

4th Australian Conference on Industrial Engineering and Operations Management

~ Melbourne

ORGANIZER



HOST



Nov. 25-27, 2025

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Organizer



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 4th Australia International Conference on Industrial Engineering and Operations Management in Melbourne, Australia, 2025

To All-Conference Attendees:

We would like to begin by acknowledging the Traditional Custodians of the land on which we gather. We would also like to pay our respects to their elders past and present.

On behalf of the IEOM Society International, we would like to welcome you to the 4th Australian International Conference on Industrial Engineering and Operations Management to be held in Melbourne, Australia during November 25-27, 2025. The Venue is Batman's Hill Hotel on Collins Street, Melbourne, Australia. This unique international conference provides a forum for academics, researchers, and practitioners from many industries to exchange ideas and share recent developments in the fields of industrial engineering and operations management. This diverse international event provides an opportunity to collaborate and advance the theory and practice of major trends in industrial engineering and operations management. The program includes many cutting-edge topics in industrial engineering and operations management. We have received more than 200 paper/abstract submissions from about 35 countries.

This conference will address issues concerning the continuous improvement of quality and services in supply chain, logistics, and applications of AI based techniques. The IEOM Society is delighted to have the following keynote speakers:

1. Dr Daniel Prior FAMI CPM SFHEA MILT, Associate Professor, Director, Supply Chain Sustainment Research Group, University of NSW Canberra, Australia
2. Professor Dr Fitra Lestari, Vice Dean, Faculty of Science and Technology, Professor in Industrial Engineering Department, Universitas Islam Negeri Sultan Syarif Kasim Riau, Riau, Indonesia
3. Mr Chris Gaspardis, Manufacturing Engineering Manager, PACCAR, Melbourne, Australia
4. Dr Gary Yu-Hsin Chen, Professor, Department of Logistics Management, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan
5. Prof Dr Sally Male, Director, Teaching and Learning Lab (TLL), Faculty of Engineering and Information Technology, The University of Melbourne, Australia
6. Mr Daniel Kulawiec, Design & Construction Executive, Telstra InfraCo, Melbourne, Australia
7. Dr Tetsuo Yamada, Dr Eng., Professor, Program Chair of Management Science and Social Informatics, Director of Laboratory for Environment-Conscious Life Cycle Design with Products Information, Department of Informatics, Graduate School of Informatics and Engineering, The University of Electro-Communications, Japan
8. Dr. Nurbek Kurbonov, PhD, Associate Professor, Tashkent State Technical University (TSTU), Tashkent, Uzbekistan
9. Dr David Paynter, MBA Meng (Adv. Manuf. Tech) BE (Indust.) (Hons) GC (Learn & Teach), UniMelb, Monash, Chisholm & Swinburne, Australia

We are a student-focused organization with 250 student chapters in 55 countries. There are 151 countries from six continents participating in various IEOM Society activities. The IEOM Global Community has more than 25,000 members. Students will participate in competitions on Industrial Engineering and Operations Management sponsored by industry. At this conference, the IEOM Society will hold its Global Engineering Education session which will feature distinguished speakers who will discuss workforce readiness and engineering education challenges and opportunities. The IEOM Industry Solutions will showcase and feature major topics including IoT, AI, Data Analytics, iCloud, Cyber security, Automation, Digital Manufacturing, MSV, and industry best practices. Global Supply Chain and Logistics will address the global logistic challenges due to the pandemic and Global Business Management will focus on business operations improvement. Panel sessions have been planned: Diversity and Inclusion Panel, Editorial Panel, and Industrial Engineering and Operations Management Tools panel.

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

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



Conference Chair
Dr Felix Kin Peng Hui
University of Melbourne, Australia



Conference Co-chair
Dr Matthew Pepper
University of Wollongong, Australia



Conference Co-chair
Dr Roberto Chavez Clavijo
Swinburne University of Technology, Australia



Conference Co-chair
Dr Sanjoy Paul
University of Technology Sydney (UTS), Australia



Conference Co-chair
Dr. Azizur Rahman,
RMIT University, Australia



Conference Co-chair
Dr Peter Shi, FCILT
Macquarie University, Australia



Conference Co-chair
Dr Imran Ali
Central Queensland University, Australia



Conference Co-chair
Dr Md Mizanur Rahman
Western Sydney University and IEOM Australia



President, IEOM Society International
Professor Charles Mbohwa, Ph.D.
Distinguished Professor
University of South Africa (UNISA)
Pretoria, South Africa
Past Pro-VC, University of Zimbabwe



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Perth, WA, Australia



Conference Co-chair
Dr. Ahad Ali
Lawrence Tech University,
Michigan, USA
Executive Director, IEOM Society



Program Chair
Prof. Donald Reimer
IEOM Society International
Southfield, Michigan, USA

Welcome Address and Keynotes

Day 1 – Tuesday, November 25, 2025, 11:00 am – 1:00 pm

Welcoming Remarks: 11:00- 11:10am, Tuesday, 25 November 2025



Dr Felix Kin Peng Hui

Conference Chair &

Associate Professor of Engineering Management
and an Academic Specialist

Department of Infrastructure Engineering
University of Melbourne, Melbourne, Australia

Dr Felix Kin Peng Hui is an Associate Professor of Engineering Management and an Academic Specialist in the Department of Infrastructure Engineering, Faculty of Engineering and IT, University of Melbourne. He is also the Program Director/Academic Coordinator for the Master of Engineering Management program and the Engineering Business specialisation for postgraduate masters degrees.

Dr Hui is an experienced engineer with over 25 years of industry experience in managing continuous improvement projects, factories, and business units. He has held senior management positions in a range of manufacturing industries which includes machine tools, precision engineering and semiconductors. He has also consulted to organisations seeking continuous improvements to optimise their operational efficiency. His research interests are in the areas of operational process optimisation, operational efficiency, lean systems, organisational development and team dynamics in engineering projects. He is currently a lead investigator on several government funded projects which includes mega-infrastructure projects research, prefabricated modular construction research, next generation buildings with Building 4.0 CRC and on CRC-P projects involving end-of-life treatment processes. Dr Hui is a registered Professional Engineer (Singapore), an ASEAN Chartered Professional Engineer and a Fellow of Institute of Managers and Leaders.

Keynote I: 11:10- 11:50am, Tuesday, 25 November 2025



Dr Daniel Prior FAMI CPM SFHEA MILT

Associate Professor

Director, Supply Chain Sustainment Research Group
University of NSW Canberra, Australia

Presentation Title: Opening the closed systems paradigm in operations research: Guidelines for use case referencing

Daniel Prior is an Associate Processor in Management in the School of Business at UNSW, Canberra. Daniel is also a member of UNSW Cyber and has held visiting appointments at Cranfield University, UK, and the University of Texas at Austin, USA. Between 2017 and 2019, Daniel was Professor of Strategic Sales Management, Co-Director of the Centre for Strategic Marketing and Sales, Director of the Executive MBA and Director of the Key Account Management and Strategic Sales Forum at Cranfield University. Prior to this, he was on the faculty in the School of Business at UNSW Canberra. Daniel has worked in industry for companies such as KPMG, Acer Computer Australia and Communications Design and Management. Daniel is active on a range of corporate and not-for-profit boards, and, as a marketing strategy consultant and mentor for industry, particularly in new product development, complex systems implementations and in strategy.

Daniel completed his PhD in 2008. He holds a Master of Commerce (Marketing), a Graduate Certificate in University Teaching and Learning, and a Bachelor of Commerce in Marketing. Daniel is a Fellow of the Australian Marketing Institute and a Senior Fellow of the Higher Education Association (UK). Daniel's core interest is in buyer-supplier engagement, particularly where there are complex relationships that are high risk and that develop over extended periods. Daniel's research, teaching and consulting interests have two foci. First, Daniel is interested in understanding how supplier firms create value, how buyer firms realise value, and how relationships determine the nature of value at multiple levels of interaction. Current projects centre on developing 'value narratives' for complex solutions, integrating circular economy principles into complex value propositions, and supply chain sustainability. Second, Daniel is interested the application of computer science techniques to address problems that arise from buyer-supplier engagement. This includes for situational awareness and in understanding human factors, particularly as these pose risks to the viability of buyer-supplier engagements. Core topics include customer relationship management, supplier selection, contract monitoring and information integrity.

Keynote II: 11:50- 12:30pm, Tuesday, 25 November 2025



Professor Dr Fitra Lestari

Vice Dean, Faculty of Science and Technology
Professor in Industrial Engineering Department
Universitas Islam Negeri Sultan Syarif Kasim Riau
Riau, Indonesia

Presentation Title: Operation Management for Implementing the Effective Community Service Project

Fitra Lestari is currently a Professor and Former Head of Industrial Engineering Department in Faculty Science and Technology, UIN Sultan Syarif Kasim Riau, Indonesia. Then, He also Head of Emerging Technology and Continuous Improvement in Center Of Islamic Data Science And Continuous Improvement (CIDSCI) Research Group, UIN Sultan Syarif Kasim Riau, Indonesia. He gained his BEng and MEng in Industrial Engineering from Andalas University (Indonesia) and Universiti Teknologi Malaysia (UTM- Malaysia). Then, He has continued the PhD project at UTM Malaysia in the field of Supply chain relationships in a downstream sector of the Palm Oil industry. He has published extensively including several refereed journal papers, conference papers, book chapters, and edited reference books associated with Supply Chain Management, Marketing, Logistic, and Performance Measurement. He serves as a reviewer, associate editor and editorial member for several national and international journals. He joins as a member of the International Association of Engineers (IAENG), and Director of student competition in Industrial Engineering and Operations Management (IEOM Society- Indonesia), and Head of Indonesian Industrial Engineering Higher Education Organizing Agency (BKSTI Indonesia-Sumatera II). He also registered as Halal Auditor in Indonesia. His industrial and government collaborators include Strategy of Small Medium Enterprises, Halal Supply Chain dan Performance Assessment and Institutional Strengthening of Oil Palm Supply Chains.

Keynote III: 12:30- 1:10pm, Tuesday, 25 November 2025



Chris Gaspardis

Manufacturing Engineering Manager
PACCAR, Melbourne, Australia

Chris Gaspardis is an accomplished Manufacturing Engineering Manager at PACCAR, with over 15 years of experience in industrial and manufacturing engineering. Chris has held progressive leadership roles at PACCAR, including Industrial Engineering Manager and Senior Industrial Engineer, where he has played a key role in transitioning major projects from prototype to full-scale production. He holds a Bachelor of Engineering (Systems) from

The Australian National University, where he actively contributed to motorsport and sustainability projects such as Formula SAE and the Solar Car Challenge. Chris brings a strong foundation in mechanical systems, composites, and SolidWorks, complemented by hands-on experience from previous roles at Bosch and in entrepreneurial initiatives. He is known for his motivation, communication skills, and ability to deliver complex projects with precision and enthusiasm.

Day 2 – Wednesday, November 26, 2025, 11:00 am – 1:00 pm

Keynote IV: 11:00- 11:40am, Wednesday, 26 November 2025



Dr Gary Yu-Hsin Chen

Professor
Department of Logistics Management
National Kaohsiung University of Science and Technology
Kaohsiung, Taiwan

Presentation Title: Telecommunications and Operations Research: How My Industrial Experience Inspires My Research

Gary Yu-Hsin Chen is a professor of Logistics Management at the National Kaohsiung University of Science and Technology (NKUST) in Kaohsiung, Taiwan. Dr. Chen earned a Bachelor of Science in Biology from Purdue University, a Master of Computer Science in Computer Science from the University of Texas at Arlington, a Master of Business Administration from the University of North Texas, and a PhD in Industrial Engineering from the University of Texas at Arlington. Before joining academia, he worked as a software developer and test engineer for major telecommunications companies such as Motorola, Nokia, and Siemens. He has been certified by the American Society for Quality – Software Quality Engineer (ASQ-CSQE).

He has authored multiple scholarly articles on optimization, software testing, and meta-heuristics in renowned journals, including the International Journal of Production Economics, Computers & Operations Research, and the International Journal of Production Research. He received the “Dr. Pao-Long Chang Memorial Publication Award” from the Chinese Institute of Industrial Engineers in Taiwan in 2022. He is a permanent member of the Chinese Institute of Industrial Engineers (CIIE), the Operations Research Society of Taiwan (ORSTW), and the Chinese Society for Quality (CSQ).

