi, B.Sc. in Computing and Information Systems Student, College of Engineering & IT (CEIT), University of Dubai, Dubai, UAE
 Tayma Hasan, B.Sc. in Computing and Information Systems Student, College of Engineering & IT (CEIT), University of Dubai, Dubai, UAE
 Hiba Ahmed, B.Sc. in Computing and Information Systems Student, College of Engineering & IT (CEIT), University of Dubai, Dubai, UAE
 Maisam Wahbah, Assistant Professor, College of Engineering & IT (CEIT), University of Dubai, Dubai, United Arab Emirates

Undergraduate Student Paper Competition sponsored by Siemens**ID 10 Phytochemicals–Nano Carriers for Neurological Disorders Treatment**

Hiba Kafisheh and Marah Elbaw, College of Pharmacy and Medical Sciences, Hebron University, Hebron, Palestine
 Sami Makharzeh, College of Medicine, Hebron University, Hebron, Palestine
 Abdel Qawasmeh, College of Pharmacy and Medical Sciences, Hebron University, Hebron, Palestine

ID 159 Hospital Supply Chain Management: A Review of Research Gaps and Decision Support Opportunities

Sarah Al Zaid, Tala Hassouna, Rokia Elshahhat, Mohamad Chaaban, Seifeldin Faidallah, Omar Abdelmoaty and Dua Weraikat, Rochester Institute of Technology, Dubai, United Arab Emirates

ID 235 Optimized HDH Desalination Integrated with PEM Hydrogen Production and Multi-Use Water Management

Ragab, M.M, Al-Alamy, O.M, Al-Alamy, M.M, Zayan, M.M, Elsakaan, A.M and Elgharib, E, S, Mechanical Power Department, Faculty of Engineering Damietta University

ID 286 Green Ammonia and Hydrogen: Pathways to a Sustainable Energy Future-The Role of Transportation, Logistics, and Trading

Ahmed Hossam Fouad, Supply Chain Department, Arab Academy for Science, Technology & Maritime Transport, Heliopolis, Egypt

ID 290 Factors Affecting Graduates' Intent to Use TikTok as an Alternative to Corporate Employment

Sean Patrick M. Nalayog, Jose Marie Carrillo, Geewel P. Dariagan, Wimbledon L. Domingo, Kristine Bernadette T. Empaynado, Sarah Mae L. Galit, Agnes E. Gatlabayan, Kaye Angelie M. Manalang, John Rod Jarrel DM. Palencia and Maricar M. Navarro, Industrial Engineering Program College of Engineering and Architecture Technological Institute of the Philippines, Quezon City, Philippines

ID 299 Development of Sustainable Occupational Safety and Health Programs in the Petroleum Sector Using Quality Control Techniques

Basmah AlAwadhi, Zainab AlEnzi, Manayer AlOtaibi, Nora AlMarshoud, Manal AlDabbous and Hussam Ali Alothman, College of Engineering and Technology, American University of the Middle East, Kuwait

ID 303 Enhancing Inventory Efficiency in Specialized Warehouses through AI-Powered Computer Vision

Imen Rasheed Bouazzi, Assistant Professor, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
 Reema Abdulwahab Abumilhan, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
 Alya Mohammed Qasim, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
 Maha Farouq Alqahtani, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
 Enas Khalid Awad, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia

ID 312 Application of Cognitive Logistic Networks for Route Optimization in Oman's Logistics Operations

Hiba Marva Kallidumbil Nachithadathil, Management Studies, Middle East College, Muscat, Oman

ID 341 Yaqeen: An AI-Powered Islamic Companion Mobile Application for Personalized Islamic Guidance

Nidha Sadath, Department of Computer and Electronic Engineering, Middle East College, Muscat, Oman

ID 350 Intelligent Cold Chain Warehousing 4.0: Predictive System for Surveillance of Perishable Commodities

Boshra Taha, Mysoon Alasmri, Jumana Alqahtani, Samar Alasiri and Rahaf Alghamdi, Industrial Engineering Department, College of Engineering, King Khalid University, Abha, Saudi Arabia

ID 388 Design and Characterisation of PLA-Based Biocomposite Filaments Reinforced with Pecan Shell for 3D Printing

Gliden Jaroslav Dubois-Makarova and Alejandro Antonio Lara-Ruiz, Bachelor's Degrees in Industrial Engineering, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
 Juan Carlos Quiroz-Flores and Marcos Fernando Ruiz-Ruiz, Research Professors, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

December 1, 2025 (Monday) – Virtual Zoom Session: 11:00 – 14:00**11:00 – 14:00, Monday****Virtual Zoom Room 4**

Session Chair:

High School STEM Competition**ID 4 The Effect of Microgravity on Tissue Regeneration in the Axolotl**

Leen Alkhanifer, Saudi Arabia

ID 24 RootVolt – The Bio-Synthetic Root System for Sustainable Energy

Tollen Bahsa, Saudi Arabia

ID 56 Thermal Energy Storage Using Desert Sand: A Low-Cost Alternative for Solar Power in Arid Regions

Mariam Khaled Ebrahim, Creativity Private School, Manama, Bahrain

ID 99 Artificial Intelligence and Diabetes

Lamar Ghazi Al-Harbi, High School Student, Al-Asr Model Schools in Tabuk, Saudi Arabia

Salma Saeed Alamri, Supervisor / Teacher, Al-Asr Model Schools in Tabuk, Saudi Arabia

Noha Aboelyazeed El Kamshishy, Doctor of Philosophy in Molecular Biology and Genetic Engineering, Supervisor / Teacher, Al-Asr Model Schools in Tabuk, Saudi Arabia

ID 117 A Conceptual Framework for CRISPR-Cas9-Mediated Precision Gene Correction of Inherited Cardiomyopathies via AAV and LNP Delivery

Yakine Ghrib, Saudi Arabia

ID 149 Genetically Modifying E. Coli to Fixate Co₂

Mr. Yascer, Mr. Khalil, Hussain Bader Alanazi, Abdelaziz Saleh Alajaji, Ali Muhammad Al Ninowy and Adam Albedawi, Saudi Arabia

ID 261 Biodegradable RBC Membrane -Coated Nanoparticles for Beta Cell Protection

Raghad Faisal, Thirteenth Secondary School, Saudi Arabia

ID 340 Nano-Hemoflow: A Smart Blood Substitute for Rapid Hemorrhage Treatment

Reef Khalaf, 24th Girls High School, Hafar Al-Batin, Saudi Arabia

Graduate Student Paper Competition sponsored by Eaton Corporation**ID 137 Automation Decision**

Nader Santarisi, Associate Professor, Engineering Technology & Science, Higher Collage of Technology, Dubai Campus, Dubai, UAE