Keynote V: 11:40- 12:20pm, Wednesday, 26 November 2025



Prof Dr Sally Male

Director, Teaching and Learning Lab (TLL)
Faculty of Engineering and Information Technology
The University of Melbourne, Australia

Professor Sally Male was awarded the 2023 World Federation of Engineering Organizations Medal for Excellence in Engineering Education. As Director of the Teaching and Learning Laboratory in the Faculty of Engineering and IT at the University of Melbourne, Professor Male leads a program of research in engineering and computing education, and higher education, and a program of development and support for engineering educators. Her mission in her research and teaching, is to ensure that students have the best possible opportunities to develop capabilities and attributes to lead successful lives contributing to society. Specifically, Professor Male's research interests are curriculum development, employability, work integrated learning, and gender inclusion.

Before joining The University of Melbourne, Professor Male held the Chair in Engineering Education at The University of Western Australia. Professor Male has taught electrical engineering at Curtin University and The University of Western Australia. Professor Male is a Fellow of Engineers Australia, Editor-in-Chief of the Australasian Journal of Engineering Education, and a former Governance Board Member of Engineering Institute of Technology.

Keynote VI: 12:20- 1:00pm, Wednesday, 26 November 2025



Daniel Kulawiec

Design & Construction Executive
Telstra InfraCo
Melbourne, Australia

Presentation Topic: The AI Journey at Telstra

Daniel Kulawiec, Executive Design and Construct within InfraCo (Telstra), is responsible for leading the design, construction and protection of Telstra's passive telecommunications infrastructure. Daniel's business spans almost all of InfraCo's assets – from the national Fibre network, to exchange buildings and network infrastructure (data centres, ducts, pits and pipes), and includes more than \$0.5bn of delivery projects each year.

Daniel, who is based in Melbourne, has more than 28 years' experience in the Telecommunications industry, and has held a number of senior leadership positions at Telstra including Planning, Director of Process Solutions and various Operations Executive roles. Prior to the Design and Construct role, Daniel has been responsible for the delivery of the Definitive Agreements executed between Telstra, nbn and the Commonwealth – supporting the rollout of nbn's network and the migration of copper services onto the nbn.

Prior to joining Telstra, Daniel has held various roles in the Mining and Manufacturing industries. Daniel holds a Bachelor of Engineering (Manufacturing Management) with Honours Class 1 from the University of New South Wales and has also served as President of the Institute of Industrial Engineers (IIE) Australia for a number of years.

Day 3 – Thursday, November 27, 2025, 11:00 am – 1:00 pm

Keynote VII: 11:00- 11:40am, Thursday, 27 November 2025

**Dr. Eng. Tetsuo YAMADA**

Professor

Program Chair of Management Science and Social Informatics

Director of Laboratory for Environment-Conscious Life Cycle Design with Products Information

Department of Informatics

Graduate School of Informatics and Engineering

The University of Electro-Communications, Japan

Tetsuo Yamada is a Professor, Program Chair of Management Science and Social Informatics and Director of Laboratory for Environment-Conscious Life Cycle Design with Products Information, Department of Informatics, Graduate School of Informatics and Engineering, the University of Electro-Communications (UEC), Tokyo, Japan. He received his B.S., M.S. and Dr. Eng. in research on Designs for Assembly Line Systems from UEC. He was an Assistant and Associate Professor from 2007 to 2011 in the Department of Environmental and Information Studies, Tokyo City University (Old name: Musashi Institute of Technology). Additionally, he was a Visiting Senior Research Scientist at the Department of Mechanical and Industrial Engineering, College of Engineering, Northeastern University, USA, from 2013 to 2014.

His research interests are Carbon Neutral and Closed-Loop Supply Chains, Renewable Energy Management, Machine Learning Application, Disassembly/Assembly Systems, Remanufacturing as well as Healthcare Systems Engineering, Work-Life Balance, ERP Systems and e-Learning. He has authored or coauthored over 100 peer-reviewed journals published, and 200 international and 230 domestic conferences. He has supervised 4 PhD's dissertations in UEC Tokyo and was a pre-examiner of a PhD thesis at Aalto University in Finland in 2018. He was listed as the 7th Rank of Leading fifteen authors in "A review on remanufacturing, reuse, and recycling in supply chain —Exploring the evolution of information technology over two decades" written by Nikunja Mohan Modak, Sudipta Sinha and Debabrata Kumar Ghosh on International Journal of Information Management Data Insights, 3, (2023) 100160, Elsevier, and was the recipients of the Outstanding Paper Award at the 23rd International Conference on Production Research (ICPR-23), Manila, Philippines in 2015 and of the appreciation in his service at NEDSI (Northeast Decision Sciences Institute) 2017 conference, Springfield, MA, USA in 2017. He serves as a council member of the Japan Industrial Management Association and the Kanto Branch Chair of the Society of Plant Engineers Japan, and a member of Institute of Industrial and Systems Engineers, Operations Research Society of Japan, Scheduling Society of Japan and the Institute of Life Cycle Assessment, Japan. His papers have been appeared in International Journal of Production Economics, Sustainability, Energies, the Journal of Manufacturing Systems, Computers and Industrial Engineering, Journal of Intelligent Manufacturing, Enterprise Information Systems, Assembly Automation, International Journal of Sustainable Manufacturing, Journal of Remanufacturing, Industrial Engineering and Management Systems, International Journal of Automation Technology, Logistics, Recycling, International Journal of Computational Intelligence Studies, Journal of Japan Industrial Management Association (JIMA), etc.

Keynote VII: 11:40- 12:20pm, Thursday, 27 November 2025



Dr. Nurbek Kurbonov, PhD

Associate Professor

Tashkent State Technical University (TSTU)

Tashkent, Uzbekistan

Dr. Nurbek Kurbonov is a distinguished scholar, project leader, and internationally recognized expert in the field of energy engineering, known for his contributions to energy efficiency, digital energy systems, and IoT-based monitoring technologies. He earned his bachelor's degree and PhD from Tashkent State Technical University (TSTU) and completed his master's degree at Saint Petersburg Electrotechnical University "LETI". His professional trajectory includes advanced research training and internships at globally renowned institutions, including Kazan National Research Technical University (Russia), where he specialized in "Energy and Digital Transformation," the EKRA plant in Cheboksary on protection and automation systems, Tomsk Polytechnic University on "Image Data Processing," Shandong University and North China University of Technology (China), and Istanbul Technical University (Turkey). Beginning his career as a technician at HydroProject JSC, Dr. Kurbonov advanced through academic and industrial roles, including assistant lecturer at TSTU and NRU MEI (Tashkent) and project manager positions at Energorepair Project and NEOSMET LLC. He currently serves as Associate Professor and lead researcher at TSTU, where he continues to drive innovation in the energy sector. Dr. Kurbonov's research is distinguished by its interdisciplinary scope and practical relevance, particularly in the areas of energy audits, reduction of technological losses in power distribution networks, and the integration of advanced digital control systems and energy efficiency standards. He has successfully led fundamental, applied, and innovative projects such as FOT-2021-236, PZ-202008308, and IOT-2021-23, while also contributing to the development of Uzbekistan's national energy regulatory "Roadmap." His work extends to large-scale industrial energy audit initiatives and international collaborations, including his leadership of an advanced project on lightning risk prediction and intelligent fault diagnostics in wind power stations.

Internationally recognized for his leadership and expertise, Dr. Kurbonov has been a keynote and invited speaker at numerous prestigious conferences and forums, including The First China–Uzbekistan University Science & Technology Innovation Conference (2024), the IEOM Society International Distinguished Professor Award Ceremony (Bali, 2025), ICoMTED 2024 (Best Paper in Engineering), Tomsk Polytechnic University International Lecture Series, Baku Energy Week (2022), PowerExpo Astana (2022), and the Tinchurin Conference (Kazan, 2022). These accomplishments underscore his growing influence as a leading academic and practitioner in energy systems engineering, combining cutting-edge research with practical expertise to address global challenges in power system modernization and sustainable energy development.

Keynote IX: 12:20- 1:00pm, Thursday, 27 November 2025



Dr David Paynter

MBA Meng (Adv. Manuf. Tech) BE (Indust.) (Hons) GC (Learn & Teach)
UniMelb, Monash, Chisholm & Swinburne
Australia

Topic: People, Process & Technology for Digital Supply Chain Planning – what is holding back Digital Transformation in Supply Chain Planning

Dr David Paynter is a recognised expert in Digital Orchestration and Supply Chain Planning, published in both academic and corporate literature. He has led operational supply chain transformation as a business leader and as a management consultant across Europe and Australia. He lectures at leading Australian universities on the integrative value of digital technologies used in entrepreneurial product-making. David combines analytical understanding, strategy and digital transformation, with an integrative cross functional approach.

Submissions Received from Countries and Territories

1. Australia	10. Indonesia	19. Peru	28. UAE
2. Bangladesh	11. Japan	20. Philippines	29. UK
3. Brazil	12. Malaysia	21. Romania	30. USA
4. Canada	13. Maldives	22. Saudi Arabia	31. Uzbekistan
5. China	14. Morocco	23. Singapore	32. Zambia
6. Egypt	15. Nigeria	24. South Africa	33. Zimbabwe
7. Ethiopia	16. Oman	25. South Korea	
8. Germany	17. Pakistan	26. Taiwan	
9. India	18. PNG	27. Thailand	

Plenary

Global Business Management Education

9:00 – 11:00 am, November 27, 2025

Chair



Dr Arshia Kaul
Associate Lecturer
Management and Marketing
University of Melbourne, Melbourne, Australia

Arshia Kaul is a PhD., MPhil., M.Sc. (Gold Medalist) in Operational Research, Master Trainer Program – Teaching, Training & Developing Professionals (EIU). She is a Post Graduate Diploma in Instructional Design and Diploma in Virtual Online Teaching course. She is also a certified Green Belt in Lean Six Sigma and recently completed a Professional Certificate in Design Thinking and Innovation

Management. She has completed a Certificate IV in Training and Assessment from Boxhill, Institute, Melbourne, Australia. She has published 20+ research papers published in journals of national and international repute and presented at 10+ conferences. One of her most recent articles was published in Business Strategy and the Environment (Impact factor- 10.302). Her current research interests are quality management, supply chain management and Education 4.0.

Co-chair



Dr Aman Ullah
Lecturer in Management and Marketing
University of Melbourne, Melbourne, Australia

Aman holds PhD in Management from Deakin Business School, Deakin University, demonstrating his academic foundation in the field. He supplemented his academic qualifications with a Graduate Diploma in Pedagogy (professional teaching qualification) from the Melbourne Graduate School of Education, the University of Melbourne, reflecting his dedication to pedagogy and teaching excellence.

Also, he completed the Tutoring in Business and Economics (TBE) program from WCLA, Faculty of Business and Economics, the University of Melbourne. He is part of the WCLA team as a peer mentor, contributing positively to teaching excellence at the Faculty of Business and Economics. Aman has proven track record in subject coordination, curriculum design, LMS maintenance, student support, and delivering both face-to-face and online education that aligns with the desired skills for his position.

Speaker I



Dr Jesse Olsen
Senior Lecturer, Department of Management and Marketing
Faculty of Business and Economics
University of Melbourne, Australia

Topic: Game-based learning

Jesse Olsen is a Senior Lecturer of Management in the Department of Management and Marketing, Academic Program Director of the Master of Business, and a

Research Associate at the Centre for Asian Business and Economics. He earned his PhD in Organizational Behavior from the Scheller College of Business at the Georgia Institute of Technology (Atlanta, USA). His research focuses on hobbies/leisure and work, improvisation in organisations, diversity and inclusion, international/cross-cultural management, and leadership. For both his teaching and research, Jesse has recently begun looking at the applicability of hobbies and personal activities to work and the workplace, with particular interest in Dungeons & Dragons (D&D) and other tabletop role-playing games.

Jesse's work has been presented in such top-tier management publications as the Journal of Applied Psychology, the Harvard Business Review, and Organizational Behavior and Human Decision Processes, and has been featured in such media outlets as the BBC, SBS World News, The Guardian, Forbes, and The Conversation. He has also presented his research at numerous academic and professional conferences and worked with organisations such as Perpetual, the Australian Workplace Gender Equality Agency, McDonald's, the Queensland Government, and the Asian Development Bank. Jesse's professional experience includes his position as international exchange coordinator at Kwansei Gakuin University in Nishinomiya, Japan. He was also employed as a business project manager in the Merger Integration Office and Corporate Strategies Group of SunTrust Bank (now Truist) in Atlanta. Before coming to The University of Melbourne, Jesse conducted research and taught courses in the US, South Korea, and Japan. Always in pursuit of interesting and new ways to understand adaptation and organisational change, Jesse has received improvisation and comedy writing training from the Laugh Masters Academy (Melbourne) and the Second City (Chicago, USA). He enjoys incorporating what he has learned through these pursuits into his teaching, research, and everyday life.