Asma Ali Ahmed, Ruqaiya Faisal Alkhaldi, Hind Khalid Alhajri, Hessa Khalifa Almansouri and Ghalya Ghanim Alali, Senior Student, School of Industrial Engineering, Higher Collage of Technology (HCT), Dubai, UAE

ID 164 Monitoring, Analysis, and Countering of Air Pollution

Mohamed Zainuddin, Bahrain

ID 284 Internet of Things-Driven Waste Management: Paving the Way for Sustainable Smart Cities

Khadija Salim Al Yarubi, Sallam O. F. Khairy and S. M. Emdad Hossain, Department of Information Systems, College of Economics, Management and Information Systems, University of Nizwa, Birkat Al Mouz, Nizwa 616, Oman

Gasim Hayder, Department of Civil and Environmental Engineering, College of Engineering and Architecture, University of Nizwa, Birkat Al Mouz, Nizwa 616, Oman

ID 380 The Impact of Infrastructure on the Recovery Capability of Supply Chains from Climatic Disasters in Jazan

Maram Khardali, Postgraduate Student at Logistics and Supply Chain Master Program, Department of Industrial Engineering, Jazan University, Jazan, Saudi Arabia

December 1, 2025 (Monday) – Virtual Zoom Session: 14:00 – 16:00**14:00 – 16:00, Monday****Virtual Zoom Room 4**

Session Chair:

Supply Chain and Logistics**ID 274 Investigating Non-Oil Export Performance in Saudi Arabia: The Impact of Global Supply Chain Disruptions (2020-2025)**

Suhail Bahmdun, Sanad Tawili, Abdulmonsan Ali, Abdulrahman Hallak and Sarah Osailan, Operations and Supply Chain Management Department Effat University, Jeddah, Saudi Arabia

ID 285 Framework Analysis for Enhancing Business Continuity in SPL Logistics Operations

Samia Elattar, Rana Alquraishi, Haneen Alodah, Aryam Aldharman, Rawan Aljarboua and Razan Alqahtani, Industrial & systems Engineering Department, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

ID 291 Optimizing FLW Risk Mitigation Strategies in Chili Supply Chains using Fuzzy-ANP

Rini Oktavera, Doctoral Program of Department of Agro-Industrial Technology, Faculty of Agricultural Technology, Universitas Brawijaya, Malang, Indonesia

Imam Santoso and Wike Agustin Prima Dania, Agro-Industrial Technology Department, Faculty of Agricultural Technology, Universitas Brawijaya Malang, Indonesia

Sujarwo Sujarwo, Agriculture Socio-Economic Department, Faculty of Agriculture, Universitas Brawijaya, Malang, Indonesia

ID 304 Drone Delivery in Saudi Arabia: Public Awareness and Challenges

Saja Bahabri, Nawal Salamah, Linah Alnumani and Mawadah Al Yazidi, Department of Operations and Supply Chain Management, Effat University, Jeddah, Saudi Arabia

ID 320 Reverse Logistics in Saudi Arabia: Challenges and Strategies for Recycling and Sustainability under Vision 2030

Lara Masoud, Malak Bogari and Shjon Faqeeh, Operations & Supply Chain Management Department, Effat College of Business, Effat University Jeddah, Saudi Arabia
 Sarah Y. Osailan, Operations & Supply Chain Management Department, Effat College of Business, Effat University, Jeddah, Saudi Arabia

Engineering Education and Curriculum Improvement

ID 403 AI-Enabled Education for Sustainable Development: Framework Integration and Contextualization in Vietnam
 Luu Van Thanh, Lecturer in the Faculty of Engineering, Vietnamese – German University, Ho Chi Minh City, Vietnam

December 1, 2025 (Monday) – Virtual Zoom Session: 16:00 – 18:00

16:00 – 18:00, Monday

Virtual Zoom Room 4

Session Chair:

Lean Six Sigma Competition

ID 172 Quality Inconsistencies in the printing Industry: A Case Study of Trust Industrial company
 Liyan Hassanain, Eman Sukkar, Tamara Baabbad, Sara Taieb and Hasan Balfaqih, Saudi Arabia

ID 174 Logistics performance in Saudi Arabia: A Case Study Using Six Sigma DMAIC, FMEA
 Maryam A. Alawlaqi, Sarah Y. Osailan and Malak Ali, Operations and Supply Chain Department, Effat University, Jeddah, Saudi Arabia

ID 178 Enhancing Service Reliability through Lean Six Sigma Reducing Variation in Maintenance Scheduling
 Sarah Al-Aradi, Tala Aljezani, Joori Almohands, Mawadah Al Yazidi and Hasan Balfaqih, Operations and Supply Chain Management Department Effat University, Jeddah, Saudi Arabia

ID 231 Six Sigma–Driven, Digitally Enabled Reduction of Delivery Delays and Failures
 Sadeem AlQahtani, Yasmeen Alawadhi, Retaj Altamimi, Danah Alajmi, Raghad Alajmi and Oumayma Hamlaoui, College of Engineering and Technology, American University of the Middle East, Kuwait

Supply Chain and Logistics

ID 274 Investigating Non-Oil Export Performance in Saudi Arabia: The Impact of Global Supply Chain Disruptions (2020-2025)
 Suhail Bahmdun, Sanad Tawili, Abdulmonsen Ali, Abdulrahman Hallak and Sarah Osailan, Operations and Supply Chain Management Department Effat University, Jeddah, Saudi Arabia

ID 285 Framework Analysis for Enhancing Business Continuity in SPL Logistics Operations
 Samia Elattar, Rana Alquraishi, Haneen Alodah, Aryam Aldharman, Rawan Aljarboua and Razan Alqahtani, Industrial & systems Engineering Department, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

ID 291 Optimizing FLW Risk Mitigation Strategies in Chili Supply Chains using Fuzzy-ANP
 Rini Oktavera, Doctoral Program of Department of Agro-Industrial Technology, Faculty of Agricultural Technology, Universitas Brawijaya, Malang, Indonesia
 Imam Santoso and Wike Agustin Prima Dania, Agro-Industrial Technology Department, Faculty of Agricultural Technology, Universitas Brawijaya Malang, Indonesia
 Sujarwo Sujarwo, Agriculture Socio-Economic Department, Faculty of Agriculture, Universitas Brawijaya, Malang, Indonesia

ID 304 Drone Delivery in Saudi Arabia: Public Awareness and Challenges
 Saja Bahabri, Nawal Salamah, Linah Alnumani and Mawadah Al Yazidi, Department of Operations and Supply Chain Management, Effat University, Jeddah, Saudi Arabia

ID 320 Reverse Logistics in Saudi Arabia: Challenges and Strategies for Recycling and Sustainability under Vision 2030
 Lara Masoud, Malak Bogari and Shjon Faqeeh, Operations & Supply Chain Management Department, Effat College of Business, Effat University Jeddah, Saudi Arabia
 Sarah Y. Osailan, Operations & Supply Chain Management Department, Effat College of Business, Effat University, Jeddah, Saudi Arabia

December 1, 2025 (Monday) – Virtual Zoom Session: 18:00 – 20:00

18:00 – 20:00, Monday

Virtual Zoom Room 4

Session Chair:

Senior Design Competition / FYP Competition

ID 107 Design of a Smart Solar Energy Management System for Protected Areas in the Kingdom of Saudi Arabia
 Lena M. Al-Shahrani, Laila M. Al-Muawi, Renad M. Al-Qahtani and Alhanouf S. Al-Qarni, Undergraduate Student in Industrial Engineering Department, College of Engineering, University of Bisha 61922, Saudi Arabia

Khaled Ali Abuhase, Full Professor in Industrial Engineering Department, College of Engineering, University of Bisha, Bisha 61922, Saudi Arabia

ID 122 Modeling and Control of Three-Phase Gravity Separator

Esra Saeed Salman Helal, Masooma Abdulameer Abbas Alhalal, Manar Ashraf Yusuf, Ms. Bintu Jasson and Raed Ebrahim Aljowder, Bahrain

ID 123 Internal Structure Design Optimization for the Truck Tanks to Minimize Slashing Effect

Mohamed Abouelela, Saad Al-Azmi, Abdullah Jawli, Abdullateef Al-Khudhur, Yousef Dashti and Ebraheem Al-Sawan, American University of the Middle East, Block 6, Building 1, Egaila, Kuwait

ID 133 Strategy to Accelerate QRIS Payment Adoption in Papua Province with System Dynamics Approach

Daniel Lukita Hertanta and Armand Omar Moeis, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Depok, 16424, Indonesia

ID 134 Feasibility Analysis of Investing in Single Vessel Ownership Using the Value at Risk Method

Anastasia Arkania Satyawan and Armand Omar Moeis, Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia Depok, 16424, Indonesia

Nur Baiti Ingg Wulandhari, Faculty of Business, Law, and Politics, University of Hull, Cottingham Rd, Hull HU6 7RX, United Kingdom

ID 232 Design and fabrication of a safety helmet

Aisha Alqumlas, Elaf Alqattan and Jamaloddin Jamali, College of engineering and technology, American University of Middle East, Kuwait

ID 277 Job Shop Scheduling Optimization Through Dispatching Rules and Genetic Algorithms

Norah Saeed Abdullah Aseri, Hawazin Ali Dhafer Alqhtani, Dareen Ali Salem Al-Ahmari, Ghadi Abdullah Mohamed Al-Asmari and Waad Ali Talhan Al-Ahmari, Undergraduate Students, Industrial Engineering Department, King Khalid University, Abha, Saudi Arabia

Abir Mouldi, Supervisor, Industrial Engineering Department, King Khalid University, Abha, Saudi Arabia

ID 301 Enhancing Inventory Efficiency in Specialized Warehouses through AI-Powered Computer Vision

Imen Rasheed Bouazzi, Assistant Professor, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
Reema Abdulwahab Abumilham, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
Alya Mohammed Qasim, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
Maha Farouq Alqahtani, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia
Enas Khalid Awad, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Saudi Arabia

December 2, 2025 (Tuesday) – Virtual Zoom Session: 8:00 – 11:00

8:00 – 11:00, Tuesday

Virtual Zoom Room 4

Session Chair:

Master's Thesis Competition

ID 31 Redesigning the Material Handling System for a Medical Warehouse

Wafa Murad Al Balushi, Department of Operations Management and Business Statistics, College of Economics and Political Science, Sultan Qaboos University, Sultanate of Oman, Oman

ID 259 Predictive Modelling of Vehicle Downtime Risk Using Machine Learning

B. B. S. Makhanya and JHC Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

Poster Competition

ID 17 VitaLynk The Future of Health Monitoring - Smart, Wearable & Personalized

Saudi Arabia

ID 98 Enhancing Resilient Operations via Predictive Maintenance: A Simulink-based Machine Learning Approach for Induction Motor Bearings

Mohammed Esmail M A Al-Boinin, Department of Mechanical and Industrial Engineering, College of Engineering, Qatar University, Qatar
Mehdi Dhaoui, Department of Electrical Engineering, National Engineering School of Gabes, University of Gabes, Tunisia
Mariem Mhiri and Mohamed Haouari, Department of Mechanical and Industrial Engineering, College of Engineering, Qatar University, Qatar

ID 283 Smart Waste Segregation Using Scalable AI Models: Advancing the Vision of Sustainable Cities

Khadija Salim Al Yarubi, Sallam O. F. Khairy and S.M.E Hossain, College of Economics, Management and Information Systems, Oman

ID 343 Global Trade and Logistics in a Shifting World

Dana Sabbagh, Ghalia Samkari, Tamara Essa and Jumana Almutawaa, Department of Operations and Supply Chain Management, Effat University, Jeddah, Saudi Arabia

Human Factors, Ergonomics and Healthcare Systems

ID 7 Environmental Tooth Damage Simulator: A Visual Study of How Environment Affects Human Dental Development

Deema Alhadidi, Grade 11 – Al Faris International School, Riyadh, Saudi Arabia

ID 91 Integrating Utilitarian and Religious Ethics in Medical Triage: Towards a Comprehensive Ethical Framework

Shamsuddin Ahmed, Shamsuddin Ahmed, Faculty of Engineering, Department of Industrial Engineering, Islamic University of Madinah, 42351,

Kingdom of Saudi Arabia

ID 268 Impact of Workplace Ergonomics on Productivity and Operational Efficiency: A Case Study of Garment Factories in Bole Lemi Industry Park

Kidane Gashawa, Kassu Jilchaa, Gezahegn Tesfayea and Daniel Kitawa, School of Mechanical and Industrial Engineering, College of Technology and Built Environment, Addis Ababa University, Addis Ababa, Ethiopia

December 2, 2025 (Tuesday) – Virtual Zoom Session: 11:00 – 14:00**11:00 – 14:00, Tuesday****Virtual Zoom Room 4**

Session Chair:

AI-ML Competition**ID 12 Leveraging AI, Data Analytics, and Intelligent Operations Management for Enhanced Operational Efficiency**

Ibrahim Murad, SAJCO, Saudi Arabia

ID 113 Port-Level Network and Resilience Analysis of the Solar PV Module Import Supply Chain in the United States

Dalal Bamuffeh, Yuxin Wang and Yong Wang, School of Systems Science and Industrial Engineering, Binghamton University, Binghamton, NY, United States

R Raja Singh, Automotive Research Centre, Vellore Institute of Technology, Vellore, Tamil Nadu, India