Speaker II

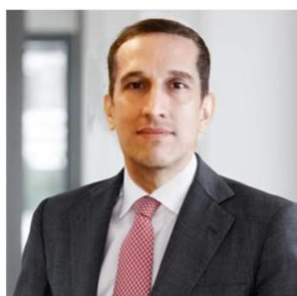


Dr Michael "Maxx" Schmitz
Curriculum Designer, Faculty of Arts
University of Melbourne, Australia

Topic: Game-based learning

Dr Michael 'Maxx' Schmitz is an award-winning educator, curriculum designer, and game-based learning specialist with over two decades of experience in higher education. Currently a Lecturer at the University of Melbourne, he leads innovative teaching initiatives that integrate games, simulations, and experiential learning into Arts and interdisciplinary curricula. Maxx's research explores the pedagogical impact of serious games and wargaming, with a focus on improving student engagement, critical thinking, and transferable skills in both academic and industry-facing contexts. He has designed games and immersive learning experiences in both tertiary and vocational sectors. His current projects include developing digital escape rooms for teamwork development and assessment and creating dynamic learning environments that merge academic theory with practical application.

Speaker III



Ts. Dr. Mehran Doulat
Director of Asia-Pacific Centre for Operational Excellence (APCOE)
Universiti Teknikal Malaysia, Melaka
Malaysia

Plenary

Sustainability in Engineering and Business

9:30 – 11:00 am, November 26, 2025

Chair and Speaker I



Dr Ferry Jie
School of Business and Law
Edith Cowan University, Perth, Australia

Ferry graduated with his doctorate from The University of Sydney in 2008. His PhD thesis is Supply Chain Analysis in the Australian Beef Industry. Currently Dr Jie is an Associate Professor at School of Business and Law, Edith Cowan University. Previously, he was a Senior Lecturer and taking a program coordinator role in Logistics and Supply Chain Management (LSCM) at RMIT University. He was managing and coordinating the undergraduate program in LSCM at RMIT from 2015 to 2016.

Ferry Jie has maintained a high quality of research throughout his academic career including international scholarly leadership in the areas of supply chain management and logistics, including regularly being invited to be a keynote speaker and to give public lectures at symposiums and international conferences in Indonesia, Pakistan, Bhutan, Malaysia, Vietnam, China, UK, Sri Lanka, and Australia. From 2017 to now, published more than 88 refereed journal articles—including 51 articles in SCIMAGO Q1-ranked journals and 12 articles in Q2-ranked journals, and 9 refereed conference papers. Furthermore, Dr Jie has received research grants/awards adding over \$1.7 million between 2017 and 2024.

Speaker II



Dr Md Abdus Samad Kamal
Graduate School of Science and Technology
Gunma University, Japan

Dr. Md Abdus Samad Kamal is an Associate Professor at the Graduate School of Science and Technology, Gunma University, Japan. He received Ph.D. degree from Kyushu University, Japan, in 2006. Earlier, he was a Researcher at The University of Tokyo, Japan, a Visiting Researcher with Toyota Central R & D Labs., Inc., Japan, and a Senior Lecturer at the School of Engineering, Monash University, Malaysia campus. His research interests include intelligent transportation systems, cooperative control of connected and automated vehicles, and the applications of model predictive control. Over a decade, he has been jointly working in various research projects in collaboration with Japanese car manufactures and/or under the Grants-in-Aid for Scientific Research of Japan Society for the Promotion of Science (JSPS). Dr. Kamal is a member of the Society of Instrument and Control Engineers (SICE), a Senior Member of the Institute of Electrical and Electronic Engineers (IEEE), and a Chartered Engineer of the Institution of Engineering and Technology (IET).

Speaker III

**Abbos Sattorov**

Chief Specialist

The Center for International Cooperation

Oriental University Tashkent, Uzbekistan

Abbos Sattorov is Chief Specialist at the Center for International Cooperation at Oriental University Tashkent, Uzbekistan, where he also lectures in English linguistics. He earned his first Master's degree in Information and Communication Technologies from Tashkent University of Information Technologies and is currently completing his second Master's degree in English Linguistics at Oriental University. This multidisciplinary foundation enables him to integrate technology, language, and education into his academic and professional work.

His interests focus on the internationalization of higher education, education policy and management, and operations management in emerging economies. At Oriental University, he has played an active role in developing global partnerships, coordinating Erasmus+ initiatives, and promoting student and staff mobility programs that connect Uzbekistan with international institutions. Looking forward, he plans to pursue a PhD in education policy and management at a top 20 globally ranked university, with the University of Melbourne among his preferred destinations. By participating in IEOM Melbourne 2025, he seeks to share insights from Central Asia, contribute to global discussions on operations and education management, and establish long-term cooperation between Oriental University and the University of Melbourne.

Panel

Global Engineering Education

9:30 – 11:00 am, November 25, 2025

Moderator:



Dr Matthew Pepper
Professor, School of Business
Faculty of Business and Law
University of Wollongong, Australia

Matt's PhD research centred on the design and application of continuous improvement frameworks in process industry supply chains. Recent research and consultancy activities focus on lean thinking, six sigma-based process improvement and supply chain design and optimisation. Matt has undertaken research and consultancy across a range of industry sectors, including the manufacturing and process industries as well as local government. Most recently his work has focused on the implementation of continuous improvement in service environments. Matt is a member of the Editorial Advisory Boards for the Journal of Manufacturing Technology Management, the International Journal of Lean Six Sigma, International Journal of Information and Operations Management Education. He is also an Associate Editor for the Global Journal of Flexible Systems Management and the IIMK Society and Management Review Journal.

Speaker I



Prof Lu Aye, PhD
Department of Infrastructure Engineering
University of Melbourne
Australia

Lu Aye is a Professor in the Department of Infrastructure Engineering at the University of Melbourne, Australia. Prof. Aye has more than 40 years of engineering experience in university teaching, research, development, demonstration and commercialisation of renewable energy and energy efficiency technologies.

He has been internationally recognised as an expert in low-carbon technologies for built environment applications. His research areas include heating, ventilation, air-conditioning and refrigeration systems, waste to resources, complex systems modelling. Prof. Aye applied phenomenological modelling and simulation approaches for optimising energy systems. He also utilised computational and participatory approaches for modelling socio-ecological systems under deep uncertainty. These system models have been applied for identifying the effects of policy interventions and robust decision making. He has been recognised as a leading expert in modelling, simulation, optimisation and forecasting of complex systems behaviours.

Speaker II



Dr Obuks Ejohwomu, PhD, MSc, BEng, FNSE, FHEA
Academic (Teaching & Research) Reader
Sustainable Built Environment & Project Management
University of Manchester, UK

Obuks Ejohwomu is a Reader (Associate Professor) and founder of Nudge SIG (Special Interest Group) at The University of Manchester. He is the current Head of Admissions in the School of Engineering, Faculty of Science and Engineering. He is

listed as one of Manchester's Heritage Heroes for the impact of his research work. Obuks is also a fellow of the Higher Education Academy and the unit lead for commercial and procurement management. Obuks particularly leads a research group focusing on a future sustainable built environment with expertise in decarbonised projects, indoor/outdoor air pollution monitoring using low-cost sensors, occupational health & safety and digitalisation in the built environment. He is a Better World Showcase 2022 award winner for outstanding contributions to environmental sustainability. An award winner for notable contribution to the fight against the COVID-19 pandemic. He has managed grants valued at over GBP £1.3m, with funders including EPSRC, Association of Project Management (APM), GCRF, Lloyds Register Foundation, NHS Foundation Trust, and UKRI. He is the PI on a high-impact multidisciplinary research project probing the "societal value of quality low-cost urban air monitoring in low resource environments (SQUARE). Before joining MACE he worked as a contracts manager on several building construction projects totalling over N100m (Lukayson Ventures Ltd), a systems engineer in the telemetry and laboratory business area of Scottish Water, Glasgow, Research Assistant on a Black Country learning and skills action research project (University of Wolverhampton), Research Fellow (University of Reading) on the EPSRC Health and Care Infrastructure Research and Innovation Centre (HaCIRIC), Programme Manager (W D Consults Ltd), Lecturer in Civil Engineering (Covenant University), Senior Lecturer in Project Management and Head, Department of Management Technology (Bells University of Technology).

Speaker III



Dr George Panas
Enterprise Fellow, Management and Marketing
University of Melbourne, Melbourne, Australia

Dr George Panas has 25 years of senior management experience in industry and consulting. After that, he transitioned to academia with the completion of my PhD in 2022. His areas of interest or specialisation include: e-commerce supply chains (grocery, general merchandise & apparel retail), Supply chain and the UN SDGs (including modern slavery, environmental / food and packaging waste, procurement diversity), Supply chain strategy & network design/optimisation, Retail global sourcing & logistics, Supply chain operations in Asia (including China, HK, Singapore, India, Malaysia, Thailand, Indonesia, Vietnam, etc), International supply chain management (sea & air freight, freight forwarding, origin value added services, etc), Corporate strategy, financial planning and analysis, Financial/Mathematical optimisation modelling & techniques, Supply chain commercial finance

Speaker IV



Prof. Dr. Eriki Ananda Kumar
Dean Research and Development
Professor in Mechanical Engineering
MJR College of Engineering and Technology, AP, India

Professor Eriki Ananda Kumar received his Ph.D. in Mechanical Engineering from VELs University, India. He earned Master of Engineering with specialization of CAD from Sathyabama University, India. He holds a Bachelor of Technology in Mechanical Engineering from JNTUH, India. Additionally, a mechanical engineering diploma and a competent welding certification are required. Dr. Eriki is a Professor and Dean R&D of Mechanical Engineering in MJRCET, India; He was an Associate Professor of Automotive Engineering in FTVETI University, Ethiopia and Assistant Professor of Mechanical Engineering in VEMU Institute of Technology, India. Also worked as a Senior Lecturer in Nilai Univeristy, Malaysia, Lecturer in Caledonian College of Engineering in OMAN and SEGi Univeristy in Malaysia and Instructional writer in The Automotive College in Malaysia. He visited 14 countries to organize/participate conferences as a Keynote speaker with over 20 years of experience in academics and research. He has 3 PATENTS and published more than 40 journals with SCOPUS & Indexd; SCI and conference papers since 2010. Publish 3-BOOKS in the area of

recent developments in engineering research at London & India. Also His research area includes titanium alloys, Nanotechnology, Simulation Modeling and Analysis. He is actively supervising undergraduates, master and PhD students in the area of mechanical and automotive engineering. He is a member of International Association of Engineers and Institution of Engineers Malaysia, also an associate editor of IIER, IASTEM, IJMSE, OGCE, IJMEA, and IISEM, reviewer for IJSTM, IJEX and IJMCMR.

Panel

Women in Industry and Academia sponsored by Ford Motor Company

3:30 – 5:00 pm, Wednesday, November 26, 2025

Moderator:



Dr Nilupa Herath

Lecturer, Department of Infrastructure Engineering
University of Melbourne, Australia

Dr. Nilupa Herath is a Lecturer (Education Specialist) at the Department of Infrastructure Engineering at the University of Melbourne. She is an experienced structural Engineer who has worked in Australia and overseas in a variety of construction projects. Nilupa's research interests include Engineering Education, Sustainable Buildings, bridge engineering, tall buildings, earthquake engineering and engineering management.

Speaker I



Rahima Khatun

Electrical Engineer at K1 Save Energy &
Founder and CEO, Leading Women Australia and D RYMA Group
Melbourne, Australia

I, Rahima Khatun, an experienced Electrical Engineer background professional at the K1 Save Energy. Concurrently, the founder and CEO of the Leading Women Australia and D RYMA Group. The Leading Women Australia is a not-for-profit organisation dedicated to advancing women's leadership, equity, and representation. Through leadership programs, advocacy, and partnerships, we are creating pathways for women to thrive in engineering, construction, and other traditionally male-dominated industries. Furthermore, we provide coordination service in the government health industry as a registered provider. where at D RYMA GROUP, we lead a mission to deliver innovative and sustainable engineering solutions that transform industries and communities. At D RYMA, we focus on harnessing technology, research, and engineering excellence to design smarter, more energy-efficient systems that respond to the global demand for sustainability and resilience. "I lead multi-disciplinary projects across energy, defence, and sustainable infrastructure, turning blueprints into operational impact—from validating military systems at Tectonica Australia to developing a hydroelectric micro-grid with Engineers Without Borders, and streamlining national engineering inventory systems at Hanes Brands Inc. I am a dynamic engineering leader and internationally recognised speaker, appeal by IEEE Bangladesh to keynote on global educational migration and engineering research and projects, and by the University of Melbourne & IEEE Women in Engineering to lead seminars on engineering career strategies, where I translate a decade of industry experience into actionable frameworks.

I am honoured to be recognised as a Women in Construction Ambassador and Mental Health in Construction Ambassador, actively advocating for diversity, inclusion, and wellbeing in technical industries. My community involvement extends to serving as a Board Member at Wellsprings for Women and as a System Change Youth Employment Advisor at the Brotherhood of St Laurence, where I contribute to advancing equity and opportunity. I hold a Master of Engineering Management from the University of Melbourne and a Bachelor of Electrical and Electronics Engineering, complemented by certifications in Business Management, WHS, and CNC Machining. My mission is to shape a future where engineering solutions are sustainable, leadership is inclusive, and women are fully represented at every level of decision-making.

Speaker II



Dr Achini Peiris

Senior Consultant, Digital Enablement, Aurecon
Melbourne, Australia

Achini Peiris is a Civil Engineer, currently working as a Senior Consultant, Digital Enablement at Aurecon. She is also an Honorary Research Fellow at the University of Melbourne. Her career started off in construction, as a Quality Assurance and Planning Engineer at the International Construction Consortium in Sri Lanka. She then moved to Australia, to further her studies in Engineering Management, later obtaining a PhD in Engineering Management from the University of Melbourne. During this time, she joined Faramoon as a Co-founder, a Melbourne-based tech startup that spun out of the Translating Research at Melbourne (Tram) program at the University of Melbourne. Their proprietary software can be used to automate 3D-model creation process from laser scans, or in other words point clouds. This became the segway for her to pursue a career in BIM and Digital Engineering. Currently her work in Aurecon focusses on enabling client organisations to embrace digital practices and workflows aligning with ISO 19650. She helps her clients to implement digital ways of working aligning with Building Information Modelling and Digital Engineering throughout the asset life cycle. She is very passionate about identifying challenges faced by the Architecture, Engineering and Construction, Operations and Maintenance sectors and to work with the stakeholders to implement trusted solutions, keeping in mind that we all are people, and we hate to change!

Speaker III



Dr Alka Nand

Lecturer

Department of Management, Monash Business School
Monash University, Victoria, Australia

Alka's expertise lies in the operations and supply chain management fields. Her studies have been based in the services and manufacturing sector and public sector. She has published her work in a number of leading journals including International Journal of Production Economics, International Journal of Operations and Production Management and International Journal of Production Research. Alka obtained her PhD from the University of Melbourne and her thesis examined how firms in Australian service and manufacturing industries treated and developed their operational capabilities using primarily secondary data. She also has strong interests in areas such as food waste, sustainability and circular economies with various publications such as IEEE: Transactions on Engineering Management, Journal of Business Research and Journal of Cleaner Production. Alka is an experienced lecturer, having taught many courses in undergraduate and postgraduate program locally and abroad. She is the co-chair for Australia and New Zealand Academy of Management (ANZAM) Operations, Supply Chain, and Services Management Symposium in 2021 and 2022.

Panel

Artificial Intelligence, Data Analytics and Cybersecurity

3:30 – 5:00 pm, November 25, 2025

Moderator:**Dr Shamsul Huda**

Lecturer in Computer Science, Cyber Security Research and Innovation Centre (CSRI), School of Information Technology
Faculty of Science Engineering and Built Environment
Deakin University, Burwood, Victoria, Australia

Shamsul Huda received his PhD degree in Computer Science from the Center for Informatics and Applied Optimization (CIAO), School of Science, Information Technology and Engineering (SITE), Federation University, in 2009. During his PhD, he jointly worked with Prof John Yearwood, at CIAO and Prof Roberto Tognieri, Signal Processing and Recognition Laboratory, UWA where he spent significant time in UWA, at Perth, WA for completion of his PhD and gained research experiences from both universities. He achieved "Certified Information System Security Professional (CISSP)" certification from the topmost organization of the world for training and certifications for cybersecurity: "The International Information System Security Certification Consortium, (ISC)2". He also has achieved a full membership of (ISC)2 as part of the recognition of his contribution and expertise in cybersecurity areas and industry based research engagement.

Speaker I:**Professor Dr Jemal Abawajy**

Faculty of Science Engineering and Built Environment
School of Information Technology
Deakin University, Melbourne

Prof. Jemal Abawajy is a full professor at Deakin University, Australia. He is an eminent and highly cited scholar and is ranked in the top 2% of the most influential scientists at Stanford University List. He has numerous awards, including the Deakin Vice-Chancellor Best Researcher award and was selected, for four consecutive years, to the Global Initiative for Academic Networks (GIAN) program of the Indian government. He holds a visiting professorship and is a member of academic advisory committees and an academic advisor in many universities outside Australia. He is regularly invited to undertake formal reviews of academic programs at many degree-granting institutions and has been appointed by many local and international universities to assess promotion applications to the rank of associate professor and full professor; and assess competitive grants for granting agencies both in Australia and overseas; and assess PhD theses for many reputable institutions all over the world. He has served or is serving on the editorial board of numerous international journals (e.g., IEEE Transactions on Cloud Computing) and more than 400 international academic conferences in various capacities, including chair and program chair. He has given over 80 invited keynote speeches and numerous technical lectures and delivered faculty development programs and invited seminars globally. He has supervised numerous PhD/master's degree and postdoctoral candidates to successful completion

Speaker II:



Dr Seyed Mojib Zahraee
RMIT School of Engineering
RMIT University, Melbourne
Australia

Dr. Seyed Mojib Zahraee is a Lecturer at the RMIT School of Engineering, within the Department of Mechanical, Manufacturing, and Mechatronic Engineering. He earned his PhD from RMIT University in 2022 and has been actively involved in teaching at the School of Engineering since early 2024. Since 2019, Dr. Zahraee has contributed his research expertise as a research assistant on multidisciplinary funded projects at RMIT University. With over a decade of research experience, his work spans biomass renewable energy supply, production, supply chain management, transportation and logistics systems, and sustainability. His contributions to the field have earned him recognition among the top 2% of scientists worldwide (2020–2024), as listed by Stanford University and published by Elsevier. In acknowledgment of his academic achievements—including high-impact publications, extensive research experience in Australia and internationally, and various awards—he has been awarded an Australia Global Talent Visa in the energy sector. His publication record, the impact of his work, and the notable quality of his scholarly contributions have placed him in the top 0.5% of all scholars worldwide according to the most recent 2024 ScholarGPS rankings. His contribution in the field of biomass prior to the last 5 years ranked him #14 locally in Australia and #407 worldwide.

Dr. Zahraee's current research focuses on biomass supply chains, sustainability assessment, renewable energy supply and production systems, optimization and operations management, lean manufacturing, transportation and logistics, and environmental and emissions analysis. In addition to his research, he is an active peer reviewer, having evaluated more than 350 papers for leading journals, particularly in the energy sector.

Speaker III:



Dr Ali Shahidinejad
Lecturer in Information and Communication Technology
CQ University Sydney, Australia

Dr Shahidinejad is a cybersecurity educator and researcher specializing in network security, secure communication protocols, blockchain and IoT security. With over seven years of academic experience, Dr Shahidinejad has designed and delivered a wide range of undergraduate and postgraduate courses, including network security, malware analysis, and secure coding practices.

Dr Shahidinejad has led to 50+ peer-reviewed publications in top-tier venues and continues to focus on solving real-world security challenges. Dr Shahidinejad actively contribute to the academic community as a reviewer for leading IEEE and ACM journals, staying engaged with cutting-edge developments in cybersecurity. Dr Shahidinejad's passion on: Innovative and student-centered teaching Bridging academia and industry through collaborative research, Translating theoretical insights into practical security solutions, Whether in the classroom or the lab, Dr Shahidinejad strive to equip the next generation of professionals with the skills and mindset to secure tomorrow's digital infrastructure.

Workshops

Workshop 1: Effective Consensus Decision Making-Utilising Practical Game Theory Techniques 2:00 – 3:30 pm, November 25, 2025

Facilitator:



David Karr (CPEng, Chris Heyde Awardee, FIIEA)

Federal Immediate Past President
Industrial Engineers Australia (IEA)
Perth, WA, Australia

David Karr Graduated as an Industrial Engineer BSc (Eng Mech in the Industrial Option) in 1976 at University of Witwatersrand (Wits), Johannesburg, South Africa in 1976. He received a Graduate Diploma in Engineering at Wits 1979. David has worked in various Production and Industrial Engineering roles in manufacturing, service industries and consultancy for over 45 years in South Africa, Canada and Australia. He also has training experience as a lecturer(casual) at TAFE (technical college) for 13 years delivering training in various aviation business units.

He has worked for Siemens (Routing Eng) and Colgate Palmolive (IE) (South Africa), Pirelli Cables (IE) and Canada Post (IE) (Canada), BOC Gases (Australia) (Production & Project Manager) across production quality, project management, supply chain management, design and improvements of production line and layouts of work area and data optimization. Industry experience included batch and process type manufacturing as well as large and small sites mainly with large multinational or national companies. He has delivered Game Theory presentations to Curtin University, Perth, WA, University of Melbourne and Industrial Engineers Australia. Also, he has applied practical Game Theory industry circumstances.

He has its own Business Consultancy undertaking passenger surveys, time and motion studies, setting up preventative maintenance systems for various clients and introduction of digitized autonomous processes. David has been very active in professional organizations in Canada (Canadian Society of Industrial Engineers (CSIE) and in Australia (Industrial Engineers Australia (IEA) and Engineers Australia (EA). He is a fellow, Chris Heyde Awardee and Federal Immediate Past President of Industrial Engineers Australia and a Chartered Professional Engineer of Engineers Australia.

About the Workshop

This workshop will demonstrate a practical example of utilizing Game Theory for effective Consensus Decision Making. In today's ever increasingly multifaceted world, there is an essential need for complex decisions to be resolved in a responsible optimal manner. The solution process needs to be suitably applied, that appropriately resolves the issue. In most cases, utilising Industrial Engineering (IE) Techniques will result in suitable outcomes. Consensus Decision Making-Utilising Game Theory, is a participative, creative and dynamic way of reaching an optimum collective agreement between all or most members of a group. Instead of simply voting for an item and having the majority of the group getting their way, a group using consensus decision making, is committed to finding the best solution that everyone actively supports, or at least can live with leading to beneficial outcomes minimizing risks

Workshop 2: Industry 4.0: Digital Manufacturing Made Easy!**2:30-4:00pm, Thursday, 27 November 2025****Facilitator:****Vikram Sachdeva**

Director – Manufacturing Excellence and Transformation
Swinburne University of Technology
Melbourne, Australia

Vikram Sachdeva is an accomplished manufacturing leader with 28 years experience spanning operations management, industrial engineering, operational excellence, and digital transformation. He defines and executes strategies that equip businesses for the future. A trained engineer and a natural problem solver, he uses Lean Six Sigma and Industry 4.0 to create process, people and technology solutions that address both ingrained and evolving manufacturing challenges. Underpinned by his passion for bringing new ideas to business, he engages and leads teams in delivering innovation and continuous improvement.

In his current role, Vikram is leading Manufacturing Excellence and Transformation initiatives at Swinburne, with a remit to support manufacturing businesses (primarily SMEs) with digital transformation. In the last 5 years, Swinburne's Factory of the Future has successfully delivered a unique, nation first, government funded Industry 4.0 Business Readiness program catalysing multi million dollar investment in Industry 4.0 technologies, contributing to onshoring, new jobs creation and establishing Industry 4.0 as a key enabler to any manufacturing transformation program.

Through this workshop, Vikram and his team aim to spread awareness and provide hands-on experience on how the new technologies can assist Industrial Engineers to be more productive while they develop innovative human-centred systems

About the Workshop

Using engaging demonstrations, this workshop takes a holistic approach to lay the foundations for understanding Industry 4.0. Participants will learn about the benefits, applications, and approaches to adopting digital technologies. Developed and delivered by a mix of industry-experienced professionals and subject matter/technology experts, Demonstrations provide hands-on experiential learning with technology demonstrators across vision systems, Industrial Internet of Things (IIoT), Data Analytics, Artificial Intelligence, Augmented & Virtual Reality, real-time location systems, wearables, and predictive maintenance.