Supply Chain and Logistics**ID 156 Industry 4.0 and Digital Supply Chains: A Review of Flexibility, Viability, and Antifragility**

Hamad A. Almajid, Abdulaziz A. Albarrak, Falah H. ALqahtani, and Mohammed Alkahtani, Department of Industrial Engineering, College of Engineering, King Saud University, P.O. Box 800, Riyadh, Saudi Arabia

ID 173 Optimizing Logistics Operations for Vision 2030: Strategies to Reduce Costs and Improve Competitiveness

Alaa Almohamadi, Deema Algafr, Abeer Alathwari, Ebtisam Alqudaimi and Hasan Balfaqih, Operations & supply chain management, Effat University, Jeddah, Saudi Arabia

ID 210 Total Quality Management (TQM) and Lean Management Case study: Long Paths Company

Ebitsam Alqudaimi, Manal Saleh, Sitah Albalawi and Abduaziz Albalawi, Operations & supply chain management, Effat University, Jeddah, Saudi Arabia

ID 212 Quality Management (TQM) and Lean Management Case study: Long Paths Company

Ebitsam Alqudaimi, Manal Saleh, Sitah Albalawi and Abduaziz Albalawi, Operations & supply chain management, Effat University, Jeddah, Saudi Arabia

ID 269 Decentralizing Drug Traceability: A Blockchain Approach for the Saudi Pharmaceutical Supply Chain

Marwa Ahmed Abd El-baky, Associate Professor, Industrial Engineering Department, College of Engineering, King Khalid University, Abha, Saudi Arabia

Basma Nasser Omair, Jamila Mohammed Shadad, Raghad Mohammed Al Ghanim and Ruba Jaber Alshehri, Senior Student, Industrial Engineering Department, College of Engineering, King Khalid University, Abha, Saudi Arabia

December 2, 2025 (Tuesday) – Virtual Zoom Session: 14:00 – 16:00**14:00 – 16:00, Tuesday****Virtual Zoom Room 4**

Session Chair:

Quality, Reliability and Maintenance**ID 75 Smart Quality Control for Materials and Spare Parts: Integrating RFID with Etras in EV Manufacturing**

Budsaya Schramm, and Phongchai Jittamai, School of Industrial Engineering, Institute of Engineering, Suranaree University of Technology, Nakhon Ratchasima, Thailand

ID 213 Factors (including casting defects) Affecting Quality in Foundry Companies

Zanele Mpanza, University of South Africa, South Africa

ID 215 The Relationship Between Casting Defects and Monetary Losses in Sand Casting Foundries

Zanele Mpanza, University of South Africa

ID 227 Applying Lean and Six Sigma (DMAIC) to Reduce Cold-Chain Losses and Improve Product Quality in Almarai's Dairy Distribution Operations

Anas Benaissa, Operations and Supply Chain Management Department, Effat University, Jeddah, Saudi Arabia

ID 282 Determining the Uncertainty of the Mean-Time-To-Failure via Nonlinear Regression Estimation

Vishal Ramnath, Department of Mechanical, Bioresources and Biomedical Engineering, University of South Africa, Pretoria, Republic of South Africa

ID 104 How Do Technical Universities Differ from Others?

Dr Kamran Ahmed Siddiqui, Associate Professor, College of Business Administration, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

ID 295 Entrepreneurship and Innovation in the Energy Sector

Nyasha Gatawa and Charles Mbohwa, Sustainability Engineering and Future Technologies Centre, College of Science, Engineering and Technology, University of South Africa, Johannesburg, South Africa

ID 371 Enhancing Pilgrim Services During Hajj: A Hajj SERVQUAL and SEM Approach

Shamsuddin Ahmed, Faculty of Engineering, Department of Industrial Engineering, Islamic University of Madinah, 42351, Kingdom of Saudi Arabia

December 2, 2025 (Tuesday) – Virtual Zoom Session: 16:00 – 18:00

16:00 – 18:00, Tuesday

Virtual Zoom Room 4

Session Chair:

Artificial Intelligence and Data Science

ID 13 An artificial intelligence model for detecting depression indicators through the analysis of spoken and written texts.

Sumaya Daqam, 103rd Secondary School, Saudi Arabia

ID 33 Leveraging AI algorithms for the early prediction of Alzheimer's Disease (AD)

Fajer Albudia, Saudi Arabia

ID 110 AI-Powered Approach to Data Science: Understanding and Important Factors

Azhari Qismallah, Department of Computer Science, University of Tabuk, Tabuk, Saudi Arabia
Ahmed Hamza Osman, Department of Information Technology, King Abdulaziz University, Rabigh, Saudi Arabia

ID 114 Driver Fatigue Detection Using On-board Systems in Connectivity-Dead Regions

Jose Ignacio Soria Miranda, Joaquin Miguel Triveño Pazos and Fabricio Humberto Paredes Larroca, Faculty of Engineering and Architecture, University of Lima, Lima, Perú

ID 132 Classification of COVID-19 Sub-Categories by Means of Segmented Exhaled Breath Waveform and Classical Machine Learning Algorithms

M.B. Malarvili, Santheraleka Ramanathan, Jothi Letchumy, Rishya Manikam, Ahmad Adib Ramli, Rafi' Uddin Radzi Ruslay, Anhar Kamarudin, Aina Amalina Ahmad Tarmizi and Razali Muhammad, Malaysia

ID 293 The Use of Artificial Intelligence in the Fashion Industry

Nyasha Gatawa and Charles Mbohwa, Sustainability Engineering and Future Technologies Centre, College of Science, Engineering and Technology, University of South Africa, Johannesburg, South Africa

ID 318 Impact of AI on Industrial Engineering: A Systematic Literature Review (SLR) of Peer-Reviewed Articles and Conference Proceedings

Asfa Muhammed Din Javeed, Industrial Engineering Department, Alfaisal University, Riyadh, Saudi Arabia

ID 399 The Use of Artificial Intelligence in the Fashion Industry

Nyasha Grace Gatawa and Charles Mbohwa, Sustainability Engineering and Future Technologies Centre, University of South Africa, Johannesburg, South Africa

ID 379 Real-time Livestock Tracking and Alerting Method for Proactive Warning System

Ahamed Aljuhani, Department of Information Technology, University of Tabuk, Tabuk 71491, Saudi Arabia
Amer Aljaedi, Department of Information Technology, University of Tabuk, Tabuk 71491, Saudi Arabia
Abdullah D. Alanazi, Department of Biological Sciences, Shaqra University, Ad-Dawadimi 11911, Saudi Arabia

December 2, 2025 (Tuesday) – Virtual Zoom Session: 18:00 – 20:00

18:00 – 20:00, Tuesday

Virtual Zoom Room 4

Session Chair:

Simulation, Optimization and Productivity Improvement

ID 58 Contribution to the Development of a Predictive Model for Industrial Performance Risks across Various Sectors: Application to Moroccan Industries

El Aaouami Asmae, Houache Said and En-nadi Abdelali, Industrial Engineering Department, Faculty of Science and Technology, Fez, Morocco

ID 73 Operations Research In Healthcare Simulation Modeling of Emergency Department Patient

Raghad Nazal Alruwaili, Student, Saudi Arabia

ID 87 Enhancing Supply Chain Performance: The Interplay of Supply Chain Integration and Flexibility

Raymund P. Berdin, MBA, BSChE, Supply Chain Management, Ampleon Phils., Inc., LISP 1, Cabuyao, Laguna

ID 95 Waste Management and Operational Efficiency Improvement in Cake and Pastry Factory Through Adapting DMAIC Methodology

Kaouter Ghacham, Shoug Ghanem Alshawi, Raghad Muhammed Aljaloud, Malath Abdulkarim Alrawdhan, Munerah Saleh Alrudhyan and Lial Hamad Almari, Industrial and Systems Engineering Department, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

ID 115 Management Model to Reduce Order Preparation Time by Applying 5S and Standard Work in a Glassworks

Rodrigo Aldair Osorio Vasquez and Johan Devid Pereda Contreras, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Peru
Carlos Alberto Galvez Zarate and Paul Angello Daniel Sanchez Soto, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Peru

ID 214 Impact of Casting Defects on Productivity in Sand Casting Foundries

Industrial Engineering Department, University of Tabuk, Tabuk, Saudi Arabia

ID 278 InduSight: Intelligent Analytical System for Industrial Market Gap Analysis

Reem Alshehri, Department of Industrial Engineering, King Khalid University, Abha, Saudi Arabia

ID 280 InduSight: Intelligent Analytical System for Industrial Market Gap Analysis

Ekram Abdullah, Reem Mohammed, Mayas Abdulaziz, and Yara Saleh, senior students in Industrial Engineering at King Khalid University, Saudi Arabia

Bader Mohammed, Assistant Professor in the Industrial Engineering Department at King Khalid University, Saudi Arabia

ID 302 Facility Layout Optimization using GA-Simulation & Real factory [X]

Mohamed Gasser Gawdat, Mechanical Engineering Department, German International University, Cairo, Egypt
Mohamed Magdy Nafea, Design and Production Engineering Department, German University in Cairo, Cairo, Egypt
Yasmine Zaghloul, Automation & Control Electrical Engineering Department, German International University, Cairo, Egypt
Lamia Ahmed Shihata, Design and Production Engineering Department, German University in Cairo, Cairo, Egypt

ID 325 Evaluating 5S Implementation Across Automated Industrial Environments – A Multi-Factory Case Study

Mona Alghasib, King Khalid University, Saudi Arabia

December 3, 2025 (Wednesday) – Virtual Zoom Session: 8:00 – 11:00 am

8:00 – 11:00 pm, Wednesday

Virtual Zoom Room 4

Session Chair:

Lean Six Sigma and Operations Excellence

ID 88 Integrating a Green Lean Six Sigma Framework for Sock Manufacturing Operations in SMEs

Shimaa M. Osman, Mohammad A. Younes and Amira A. Khattab, Production and Industrial Engineering Department, Faculty of Engineering, Alexandria University, Alexandria, Egypt

ID 125 Productivity Improvement in a Bakery and Pastry Premix Company by Applying Preventive Maintenance, SMED and 5'S.

Edgar Manuel Chávez Calle and Steven Alexander Guzmán Rodríguez, Universidad de Lima, Carrera de Ingeniería Industrial Lima, Perú
Carlos Alberto Galvez Zarate and Paul Angello Daniel Sanchez Soto, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Perú

ID 126 Productivity Improvement in a Bakery and Pastry Premix Company by Applying Preventive Maintenance, SMED and 5'S

Edgar Manuel Chávez Calle, Steven Alexander Guzmán Rodríguez, Universidad de Lima, Carrera de Ingeniería Industrial Lima, Perú
Carlos Alberto Galvez Zarate, Paul Angello Sánchez Soto, Universidad de Lima, Instituto de Investigación Científica, Carrera de Ingeniería Industrial, Lima, Perú

ID 165 Crisis-Driven Transformation: Lean, Agile, and Leagile Approaches to Operational Excellence and Supply Chain Resilience

Ecem AVCU, Antalya Bilim University,
Semail Ülgen, Department of Industrial Engineering Antalya Bilim University, Ciplakli Mahallesi Farabi Caddesi No: 23 Dosemealti, Antalya, 07190, Turkey

ID 170 Enhancing Logistics Performance through Lean Six Sigma: Integrating Value Stream Mapping and DMAIC

Suhail Bahmdun, Abdulrahman Hallak, Shjon Faqeeh, Lara Masoud and Hasan Balfaqih, Operations and Supply Chain Management Department Effat University, Jeddah, Saudi Arabia

ID 171 Applying Lean Six Sigma to Enhance Service Quality in the Café Industry: A Case Study from Saudi Arabia

Joud Dashash, Wafa Aldeais, Fatima Aminu and Hasan Balfaqih, Operations and Supply Chain Management Department, Effat University, Jeddah, Saudi Arabia

ID 267 Application of Six Sigma to Optimize Manufacturing Parameters and Enhance Enzyme Stability in Glucose Test Strips

Mona Abu Mughaedh, Abeer Melebari, Shatha Alfaiqi, Alaa Al-Wakeel, and Heba Ibrahim Elkhoully, King Khalid University, Saudi Arabia

ID 351 Six Sigma in the Digital Age: Opportunities, Challenges, and Applications

Ahmed A. Aljabr, Continuous Excellence Program, Technical Services Business Support Department, Saudi Aramco, Dhahran, Saudi Arabia
Pablo Colman Alvarez, Operational Excellence Consultant, Operational Excellence Department, Saudi Aramco, Dhahran, Saudi Arabia

Engineering Management and Project Management

ID 90 Impact of The Interplay of Delay Factors and Project Outcomes- An Integrated SEM-Path Analysis and CCA Model in the Madinah Construction Sector
S Ahmed, Saudi Arabia

ID 167 Toward Timely and Uninterrupted Perishable Food Supply Chains: A Literature Review to Guide Operational Decisions
Ziqing Lin, Nottingham Business School, University of Nottingham, Malaysia

December 3, 2025 (Wednesday) – Virtual Zoom Session: 11:00 – 14:00

11:00 – 14:00, Wednesday

Virtual Zoom Room 4

Session Chair:

Automation, Robotics and Autonomous Systems

ID 209 Analysis of the success and failure connection in the advanced access class barring for internet of thing deployment over LTE-Advanced network