Conference Committee

Conference Chair

Dr Felix Kin Peng Hui, Associate Professor, Program Director and Academic Coordinator, Master of Engineering Management Program, Leader of the Sustainable Production Systems and Systems Engineering Group, Department of Infrastructure Engineering, University of Melbourne, Melbourne, Australia

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Dr Sanjoy Paul, Associate Professor, UTS Business School, University of Technology Sydney (UTS), Sydney, Australia

Dr. Azizur Rahman, Senior Lecturer – Occupational Health and Safety/Ergonomics, School of Property Construction and Project Management, RMIT University, Australia

Dr Peter Shi, FCILT, Deputy Director (MCom) and Head of Supply Chain Management, Macquarie Business School, Macquarie University; Chair of the Chartered Institute of Logistics and Transport NSW Section, NSW, Australia

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Dr Ahad Ali, Associate Professor and Director of Industrial Engineering Program, Lawrence Technological University, Michigan, USA

Dr Md Mizanur Rahman, Western Sydney University, Sydney, Australia, and Director, IEOM Australia Operations

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Mohan Ganavarapu (CPEng, MIIIEA), Federal President, Industrial Engineers Australia (IEA), Australia

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Dr. Imran Ali, Senior Lecturer, Operations & Innovation Management, School of Business and Law Centre for Regional Economies and Supply Chains, Central Queensland University (CQU), Melbourne, VIC 3000, Australia

Dr Mohsin Malik, Associate Professor & Director – Master of Project Management, Swinburn Business School, Swinburn University of Technology, Melbourne, Australia

Dr Ki Pyung Kim, PhD, PMP, PMI-SP, MCTS, Senior Lecturer, Senior Lecturer in the Construction and Project Management, UniSA STEM University of South Australia, Australia, Visiting Professor, Hanyang University, Korea

Dr Roberto Chavez Clavijo, Senior Lecturer, Supply Chain Management, Department of Management and Marketing, Swinburne Business School, Swinburne University of Technology, Victoria, Australia

Dr Gopinath (Gopi) Chattopadhyay, Maintenance and Reliability Engineering, Federation University Australia, VIC 3841, Australia, Chair of Asset Management Council Australia, Gippsland Chapter.

Dr Ngoc Dang Khoa Nguyen, School of Business and Law, Central Queensland University, Melbourne, Australia

Dr Shamsul Huda, Lecturer in Computer Science, Cyber Security Research and Innovation Centre (CSRI), School of Information Technology, Faculty of Science Engineering and Built Environment, Deakin University, Burwood, Victoria, Australia

Dr Spring Zhou, Senior Lecturer, School of Business, Faculty of Business and Law, University of Wollongong, Australia

Dr Peter Shi, Director of Research Centre for Transport, Logistics and Global Supply Chain Management, FoRC Champion in Transport, Logistics and Supply Chain Management, Department of Management, Macquarie Business School, Macquarie University, Australia

Dr Sanjoy Paul, Associate Professor and Program Director, Master of Strategic Supply Chain Management programs, UTS Business School, University of Technology Sydney, Australia

Dr. Marjia Haque, Systems Engineering, Supply Chain Management & Decision Analytics, UNSW Canberra, Australian Capital Territory, Australia

Dr Mostafa Khatami, Lecturer, School of Business, Faculty of Business and Law, University of Wollongong, Wollongong, NSW, Australia

Track Chairs

Artificial Intelligence and Data Science

Professor Dr Manale Boughanja, the National School of Artificial Intelligence and Digital Berkane, National School of Applied Sciences in Oujda, Morocco.

Dr Santoso Wibowo, Associate Professor, Centre for Intelligent Systems, School of Engineering and Technology, Central Queensland University, Australia.

Automation, Robotics and Autonomous Systems

Dr. Indra Gunawan, Adelaide Business School, Faculty of Arts, Business, Law and Economics, The University of Adelaide, Australia

Associate Professor Dr Nagesh Shukla, Department of Business Strategy and Innovation, Griffith Business School, Griffith University, QLD, Australia

Business Management and Operations Management

Dr Peter Shi, FCILT, Deputy Director (MCom) and Head of Supply Chain Management, Macquarie Business School, Macquarie University; Chair of the Chartered Institute of Logistics and Transport NSW Section, NSW, Australia

Dr Feng-Jang Hwang, Associate Prof in Operations Management, Department of Business Management, National Sun Yat-sen University, Taiwan

Digital Manufacturing, Industry 4.0 and IoT

Dr Suraiya Binte Mostafiz, Senior Research Fellow, School of Bioscience, University Technology Malaysia (UTM), Johor Bahru, Malaysia.

Engineering Management and Project Management

Dr Paulo Vaz Serra, Senior Lecturer in Construction Management at the Faculty of Architecture, Building and Planning at the University of Melbourne, Australia

Entrepreneurship

Dr Matthew Pepper, Associate Professor, School of Business, Faculty of Business and Law, University of Wollongong NSW 2522, Australia

Facility Planning and Layout

Dr Reza Kiani Mavi, Senior Lecturer, the School of Business and Law, Edith Cowan University, WA 6027, Australia

Dr. Marjia Haque, Systems Engineering, Supply Chain Management & Decision Analytics, UNSW Canberra, Australian Capital Territory, Australia

Human Factors, Ergonomics and Healthcare System Management

Dr Mostafa Khatami, Lecturer, School of Business, Faculty of Business and Law, University of Wollongong, Wollongong, NSW, Australia

Dr Xiaohua (Sean) Jin, Assoc Prof in Project Management, Director of Project Management Programs, School of Engineering, Design & Built Environment, Western Sydney University, NSW, Australia

Innovation in Engineering Education

Dr. Nilupa Herath, Lecturer, Department of Infrastructure Engineering, University of Melbourne, Australia

Dr Jukka Paatero, LUT School of Energy Systems, Lappeenranta-Lahti University of Technology (LUT), Lappeenranta, Finland

Lean Six Sigma and Operations Excellence

Dr Sanjoy Paul, Program Director, Master of Strategic Supply Chain Management programs, Senior Lecturer, UTS Business School, University of Technology Sydney, Australia

Manufacturing

Associate Professor Jo Staines, Enterprise Fellow, Mechanical Engineering, University of Melbourne, Australia.

Dr Spring Zhou, Senior Lecturer, School of Business, Faculty of Business and Law, University of Wollongong, Australia

Quality, Reliability and Maintenance

Dr Gopinath (Gopi) Chattopadhyay, Maintenance and Reliability Engineering, Federation University Australia, VIC 3841, Australia, Chair of Asset Management Council Australia, Gippsland Chapter.

Dr Guilherme Luz Tortorella, Senior Lecturer, Mechanical Engineering, University of Melbourne, Australia

Simulation, Optimization and Productivity Improvement

Dr Roberto Chavez Clavijo, Senior Lecturer, Supply Chain Management, Department of Management and Marketing, Swinburne Business School, Swinburne University of Technology, Victoria, Australia

Supply Chain and Logistics

Associate Professor Dr Ferry Jie, School of Business and Law, Edith Cowan University, Western Australia, Australia
Dr Mohsin Malik, Associate Professor & Director – Master of Project Management, Swinburn Business School, Swinburn University of Technology, Australia.

Sustainability, Renewable and Alternative Energy

Dr Obuks Ejohwomu, PhD, MSc, BEng, FNSE, FHEA, Academic (Teaching & Research) Reader in Sustainable Built Environment & Project Management Infrastructure and Resilience, University of Manchester, UK

Professor Jan-Harm Christiaan Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, South Africa

Case Studies and Best Practices

Dr Ki Pyung Kim, Senior Lecturer, UniSA STEM, City East Campus, University of South Australia

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- Asadul Haque, Monash University, Melbourne, Victoria
- Zahidul Haque, Zahid Hoque, Manager Pavement Performance at Roads and Maritime Services, Sydney
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- Yakubu Ibrahim, Swinburne University of Technology, Melbourne, Victoria
- Yousef Ibrahim, Federation University Australia Churchill, VIC
- Rafiqul Islam, Western Sydney University, Rooty Hill, New South Wales
- Sardar Islam, Victoria University Melbourne, Victoria
- Prof. Sardar M N Islam (Naz), Victoria University Melbourne, Victoria
- Naeem Janjua UNSW, Canberra, Canberra, ACT
- Ananda Jeeva, Curtin University of Technology, Perth, Western Australia
- Ferry Jie, Edith Cowan University, Perth, Western Australia
- Mohammed Kaosar, Murdoch University, Perth, Western Australia

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- Marwa Keshk, University Of New South Wales-Canberra Canberra, NSW
- Omar Khadeer Hussain, UNSW Canberra, Canberra, ACT
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- Arun Kumar, RMIT, Melbourne
- Nateque Mahmood, Deakin University, Geelong, VIC
- Mohsin Malik, The University of Melbourne, Melbourne, MB
- Abijith Maniyeri, University of Southern Queensland, Toowoomba, Queensland
- Philip Mathew, The University of New South Wales, Sydney, NSW
- Muhammad Ilyas Mazhar, Curtin University, Bentley, WA
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Parallel Sessions

All Times are in Melbourne Time (AEDT)

Tuesday, November 25, 2025			
	Onsite Room 1	Onsite Room 2	Virtual Room 3
8:00 am	Business Management and Operations Management	Automation, Robotics and Autonomous Systems	
9:30 am	Panel: Global Engineering Education Panel	Artificial Intelligence and Data Science	
11:00 am	Welcome Address: Conference Chair		
11:10 am	Keynote I: Dr Daniel Prior FAMI CPM SFHEA MILT, Associate Professor, Director, Supply Chain Sustainment Research Group, University of NSW Canberra, Australia		
11:50 am	Keynote II: Professor Dr. Fitra Lestari, Vice Dean, Faculty of Science and Technology, Professor in Industrial Engineering Department, Universitas Islam Negeri Sultan Syarif Kasim Riau, Riau, Indonesia		
12:30 pm	Keynote III: Chris Gaspardis, Manufacturing Engineering Manager, PACCAR, Melbourne, Australia		
1:00 pm	Onsite Lunch Break: Buffet Lunch		
2:00 pm	Workshop 1: Effective Consensus Decision Making- Utilizing Practical Game Theory Techniques		UG Student Paper/UG research/Masters/High school Competition
3:30pm	Panel: Artificial Intelligence, Data Analytics and Cybersecurity	Case Studies and Best Practices/ Entrepreneurship and Innovation/ LSS/ Quality, Reliability and Maintenance	AI-ML/ Lean Six Sigma/ Poster Competition
5:00pm			AI and Data Science/ Business Management and OM

Wednesday, November 26, 2025			
	Onsite Room 1	Onsite Room 2	Virtual Room 3
8:00 am	Business Management and Operations Management	Doctoral Dissertation/Master Thesis /Lean Six Sigma/ Simulation/ Human Factors and Ergonomics Competition	
9:30 am	Supply Chain and Logistics/ Manufacturing Assembly and Design	Plenary: Sustainability in Engineering and Business	
11:00 am	Keynote IV: Dr Gary Yu-Hsin Chen, Professor, Department of Logistics Management, National Kaohsiung University of Science and Technology Kaohsiung, Taiwan		
11:40 am	Keynote V: Prof Dr Sally Male, Director, Teaching and Learning Lab (TLL), Faculty of Engineering and Information Technology, The University of Melbourne, Australia		
12:20 pm	Keynote VI: Daniel Kulawiec, Design & Construction Executive, InfraCo Telstra		
1:00 pm	Onsite Lunch Break: Buffet Lunch		
2:00 pm	Human Factors, Ergonomics and Healthcare Systems	Site visit Port of Melbourne	Human Factors, Ergonomics and Healthcare Systems
3:30pm	Panel: Women in Industry and Academia Panel sponsored by Ford Motor Company		Supply Chain and Logistics
5:00 pm			Quality, Reliability and Maintenance

Thursday, November 27, 2025			
	Onsite Room 1	Onsite Room 2	Virtual Room 3
8:00 am	Sustainability, Green Systems and Energy	Simulation, Optimization and Productivity Improvement	
9:00 am	Plenary: Global Business Management Education	Engineering Management and Project Management/ Case Studies and Best Practices	
11:00 am	Keynote VII: Tetsuo YAMADA, Dr. Eng, Professor, Program Chair of Management Science and Social Informatics, Director of Laboratory for Environment-Conscious Life Cycle Design with Products Information, Department of Informatics, Graduate School of Informatics and Engineering, The University of Electro-Communications, Japan		
11:40 am	Keynote VIII: Dr. Nurbek Kurbonov, PhD, Associate Professor, Tashkent State Technical University (TSTU), Tashkent, Uzbekistan		
12:20 pm	Keynote IX: Dr David Paynter, MBA Meng (Adv. Manuf. Tech) BE (Indust.) (Hons) GC (Learn & Teach), UniMelb, Monash, Chisholm & Swinburne, Australia		
1:00-2:30 pm	Award Luncheon and closing remarks		
2:30 pm	Workshop 2: Industry 4.0: Digital Manufacturing Made Easy!		Case Studies and Best Practices/ Engineering Education and Curriculum Improvement/EMPM/ FPL/LSS
4:00 pm			Simulation, Optimization and Productivity Improvement