Bouba Goni Mahamadou, Dr, Department of Industrial Engineering and Maintenance, Polytechnic University of Mongo, Mongo, CHAD
Jérôme Mbainaibeye, Professor, Department of Informatics and Telecommunication, University of Moundou, CHAD

ID 260 Harnessing Automation and Robotics to Transform the Food and Beverage Manufacturing Industry

Sarah Y. Osailan, Aaliza Rasheed, Randa Mohab and Rand Balkhair, Operations and Supply Chain Department, Effat University, Jeddah, Saudi Arabia

ID 53 Decision Support Approach for Analysis and Evaluation of Advanced Manufacturing Technologies

Diogo E. Ribeiro, Industrial Engineering Department, Faculty of Engineering, University of Porto, Porto, Portugal
Américo Lopes de Azevedo, Industrial Engineering Department, Faculty of Engineering, University of Porto, Porto, Portugal
INESC TEC - Institute for Systems and Computer Engineering, Technology and Science, FEUP Campus, Porto, Portugal

ID 205 Advanced 3D Geometric Visualization and Computational Analysis in MATLAB for CAD/CAM Applications

Laith Al Juboori, Assistant Professor, Department of Mechanical Engineering, Higher Colleges of Technology, Fujairah, UAE

ID 258 Development and Construction of a Custom Myoelectric Prosthetic Hand Using Surface EMG and Additive Manufacturing

Laith Al Juboori, Assistant Professor, Department of Mechanical Engineering, Higher Colleges of Technology, Fujairah, UAE
Ahmed A. A. Al-Duroobi, Prosthetics and Orthotics Engineering Dept., Al-Nahrain University, Baghdad, Iraq
Fatima A. Jaism, Prosthetics and Orthotics Engineering Dept., Al-Nahrain University, Baghdad, Iraq

ID 311 Enhancing Security in Smart Home/Office Automation Systems Using Smart Contract and Facial Recognition

Nura Ibrahim Al-Ameer, College of Computer Science, King Khalid University, Abha, Saudi Arabia
Nada Al-Asbali, Department of Informatics and Computer Systems, College of Computer Science, King Khalid University, Abha, Saudi Arabia
Ahmad Al-Khodair, College of Computer Science, Tabuk University, Tabuk, Saudi Arabia

ID 327 The Role of Digital Twins in Supplier Selection Criteria: Review and Research Directions

Ndivhuwo Nemtajela, Department of Operations Management, University of South Africa, Pretoria

ID 305 Integrated System toward Sustainable Recycling of Pharmaceutical Waste Blister Packages

Amr Khamis Mahmoud, R&D Department at the Industry Service Complex (ISC), Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, Egypt
Mohamed A. Etman, Pharmaceuticals Department, Pharos University, Alexandria, Egypt
Dina M. Mahdy, Pharmaceuticals Department, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alamein, Egypt
Noha Galal, Department of Industrial & Management Engineering, Arab Academy for Science, Technology and Maritime Transport (AASTMT) Alexandria, Egypt
Lina Ismail, Department of Industrial & Management Engineering, Arab Academy for Science, Technology and Maritime Transport (AASTMT) Alexandria, Egypt
Mostafa S. Hamad, Research and Innovation Center, Arab Academy for Science, Technology and Maritime Transport, Alamein 51718, Egypt
Khaled S. El-Kilany, Department of Industrial & Management Engineering, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Alexandria, Egypt

ID 406 Analysis of the success and failure connection in the advanced access class barring for internet of thing deployment over LTE-Advanced network

Bouba Goni Mahamadou, Department of Industrial Engineering and Maintenance, Polytechnic University of Mongo, Mongo, Chad
Jérôme Mbainaibeye, Professor, Department of Informatics and Telecommunication, University of Moundou, Chad

Digital Manufacturing, Industry 4.0 and IoT

ID 138 From Data to Decisions: Leveraging Digital Twins, AI, and IoT for Smarter Supply Chain Management

Maryam A. Alawlaqi, Sarah Y. Osailan, Malak Ali, Noor Yousef and Noura Babakor, Operations and Supply Chain Department, Effat University Jeddah, Saudi Arabia

ID 405 Enhancing Security in Smart Home/Office Automation Systems Using Smart Contract and Facial Recognition

Nada Alasbali, Department of Informatics and Computer Systems, College of Computer Science, King Khalid University, Abha, Saudi Arabia
 Ahmad J. Alkhodair, University of Tabuk, Saudi Arabia

December 3, 2025 (Wednesday) – Virtual Zoom Session: 14:00 – 16:00

14:00 – 16:00, Wednesday

Virtual Zoom Room 4

Session Chair:

Supply Chain and Logistics

ID 101 Productivity Improvement in the Picking Process through the Application of Kanban and Inventory Management Approach (WMS) at Drogueria Mefar S.A.C.

Valeria Francesca Gasco Morales and Maria Paula Nomberto Diaz, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Perú
 José Antonio Taquía Gutiérrez, Universidad de Lima, Carrera de Ingeniería Industrial, Lima, Perú

ID 105 National Waste Digital Platform (NWDP): A Digital Supply-Chain Backbone for Circular MSW in Saudi Arabia

Bandar S. Aljabri, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia
 Mohamed S. Alkahtani, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

ID 106 Benchmarking Smart Waste Systems: A Strategic Pathway for Egypt's Circular Economy Transition

Ghada M. A. Younes, Reem Al-Kadeem, Nermine Harraz and Ahmad E. Elhabashy, Production Engineering Department, Faculty of Engineering, Alexandria University, Egypt
 Ghada M. A. Younes, Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

ID 121 Optimizing Warehouse Operations: Integrating Efficiency, Sustainability, and Worker Well-Being

Nader Santarisi, Associate Professor, Engineering Technology and Science, Higher College of Technology, Dubai Academic City Campus, Dubai, UAE
 Fatma Saeed and Hana Albalushi, Senior Students, School of Industrial Engineering, Higher Colleges of Technology (HCT), Dubai, UAE

ID 139 Integration of Blockchain into Supply Chains: Implications for Saudi Arabia's Vision 2030

Almuttaz Alsenani, Hussam Alsammani, Ismaila Ganiyu and Mohammed Alkahtani, Industrial Engineering Department, King Saud University Riyadh, Saudi Arabia

ID 148 A Review of Split Delivery Vehicle Routing Problem Using Adaptive Large Neighborhood Search

Abdullah Alwhibi, Faisal Almalki, Nader Alkathiri, Abdullah Almasad, and Mohammed Alkahtani, Industrial Engineering Department, King Saud University, Riyadh, Saudi Arabia

December 3, 2025 (Wednesday) – Virtual Zoom Session: 16:00 – 18:00

16:00 – 18:00, Wednesday

Virtual Zoom Room 41

Session Chair:

Sustainability, Green Systems and Energy

ID 1 Innovative Bioremediation Strategies for Oil Spill Cleanup: Integrating Biostimulation and Biosurfactants

Lujain Alqattan, Saudi Arabia

ID 25 Smart Integrated Device for a Clean and Healthy Environment

Muzoon Al-Juhani, High school graduate, Saudi Arabia

ID 28 MagnoNuke: Hybrid Nuclear-Magnetic Launch System for Deep Space Colonization

Tushit Karthik, India

ID 230 A Hybrid AHP-DEMATEL Model for Scrap Management in Gas Industries to Establish a Circular Economy

Takia Tarannum and Yasin Hossain Arian, Mechanical and Production Engineering Department, Islamic University of Technology, Gazipur, Bangladesh

ID 294 Driving Sustainability in the Energy Sector in Africa

Nyasha Gatawa and Charles Mbohwa, Sustainability Engineering and Future Technologies Centre, College of Science, Engineering and Technology, University of South Africa, Johannesburg, South Africa

ID 316 Assessment and Forecasting of Afforestation Efforts in Saudi Arabia Using Remote Sensing and Machine Learning

Mohammed Fayidh Alsharari, Hatem Awwad Almutairi, Muhannad Fahad Alhanaya, Talal Ali Alrashidi and Ahmad J. Alkhodair, University of Tabuk, Saudi Arabia

ID 317 Mind the Gap: Why Consumers Sustainable Intentions Do not Always Lead to Green Purchases

Tala Aljezani, Bateel Badr, Alaa Alsadi and Dana Alshehri, Operations & Supply Chain Management Department, Effat College of Business, Effat University, Jeddah, Saudi Arabia

ID 323 Community Engagement and Participation in Sustainable Real Estate Development

Busayo Emmanuel Akinwale, Department of Estate Management, University of Ibadan, Oyo State, Nigeria
 Imoleayo Abraham Awodele, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban,4001, South Africa, Durban, South Africa
 Molusiwar Stephan Ramabodu, Construction Management and Quantity Surveying Department, Durban University of Technology, Durban,4001, South Africa, Durban, South Africa

ID 369 Renewable Energy Transition and CO₂ Emissions Reduction: A Multivariate Analysis of Fiji's Energy Sector with Policy Implications

Shamsuddin Ahmed, Faculty of Engineering, Department of Industrial Engineering, Islamic University of Madinah, 42351, Kingdom of Saudi Arabia

ID 400 Driving Sustainability in the Energy Sector

Nyasha Grace Gatawa and Charles Mbohwa, Sustainability Engineering and Future Technologies Centre, University of South Africa, Johannesburg, South Africa

ID 404 Integrated Dust-Mitigation Framework for Solar PV Panels

Salah Elaskari, Ali Fenjan, Farah Alsharhan, Fai Albaihees, Abdulaziz Alsayegh, Shaikhah Al Dosari, and Ahmad Alenezi, School of Engineering and Computing, American International University, Saad Al Abdullah - East of Naseem, Block 3, Kuwait

December 3, 2025 (Wednesday) – Virtual Zoom Session: 18:00 – 20:00

18:00 – 20:00, Wednesday

Virtual Zoom Room 41

Session Chair:

Business Management and Operations Management

ID 83 The Complementary Effect of Internal and External Knowledge Sources on SMEs Innovation Performance: Evidence from Chile and Colombia

Naqeeb Ur Rehman, Ph.D., Department of Global Studies, King Fahd University of Petroleum & Minerals, Saudi Arabia

ID 89 Enhancing Pilgrim Services During Hajj: A Hajj SERVQUAL and SEM Approach

S Ahmed, Saudi Arabia

ID 92 A Blueprint for Better: Improving Crowd Flow and Safety at Al-Rawda Area in Madinah

Shamsuddin Ahmed and Abdulrahman Mohammed Al Blaihshi, Faculty of Engineering, Department of Industrial Engineering, Islamic University of Madinah, 42351, Kingdom of Saudi Arabia

ID 109 The Role of Blockchain Technology in Enhancing Digital Governance in Supply Chain Management in the GCC Countries: Challenges and Prospects

Makram Nouaili, University College of Duba, University of Tabuk, Tabuk, Saudi Arabia

ID 208 Semiotic Design Strategies for Industrial Engineering Firms

Kamran Ahmed Siddiqui, Associate Prof., College of Business Administration, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

ID 300 E-Learning Management Model to Improve the Productivity of the Induction and Training Process Through 5's, Work Breakdown Structure and Scrum in a Service Company

Anabely Nikole Apestegui Quispe and Rita Nicolle Castro Aparicio, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
 Carlos-Augusto Lizárraga-Portugal, Research Professor, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

ID 202 Transforming Healthcare Quality and Safety: Case Studies and Best Practices from Sultan Qaboos University Hospital, Oman

Fatma Al Dhabbari and Yousuf Al Khamisi, PhD, MSc, BSc, RN, and PhD, MA, BA, Director, Directorate of Development & Quality, Senior Quality Specialist, Sultan Qaboos University Hospital, UMC, Oman

ID 354 Rowd Management in Religious Gathering-Systems Design Approach

Shamsuddin Ahmed, Faculty of Engineering, Department of Industrial Engineering, Islamic University of Madinah, 42351, Kingdom of Saudi Arabia

ID 378 Model for Customer Relationship Management Based on User Experience in Servuction Systems: Case Study of Prepaid Medicine

Hernando Garzón Saenz, CIPTEC Research Group - Faculty of Engineering - Industrial Engineering Program - Technology in Industrial Production, Fundación Universitaria Tecnológico Comfenalco, Cartagena de Indias, Colombia
 Andrés Redchuk, ETSII. Department of Computer Sciences. University Rey Juan Carlos., Director of Operational Excellence and Process Improvement Institute, Madrid. Spain
 José Manuel Solana Garzón, CIPTEC Research Group- Faculty of Engineering - Industrial Engineering Program - Technology in Industrial Production, Fundación Universitaria Tecnológico Comfenalco, Cartagena de Indias - Colombia
 Juan Emilio Tobon Guzman, Industrial Engineer - Professional Applied Statistics Program, Tech University, Mexico City, Mexico

ID 384 Harnessing Neuroadaptive Technologies and AI in Personalized Education: The PD AkademiX Approach Towards Resilient Educational Operations

Emine Akcan, Demre Akcanlar Sigorta Girişim, Gökyazı mah. Yusuf Özek cad. 4/A Demre/Antalya, Turkey
 Semail Ülgen, Department of Industrial Engineering, Antalya Bilim University, Antalya, Turkey