November 25, 2025 (Tuesday)

8:00 – 9:30 am, Tuesday, November 25

Onsite Room 1

Business Management and Operations Management/ SCL

Session Chair: Dr Imran Ali, Senior Lecturer in Operations and Innovation Management, School of Business and Law, Central Queensland University, Australia

ID 8 The Impact of Adopting Smart Contracts and Blockchain in the Construction Industry: A Case of Lusaka, Zambia
Sinokubekezela P Dube, Moffat Tembo and Erastus Mwanaumo, Department of Civil & Environmental Engineering, The University of Zambia, Lusaka, Zambia

ID 10 Reinforcement Learning for Financial Resilience: Optimizing Supply Chain Liquidity Under Uncertainty
Yehan Dou, Department of Management, Macquarie University, Sydney, Australia
Peter Shi, Department of Management, Macquarie University, Sydney, Australia
Ruoyu Li, School of Engineering and Information Science, The University of Wollongong, Wollongong, Australia

ID 29 Embracing Smart Technologies in Risk Assessment in the Context of Industry 4.0
Wilson Takavadii Nyamanhindi, Head of Department: School of Office Management, Harare Polytechnic Zimbabwe

ID 31 The Role Of 4ir Technologies in Exacerbating and Mitigating Conflicts.
Wilson Takavadii Nyamanhindi, Head of Department: School of Office Management, Harare Polytechnic Zimbabwe
Erina Kaunda, Personal Assistant to the Principal, Harare Polytechnic, Zimbabwe

ID 39 Optimizing Production Planning for Fresh Sandwich Shops Under Demand Uncertainty
Ahmed Hamzi, Department of Industrial Engineering, College of Engineering and Computer Science, Jazan University, Jazan, Saudi Arabia

ID 57 Using bi-objective linear programming and reinforcement learning to conduct electricity supply optimization
ChihHsuan Wang, National Yang Ming Chiao Tung University, Taiwan

ID 107 Identifying the Determinant Factors of Customer Satisfaction in Automotive Technology Using the Kano Model Approach
Teuku Yuri M. Zagloel and Rafalia Maritza, Department of Industrial Engineering, Universitas Indonesia Depok, Jawa Barat, Indonesia

ID 110 The Influence of Self-Identity on Green Purchasing Intention: A Mediation Analysis of Consumption Values and Price Sensitivity
Sophia Lauren Antonio, Diana Marie De Silva, John Kenneth Punongbayan, Josefa Angelie Revilla, and Haerold Dean Layaoen, Department of Industrial Engineering, University of the Philippines Los Baños (UPLB), Laguna, Philippines

ID 111 Risk Simulation of Essential Goods Supply Chains Considering Equity under Panic Buying
Yuqi Wu, Graduate School of Engineering and Science, Shibaura Institute of Technology, Saitama, Japan
Yusuke Goto, Department of Engineering and Science, Shibaura Institute of Technology, Saitama, Japan

ID 134 Analysis of Dynamic Capabilities for Digital Transformation in the Construction Industry
Navodi Wijayarathne, Indra Gunawan and Frank Schultmann, Adelaide Business School, The University of Adelaide, Adelaide, SA 5005, Australia

8:00 – 9:30 am, Tuesday, November 25

Onsite Room 2

Automation, Robotics and Autonomous Systems

Session Chair: Dr Md Abdus Samad Kamal, Associate Professor, Graduate School of Science and Technology, Gunma University, Kiryu, Japan

ID 7 Boosting Productivity and Sustainability through Human–Robot Collaboration in Industry 5.0: Practical Insights from Australian Aerospace and Mechanical Engineering
Nazia Mustary Nayna, UTS, Australia

ID 92 Improving Workforce Efficiency in Cold Storage Environments with Autonomous Mobile Robots (AMRs)

Tan Yong Lin, Lecia, Undergraduate Student, School of Business, Singapore University of Social Sciences, Singapore
Zhao Qitong, Senior Lecturer, School of Business, Singapore University of Social Sciences, Singapore

ID 156 How to Take Inventory with Drones: RFID-UAV Integration for Automated Inventory Management

Tali Freed, Professor, Industrial and Manufacturing Engineering Department, Director, PolyGAIT – The Cal Poly Center for Global Automatic Identification Technologies, California Polytechnic State University (Cal Poly), San Luis Obispo CA, USA
Sagit Kedem-Yemini, Logistics Department, Sapir Academic College, Sderot, Israel

9:30 – 11:00 am, Tuesday, November 25**Onsite Room 1****Panel: Global Engineering Education****Moderator:**

Dr Matthew Pepper
Professor, School of Business
Faculty of Business and Law
University of Wollongong, Australia

ID 112 University Lean Adoption: A Systematic Review of Impact and Implementation Drivers

Arzoo Atiq, Lecturer, School of Computing and Information Systems, University of Melbourne, Melbourne, Australia
Felix Kin Peng Hui, Associate Professor, Department of Infrastructure Engineering, University of Melbourne, Melbourne, Australia
Lu Aye, Professor, Department of Infrastructure Engineering, University of Melbourne, Melbourne, Australia

ID 152 Embedding Business Education Skills into Engineering Curricula

Erin Snape and Matthew Pepper, School of Business, Faculty of Business and Law, University of Wollongong, Wollongong, Australia
Felix Kin Peng Hui, Department of Infrastructure Engineering, University of Melbourne, Melbourne, Australia

ID 211 Enhancing Engineering Management Education: The Impact of Project-Based Learning on Student Self-Confidence and Teamworking Skills

Nilupa Herath, Lecturer (Education Specialist), Department of Infrastructure Engineering, The University of Melbourne, Victoria 3010, Australia
Feix Hui, Associate Professor, Department of Infrastructure Engineering, The University of Melbourne, Victoria 3010, Australia
Lu Aye, Professor, Renewable Energy and Energy Efficiency Group, Department of Infrastructure Engineering
The University of Melbourne, Victoria 3010, Australia

Speaker I:

Prof Lu Aye, PhD
Department of Infrastructure Engineering
University of Melbourne
Australia

Speaker II:

Dr Obuks Ejohwomu, PhD, MSc, BEng, FNSE, FHEA
Academic (Teaching & Research) Reader
Sustainable Built Environment & Project Management
University of Manchester, UK

Speaker III:

Dr George Panas
Enterprise Fellow, Management and Marketing
University of Melbourne, Melbourne, Australia

Speaker IV:

Prof. Dr. Eriki Ananda Kumar
Dean Research and Development
Professor in Mechanical Engineering
MJR College of Engineering and Technology, AP, India

9:30 – 11:00 am, Tuesday, November 25**Onsite Room 2****Artificial Intelligence and Data Science**

Session Chair: Dr Shamsul Huda, Lecturer in Computer Science, Cyber Security Research and Innovation Centre (CSRI), School of Information Technology, Faculty of Science Engineering and Built Environment, Deakin University, Burwood, Victoria,

ID 19 Nanotechnology in Targeted Cancer Treatment

Sarthak Pandey, Student, India

ID 27 AI with Data Science for Advanced Cyber Risk and Threat Analytics

Thiru Pandian, The University of Texas at Dallas, United States

ID 38 AI-Compass: A framework for the selection of AI algorithms based on functional paradigms

Rainer Eber, Professor of Industrial Engineering and Management, Member at the Center Industry 4.0

Department of Mechanical Engineering, Aalen University of Applied Sciences, Aalen, Germany

Steffen Schwarzer, Professor and Chair of Center Industry 4.0, Department of Management and Business Science, Aalen

University of Applied Sciences, Aalen, Germany

Simon Zimmermann, IT/OT Operation Engineer, TransnetBW, Stuttgart, Germany

Gerit Mann, Graduate student and Master candidate, Aalen University of Applied Sciences, Aalen, Germany

ID 116 Development of a Database Management System for a Municipal Agriculture Office in the Philippines

Danielle Gem Mora Mappatao, Diana Marie De Silva, Miguel Darwin Lapitan, and Gabriel John De Leon, Department of Industrial Engineering, College of Engineering and Agro-Industrial Technology, University of the Philippines Los Baños, Philippines

ID 139 Exploring Human Behavior and Performance in Virtual Environments Through Engineering Analytics and EEG

Fahad Alasim, King Saud University, Saudi Arabia

ID 166 AI in Human Resource Core Processes: A Technological Framework for Higher Education Institutions

Mary Grace G. Ventura, Professor, College of Computer Studies and Systems, University of the East, Manila, Philippines

11:00 – 1:00 pm, Tuesday, November 25**Onsite Room 1****Welcome and Keynotes****Moderator:** Dr Roberto Chavez Clavijo, Associate Professor, Department of Management and Marketing, Swinburne Business School, Swinburne University of Technology, Victoria, Australia**11:00 – 11:10 am: Welcome address:** Conference chair Dr Felix Kin Peng Hui, Conference Chair & Associate Professor of Engineering Management and an Academic Specialist, Department of Infrastructure Engineering, University of Melbourne, Melbourne, Australia**11:10 – 11:50 am: Keynote I:** Dr Daniel Prior FAMI CPM SFHEA MILT, Associate Professor, Director, Supply Chain Sustainment Research Group, University of NSW Canberra, Australia**11:50 – 12:30 pm: Keynote II:** Professor Dr Fitra Lestari, Vice Dean, Faculty of Science and Technology, Professor in Industrial Engineering Department, Universitas Islam Negeri Sultan Syarif Kasim Riau, Riau, Indonesia**12:30 – 01:10 pm: Keynote III:** Mr. Chris Gaspardis, Manufacturing Engineering Manager, PACCAR, Melbourne, Australia**1:00 – 2:00 pm, Tuesday, November 25****Onsite Room 1****Lunch break****2:00 – 3:30 pm, Tuesday, November 25****Onsite Room 1****Workshop 1 (ID 3): Effective Consensus Decision Making-Utilising Practical Game Theory Techniques****Facilitator:**

David Karr (CPEng, Chris Heyde Awardee, FIIEA)

Federal Immediate Past President

Industrial Engineers Australia (IEA)

Perth, WA, Australia

2:00 – 3:30 pm, Tuesday, November 25**Onsite Room 2**

2:00 – 3:30 pm, Tuesday, November 25**Virtual Room 3****Session Chair:** Aqib Islam, IEOM Society**Undergraduate Student Paper Competition sponsored by Siemens****ID 1 New Philosophy**

Octavius MacGregor, University of Southern Queensland, Australia

ID 22 Deep Learning-Based Predictive Maintenance for Rotating Machinery: A Comprehensive Approach

Ali Mohamed Mahmoud Elgohary, Undergraduate Student, Department of Mechanical Power Engineering, Tanta University, El Gharbeia, Egypt

ID 26 A Manufacturing Model to Enhance Productivity through Applying SLP, 5S, and TPM in a Textile SME

Yonny Alexander Flores-Castillo, Xiomara Gabriella Guerrero-Cenepo, Jorge Antonio Corzo-Chavez and Gino Viacava-Campos, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

Undergraduate Research Competition sponsored by Daikin Applied**ID 59 AI-Driven Innovations in Healthcare: Enhancing Handwritten Digits Recognition**Sarah Aliouat, Computer Engineering Student, College of Engineering & IT, University of Dubai, Dubai, United Arab Emirates
Mhd Nazir Sagherji, Computer Engineering Student, College of Engineering & IT, University of Dubai, Dubai, United Arab Emirates

Maisam Wahbah, Assistant Professor, College of Engineering & IT, University of Dubai, Dubai, United Arab Emirates

ID 153 Cloud-Enabled Model Predictive Control for Optimized Vehicle Platooning in Urban TransportationMahdyar Karimi, Ahmad Hasan, Md Abdus Samad Kamal and Kou Yamada, Intelligence Control program
Department of Science and Technology, Gunma University, Kiryu, Japan

A. S. M. Bakibillah, Department of Systems and Control Engineering, Institute of Science Tokyo, Tokyo, Japan

Master Thesis Competition**ID 24 Reliability of the Electrical Multiple Unit trainset Maintenance in a Manufacturing Company**

Vulani Charlotte Ngobeni, Master's student, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

BBS Makhanya, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

JHC Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

ID 33 Engineering Human Capital Retention Strategies in South African Energy Organisations.