ID 376 Financial Risk Cascades in Mega-Projects with Structural Equation Modeling: Payment Delays, Insolvency, and Project Failure in Saudi Hotel Construction

Shamsuddin Ahmed and Omar Essam Omar Yousef, Faculty of Engineering, Department of Industrial Engineering, Islamic University of Madinah, 42351, Kingdom of Saudi Arabia

ID 401 Entrepreneurship and Innovation in the Energy Sector

Nyasha Grace Gatawa and Charles Mbohwa, Sustainability Engineering and Future Technologies Centre, University of South Africa, Johannesburg, South Africa

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- 172. Ecole Supérieure De Technologie, Fez
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- 180. University of Nigeria, Nsukka
- 181. University of Benin
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- 184. MEC - Middle East College
- 185. GCET – Global College of Engineering and Technology

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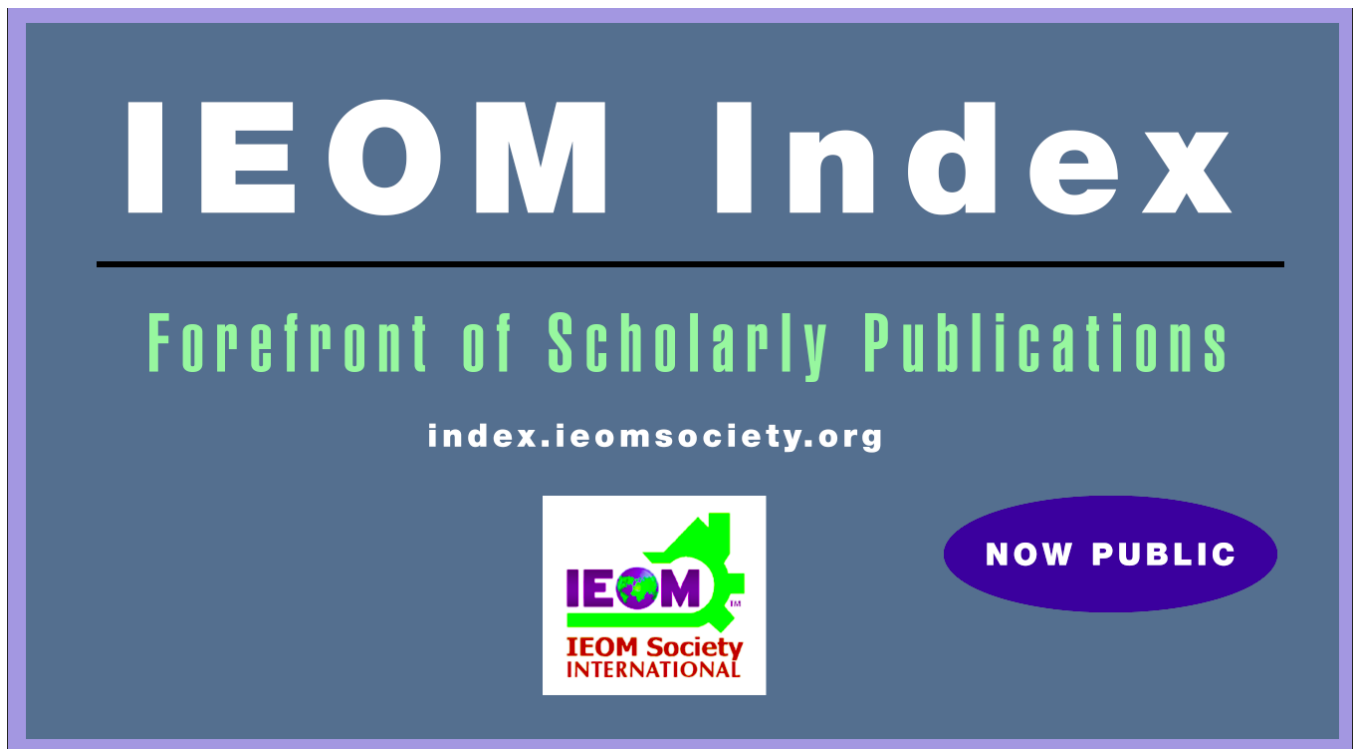
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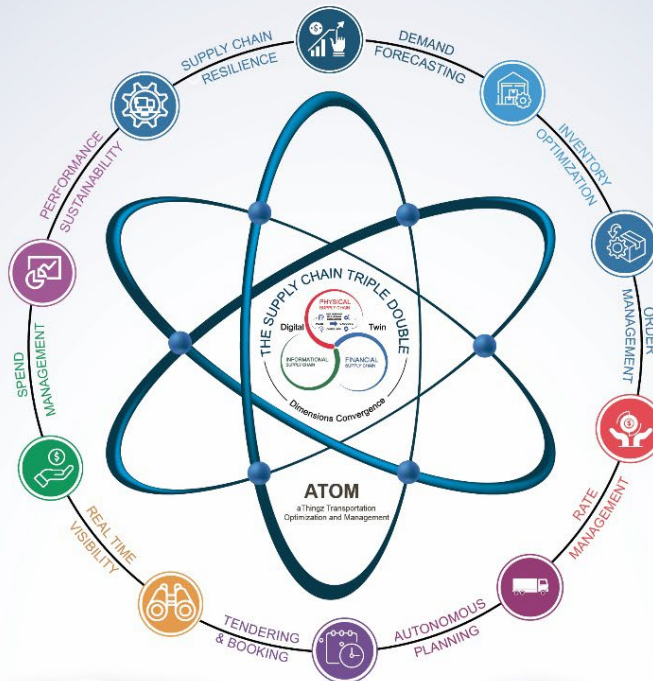
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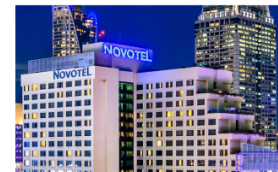
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7th Asia Pacific Conference on Industrial Engineering and Operations Management
Bangkok, Thailand, March 25-27, 2026
 Venue: Novotel Bangkok On Siam Square



7th African International Conference on Industrial Engineering and Operations Management
 Cape Town, South Africa, May 13-15, 2026
 Host and Venue: CPUT, Cape Town



11th North American Conference on Industrial Engineering and Operations Management
 Milwaukee, Wisconsin, USA, June 9-11, 2026
 Host: University of Wisconsin, Milwaukee



16th International Conference on Industrial Engineering and Operations Management
 June 23-26, 2026, Ankara, Turkey
 Host and Venue: Gazi University, Ankara



9th European Conference on Industrial Engineering & Operations Management
 Barcelona, Spain, July 20-22, 2026
 Host: EUSS School of Engineering



Host University



6th IEOM India International Conference Industrial Engineering and Operations Management
Bangalore, India, November 5-7, 2026
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