ML Mafele, B Makhanya, JHC Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

High School STEM Competition**ID 148 An Immunoinformatic Approach to a Protease-Resistant Epitope Design for a Giardiasis Vaccine**

Evan Moloseni, Hilton College, Maritzburg, Kwazulu-Natal, South Africa

3:30 – 5:00 pm, Tuesday, November 25

Onsite Room 1

Panel: Artificial Intelligence, Data Analytics and Cybersecurity**Moderator:**

Dr Shamsul Huda
Lecturer in Computer Science, Cyber Security Research and Innovation Centre (CSRI)
School of Information Technology
Faculty of Science Engineering and Built Environment
Deakin University, Burwood, Victoria, Australia

Speaker I:

Professor Dr Jemal Abawajy
Faculty of Science Engineering and Built Environment
School of Information Technology
Deakin University, Melbourne

Speaker II:

Dr Seyed Mojib Zahraee
RMIT School of Engineering
RMIT University, Melbourne
Australia

Speaker III:

Dr Ali Shahidinejad
Lecturer in Information and Communication Technology
CQ University Sydney, Australia

3:30 – 5:00 pm, Tuesday, November 25

Onsite Room 2

Case Studies and Best Practices/ Entrepreneurship and Innovation/ Lean Six Sigma and Operations Excellence/ Quality, Reliability and Maintenance

Session Chair: Dr Ferry Jie, Associate Professor, School of Business and Law, Edith Cowan University, Western Australia, Australia

ID 34 Understanding Consumer Behavior Using the Theory of Planned Behavior: A Study from India

Sahil, and S. P. Sarmah, Department of Industrial and Systems Engineering, Indian Institute of Technology, Kharagpur, India

ID 28 Optimizing Electronic Manufacturing Processes Using Value Stream Mapping: A Case Study

Tran Thi Bich Chau Vo, Lecturer, Faculty of Industrial Management, College of Engineering, Can Tho University, Can Tho, Vietnam

Nhut Tien Nguyen, Lecturer, Faculty of Electrical Engineering, College of Engineering, Can Tho University, Can Tho, Vietnam

Hong-Phuc Nguyen, Lecturer, Faculty of Industrial Management, College of Engineering, Can Tho University, Can Tho, Vietnam

Thi Le Thuy Nguyen, Lecturer, Faculty of Industrial Management, College of Engineering, Can Tho University, Can Tho, Vietnam

Cong Khai Nguyen, Faculty of Mechanical Engineering, College of Engineering, Can Tho University, Can Tho, Vietnam

Linh Thi Truc Doan, UniSA STEM, University of South Australia, Australia, Faculty of Industrial Management, College of Engineering, Can Tho University, Viet Nam

ID 60 Quality in the Age of Digitalization – How to Realize the Transformation

Dr. Martin Menrath, Lecturer for Global Quality Management, Technical University of Berlin, Berlin, Germany

Prof Dr.-Ing. Roland Jochem, Chair of Quality Science, Department of Machine Tools and Factory Management, Technical University of Berlin, Berlin, 10587, Germany

3:30 – 5:00 pm, Tuesday, November 25

Virtual Room 3

AI-ML Competition

Session Chair: Sakhita Sree Gadde, sakhitasreeg2000@gmail.com

Co-chair: Aqib Islam, IEOM

ID 73 Analysis of the Location of Emergency Ambulances in the City of Sorocaba-Brazil Using Generic Data Generation and Clustering Methods

Rodrigo Luiz Gigante, Industrial Engineering Department, Engineering School, Facens University
Sorocaba-SP, Brasil

Anibal Tavares de Azevedo, Faculty of Applied Sciences, University of Campinas (UNICAMP), Limeira-SP, Brasil

Takaaki Ohishi, Faculty of Electrical and Computer Engineering at the State University of Campinas. University of Campinas (UNICAMP), Campinas-SP, Brasil

Session Chair: Rajesh Kumar Kanji, IEEE, USA, rkanji@ieee.org

Lean Six Sigma Competition**ID 14 Multi-Dimensional Problem Solving with the DINNA Diagram: A Lean Six Sigma Innovation for Operational Excellence in the Automotive Industry**

Mohammed Hamoumi, Industrial Management and Plastics Forming Technology Team, Mechanics, Engineering and Innovation Laboratory, LM2I, National High School of Electricity and Mechanics – ENSEM- Hassan II University, Casablanca, Morocco.

ID 30 Application of Business Process Management (BPM) and Lean Six Sigma (LSS) to Improve Productivity in Customer Service in the Insurtech sector: A Case Study

Mateo Ortega-Escadillo, Carrera de Ingeniería Industrial, Universidad de Lima, Lima, Perú

Franco Arturo Ortiz-Huassasquiche, Carrera de Ingeniería Industrial, Universidad de Lima, Lima, Perú

Jorge Antonio Corzo-Chavez, Carrera de Ingeniería Industrial, Universidad de Lima, Lima, Perú

Gino Viacava-Campos, Carrera de Ingeniería Industrial, Universidad de Lima, Lima, Perú

ID 164 Sustainable management and recovery of textile waste: Mitigation and utilization of wet lint through the Circular Economy, applying Design Thinking and Design of Experiments methodologies

Jhostyn Malca, German Pro, Marlon Mejia and Blanca Palacios, Department of Industrial Engineering, University of Engineering and Technology – UTEC, Lima, Perú

Poster Competition**ID 42 An AI-Driven Predictive Maintenance Strategy for Conveyor Belt System In the Food and Beverage Manufacturing**

Aurora Takendu, PNG University of Technology, Papua New Guinea

Manufacturing, Assembly and design**ID 210 Adaptive Production Strategies in an Era of Tariff Uncertainty**

Bharat Srivastava, Associate Professor, Department of Supply Chain and System Intelligence, Marquette University, Milwaukee, Wisconsin

5:00 – 6:30 pm, Tuesday, November 25**Virtual Room 3**

Session Chair: Professor Dr Manale Boughanja, the National School of Artificial Intelligence and Digital Berkane, National School of Applied Sciences in Oujda, Morocco.

Co-chair: Aqib Islam, IEOM

Artificial Intelligence and Data Science**ID 18 AI-Driven Circular Operations**

Bharti Joshi, Student, India

ID 35 Performance Analysis of Bidirectional Associative Memory (BAM) and Feed Forward Multilayer Error Back-Propagation Network (BPN)(Neural Network) for Alphabetic Character Recognition by Applying Digital Image Processing and Neural Network Algorithm in the Algorithm in the AI field

Mainur Rahman Tarafder, IICT, BUET, Bangladesh

ID 68 A Systematic Review on the Applications of Explainable Artificial Intelligence for Enhancing Transparency and Interpretability in the Supply Chain Management

MD Faiaz Zaman Dehan, Kazi Md. Tanvir Anzum, Jannatul Ferdous Disha, MD. Mahfuzur Rahman Masum, Istiak Mahmud, Department of Industrial Engineering and Management, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

ID 108 Using Real-Time Data Analytics to Transform Healthcare Supply Chains: Insights from Johns Hopkins Aramco

Healthcare

Amjad A. Marar, May Hussain, Mahdi Ghubari, Ali Dobaisi, Mohammad Khurram, Hashim M AlAwamin, and Dana Wafai, Johns Hopkins Aramco Healthcare, Supply Chain Department, Ad Dhahran, Kingdom of Saudi Arabia.
 Ibtihal Ali AlAttallah, Johns Hopkins Aramco Healthcare, Information Technology, Ad Dhahran, Kingdom of Saudi Arabia.
 Ahmad T AlMnaizel, Johns Hopkins Aramco Healthcare, Research Office, Ad Dhahran, Kingdom of Saudi Arabia.

Business Management and Operations Management**ID 75 Blockchain Applications in the Automotive Industry: Opportunities, Challenges, and Pathways to Industry 4.0**

Fattah bin Siddique, Abday Mohaimin, Abir Ahsan, Kazi Md. Tanvir Anzum, Syed Rafidul islam, Department of Industrial Engineering and Management, Department of Materials Science and Engineering, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

ID 174 Literature Review and Talent Criteria Analysis: A Framework for Developing Indonesia's Digital Workforce to Achieve Export Excellence

Anggara Trisna Nugraha, Department of Bio-industrial Mechatronic Engineering, National Chung Hsing University, Taichung, Taiwan
 Marine Electrical Engineering Department, Politeknik Perkapalan Negeri Surabaya, Indonesia
 Anda Iviana Juniani, Marine Mechanical Engineering Department, Politeknik Perkapalan Negeri Surabaya, Indonesia
 Dhady Ayu Juli Anjhani, Marine Mechanical Engineering Department, Politeknik Perkapalan Negeri Surabaya, Indonesia
 Zaki Wicaksono, Marine Mechanical Engineering Department, Politeknik Perkapalan Negeri Surabaya, Indonesia

ID 146 Modelling the Behaviour of Battery Leasing Adoption in Indian Market

Rudra Prakash Pradhan, Indian Institute of Technology Kharagpur, India
 Deep Choudhury, Indian Institute of Technology Kharagpur, India
 Ashim K. Sabat, Steel Authority of India Limited (SAIL), Rourkela, India
 Mohd Tabrej Alam, Indian Institute of Technology Kharagpur, India
 Mohit Kumar Gautam, Indian Institute of Technology Kharagpur, India
 Aakriti Verma, Indian Institute of Technology Kharagpur, India
 Upasana Halder, Indian Institute of Technology Kharagpur, India
 R Karthik, Indian Institute of Technology Kharagpur, India

ID 147 Factors Influencing Battery Swapping Adoption of Electric Vehicles: Using Structural Equation Modelling Approach

Rudra P. Pradhan, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, India
 Deep Choudhury, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, India
 Upasana Halder, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, India
 Chandan Kumar Maity, Rekhi Centre of Excellence for the Science of Happiness, Indian Institute of Technology Kharagpur, India
 Bhuyashi Talukdar, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, India
 Satyajit Mallik, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, India
 Baishali Bose, Rekhi Centre of Excellence for the Science of Happiness, Indian Institute of Technology Kharagpur, India
 Ramya Ranjan Behera, Rekhi Centre of Excellence for the Science of Happiness, Indian Institute of Technology Kharagpur, India

ID 203 A Comparative Analysis of Different Game Genres in the Development of Entrepreneurial Skills

Kyrenne Izellah T. Ambion, Department of Industrial Engineering, University of Santo Tomas, Manila, Philippines
 Krishnia Yvonne M. Ausan, Department of Industrial Engineering, University of Santo Tomas, Manila, Philippines
 Jacob Steven M. Ong, Department of Industrial Engineering, University of Santo Tomas, Manila, Philippines
 Arianne Rae B. Ramos, Department of Industrial Engineering, University of Santo Tomas, Manila, Philippines
 Carlos Ignacio Lugay Jr., Associate Professor, Department of Industrial Engineering, University of Santo Tomas, Manila, Philippines

November 26, 2025 (Wednesday)

8:00 – 9:30 am, Wednesday, November 26**Onsite Room 1****Business Management and Operations Management**

Session Chair: FJ Hwang, Associate Prof in Operations Management, Department of Business Management, National Sun Yat-sen University, Taiwan

ID 149 The Differential Impact of Supplier and Customer Concentration on Open Innovation: A study Based on Resource Dependence Theory and Knowledge-Based View

Qian Yang, Associate Professor, School of Management, Northwestern Polytechnical University, Xi'an, China
Tianxiong Li, Ph.D Candidate, School of Management, Northwestern Polytechnical University, Xi'an, China
Liping Qian, Professor, School of Economics and Business Administration, Chongqing University, Chongqing, China

ID 150 Enhancing Operational Performance through Robust Benefit Validation

Moraya S. Gahtani, Principal Professional, Operational Excellence Department, Aramco, Dhahran, Saudi Arabia
Pierre A. Nader, Operational Excellence Specialist, Operational Excellence Department, Aramco, Dhahran, Saudi Arabia

ID 159 Unpacking Logistics Capability: A Qualitative Exploration of 3PL Practices and Pressures in Indonesia

Katlea Fitriani, Doctor of Science in Management, School of Business and Management, Institut Teknologi Bandung, Indonesia, Department of Management, Faculty of Economics, Parahyangan Catholic University, Bandung, Indonesia
Gatot Yudoko, Professor, School of Business and Management, Institut Teknologi Bandung, Indonesia
Liane Okdinawati, Associate Professor, School of Business and Management, Institut Teknologi Bandung, Indonesia

ID 160 Human Factors in Village Governance Performance: Comparative Insights from Three Independent Villages in Indonesia

Metha Djuwita Supriatna, Doctor of Science in Management, School of Business and Management, Institut Teknologi Bandung, Indonesia, Human Resources Management Apparatus, Politeknik STIA LAN Bandung, Indonesia
Dermawan Wibisono, Professor, School of Business and Management, Institut Teknologi Bandung, Indonesia
Ima Fatima, Lecturer, Faculty of Civil and Environmental Engineering, Institut Teknologi Bandung, Indonesia

ID 161 Reinventing or Refining: Firm Strategies in Response to Entity List Policies

Liping Qian, Professor, School of Economics and Business Administration, Chongqing University, Chongqing, China
Zhaoying Hu, Ph.D Candidate, School of Economics and Business Administration, Chongqing University, Chongqing, China
Qian Yang, Associate Professor, School of Management, Northwestern Polytechnical University, Xi'an, China

ID 163 Adoption of Artificial Intelligence in Recruitment and Selection: Perspectives of HR Professionals in Indonesia

Athira Setira Adil, Doctorate Student, School of Business and Management, Institut Teknologi Bandung, Bandung, Indonesia
Henndy Ginting, Professor, School of Business and Management, Institut Teknologi Bandung, Bandung, Indonesia
Hary Febriansyah, Assoc Professor, School of Business and Management, Institut Teknologi Bandung, Bandung, Indonesia

ID 173 Integrating Statistical Analysis into Maintenance Cost Benchmarking for Oil Storage Tanks

Maulana Ardiansyah, Muhamad Danang Sutawijaya and Rudi Prasetyo, Asset Integrity Management, Oil and Gas Industry, Indonesia Oil and Gas Company, Jakarta, Indonesia

8:00 – 9:30 am, Wednesday, November 26**Onsite Room 2****Doctoral Dissertation Competition/Master Thesis Competition/Lean Six Sigma Competition/Simulation Competition/ Human Factors and Ergonomics Competition**

Session Chair: Dr. Azizur Rahman, Senior Lecturer – Occupational Health And Safety/Ergonomics, School of Property Construction and Project Management, RMIT University, Australia

ID 12 Prevalence of Firm Technology Adoption and Its Multidimensional Influence on ESG Practices for Industrial Sustainability: The Role of Organizational Culture

Iddrisu Mohammed Awal, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia
Au Yong Hui Nee, Associate Professor, Dean, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia
Abdelhak Senadjki, Professor, Deputy Dean, Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Malaysia

ID 20 Reliability of the Electrical Multiple Unit trainset Maintenance in a Manufacturing Company

Vulani Charlotte Ngobeni, Master's student, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa
BBS Makhanya, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa
JHC Pretorius, Postgraduate School of Engineering Management, University of Johannesburg, Johannesburg, South Africa

ID 6 Driving Operational Excellence in Healthcare: The Second Wave of CI Improvement Projects at the University Medical City, Oman

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

ID 165 A Discrete-Event Simulation Approach to Analyzing Congestion in a Fitness Facility

Christine Ray Givertz, John Patrick Esguerra, Alyana Jane Lapuz, Gabriel John De Leon, Department of Industrial Engineering, College of Engineering and Agro-Industrial Technology, University of the Philippines Los Baños, Philippines

ID 23 Mixed Method Approach of Usability Evaluation of Weather Alert Applications in the Middle East

9:30 – 11:00 am, Wednesday, November 26

Onsite Room 1

Supply Chain and Logistics/ Manufacturing Assembly and Design

Session Chair: Dr Sanjoy Paul, Associate Professor, UTS Business School, University of Technology Sydney (UTS), Sydney, Australia

ID 16 Sustainable Logistics Optimization: Minimizing Fuel and Emissions in Vehicle Routing with Time Windows

Mastoor M. Abushaega, Department of Industrial Engineering, College of Engineering and Computer Science, Jazan University, Jazan, Kingdom of Saudi Arabia

ID 56 Generative AI in Supply Chain Decision Making: A Survey and Roadmap for Research

Mohammad Moshref-Javadi, Amlan Baruah, University of Illinois at Urbana-Champaign, USA

ID 74 Integrated Neural Forecasting and Ensemble-Inspired Prediction Strategies for Evolutionary Optimization of a Dynamic Multi-Objective Transportation Problem

Kanchan Kushwaha, Research Scholar, Department of Mathematics, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, 395007, Gujarat, India

Ranjan Kumar Jana, Associate Professor, Department of Mathematics, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, 395007, Gujarat, India

ID 114 Reframing the 'Stagnation' Phase in Disaster-Affected Food Supply Chains: An Integrative Review of Control and Recognition Capabilities Across Temporal and Spatial Dimensions

Coco Xintong Lu, PhD (Integrated) Student, Department of Management, Monash Business School, Monash University, Melbourne, Victoria, Australia

Kohyar Kiazad, Professor, Department of Management, Monash Business School, Monash University, Melbourne, Victoria, Australia

ID 169 The Time-Dependent Electric Vehicle Routing Problem with Time Windows and Parcel Lockers

Vincent F. Yu and Ting-En Huang, Department of Industrial Management, National Taiwan University of Science and Technology, Taipei, Taiwan

Shih-Wei Lin, Department of Information Management, Chang Gung University, Taoyuan, Taiwan

Hsiu-I Ting, Department of Information and Finance Management, National Taipei University of Technology, Taipei, Taiwan

Cheng-Ta Yeh, Department of Information Management, Fu Jen Catholic University, New Taipei City, Taiwan

ID 172 Spare Parts Inventory Optimisation in the Food Manufacturing Sector

Maudy Chahine & Pranistya Vacella, Master of Industrial Engineering, Department of Mechanical Engineering, University of Melbourne, Melbourne, Australia

Dr. Guilherme Luz Tortorella, Senior Lecturer, Department of Mechanical Engineering, University of Melbourne, Melbourne, Australia

ID 202 Ultra-fresh Fashion Supply Chains under Tariff Risks

Shiqing (Frank) Yao, Senior Lecturer, Department of Management, Monash University, Melbourne, Australia

ID 206 Crisis Induced Human Resource Practices for Managing Hospital Surge Capacity amidst a Dual Crisis: An Exploration of the Staffing practices.

Samadi Madiwala, Sessional Lecturer, Victoria University, Melbourne, Australia and Adelaide Institute of Higher Education, Melbourne, Australia

ID 209 A Computational Framework for Integrating DfMA Principles in Timber-Framed Composite Wall Panel Design and Manufacturing

Fraser Paxton, Felix Kin Peng Hui, Lu Aye, PhD Candidate, Associate Professor, Professor, Renewable Energy and Energy Efficiency Group, Department of Infrastructure Engineering, The University of Melbourne, Melbourne, Australia

9:30 – 11:00 am, Wednesday, November 26

Onsite Room 2

Plenary: Sustainability in Engineering and Business**Chair and Speaker I:**

Ferry Jie, PhD, FCES, FCILT
Associate Professor
ECU, School of Business and Law
Edith Cowan University, Western Australia, Australia

Speaker II:

Dr Md Abdus Samad Kamal
Associate Professor
Graduate School of Science and Technology
Gunma University, Kiryu, Japan

Speaker III:

Abbos Sattorov
Chief Specialist
The Center for International Cooperation
Oriental University Tashkent, Uzbekistan

11:00 – 1:00 pm, Wednesday, November 26

Onsite Room 1

Keynotes

Moderator: David Aaron Karr, CPEng, FIIEA, Ex President, Industrial Engineers Australia (IEA), Australia

11:00 – 11:40 am: Keynote IV: Dr Gary Yu-Hsin Chen, Professor, Department of Logistics Management, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan

11:40 – 12:20 pm: Keynote V: Prof Dr Sally Male, Director, Teaching and Learning Lab (TLL), Faculty of Engineering and Information Technology, The University of Melbourne, Australia

12:20 – 01:00 pm: Keynote VI: Mr Daniel Kulawiec, Design & Construction Executive, Telstra InfraCo, Melbourne, Australia

1:00 – 2:00 pm, Wednesday, November 26

Onsite Room 1

Lunch break

2:00 – 5:00 pm, Wednesday, November 26

Port of Melbourne

Site visit

2:00 – 3:30 pm, Wednesday, November 26

Onsite Room 1

Human Factors, Ergonomics and Healthcare Systems

Session Chair: Dr Guilherme Luz Tortorella, Senior Lecturer, Mechanical Engineering, University of Melbourne, Australia

ID 11 Smart Wearables for Chronic Kidney Disease Management

John Mulopa, Xolani Moyo, Blessing Maninga, Tinashe E. Mbiriri and Sibusisiwe Dube, Department of Informatics and Analytics, National University of Science and Technology, Bulawayo, Zimbabwe
Sinokubekezela P. Dube, School of Engineering, The University of Zambia, Lusaka, Zambia

ID 13 Digital Human Modeling (DHM): Applications, Challenges, and Future Directions

Abdullah Ali, Jazan University, Saudi Arabia

ID 21 Ergonomic Consideration of Manually Operated Coconut Milk Extractor

Marianne B. Calayag, Bulacan State University, Malolos City, Philippines

ID 25 Development of an Excellence Framework to Improve Quality in Safety Health and Environment Management for Non-Governmental Organisations in Gauteng Province, South Africa

John Mashala, Lecturer in Department of Operations Management, University of South Africa, Gauteng, South Africa.

ID 63 System Dynamics Modeling of Employee Turnover Among Canadian Nursing Home Workers

Hannah J Wong, Tamara J Daly and Liane R Ginsburg, School of Health Policy & Management
York University, Toronto, Canada
Hsien Seow, Department of Oncology, McMaster University, Hamilton, Canada

ID 70 Application of the WISN Method to Develop a Pharmacist Staffing Framework in a Private Hospital in Myanmar

Aye Thiri Kywe, School of Management, Mae Fah Luang University, Chiang Rai, Thailand
Narat Hasachoo, Integrated Disaster Logistics Management Research Center, School of Management, Mae Fah Luang University, Chiang Rai, Thailand

ID 71 Investigating the Effects of Various Handle Grip Designs on the Distal Arm during Short-Term Hand Tractor Field Operation

Josefa Angelie Revilla, John Kenneth Punongbayan, and Stephanie Caridad Landicho, Department of Industrial Engineering, University of the Philippines Los Baños (UPLB), Laguna, Philippines

ID 157 Digitalized Workflow Smoothing: Case Study of a Stroke Center

Amonsiri Vilasdaechanont, Assistant Professor, Department of Industrial Engineering, Chulalongkorn University, Bangkok, Thailand
Thita Wongwanit, Thitiwut Kitisubkul and Supanut Tansorajprasert, Department of Industrial Engineering
Chulalongkorn University, Bangkok, Thailand

2:00 – 3:30 pm, Wednesday, November 26**Virtual Room 3****Human Factors, Ergonomics and Healthcare Systems**

Session Chair: Raul Ionut Riti, Technical University of Cluj-Napoca, Romania

ID 37 A Work System Model Analysis to Investigate Ergonomic Risk Factors Affecting Level of Perceived Discomfort among Workers of Fishing Tackle Assembly

Hazel A. Caparas, Assistant Professor, Department of Industrial Engineering, Bulacan State University, City of Malolos, Bulacan, Philippines

ID 69 Assessing Impact of Environmental Enablers in Digital Readiness for Industry 4.0 in Healthcare: Using a hybrid PLS-SEM and ISM Method

Jannatul Ferdous Disha, Kazi Md. Tanvir Anzum, MD Faiaz Zaman Dehan, Istiak Mahmud, MD. Mahfuzur Rahman Masum, Department of Industrial Engineering and Management, Khulna University of Engineering & Technology, Khulna-9203, Bangladesh

ID 143 Evaluation of Performance Measurement based Contractor Safety Management System (CSMS) in the Car Manufacturing Industry

Yosia Inendatama, Master Student, Study Program Master of Safety and Risk Engineering, Shipbuilding Institute of Polytechnic Surabaya
Dewi Kurniasih, Assistant Professor, Study Program Master of Safety and Risk Engineering, Shipbuilding Institute of Polytechnic Surabaya
Anda Iviana Juniani, Associate Professor, Study Program of Design and Manufacture Engineering
Department of Marine Mechanical Engineering, Shipbuilding Institute of Polytechnic Surabaya, Indonesia

ID 145 Prioritizing Battery-as-a-Service Operational Strategies using Fuzzy Delphi: Sustainable Mobility Lessons with India-Centric findings and Global EV Implications

Upasana Haldar, Vinod Gupta School of Management, Indian Institute of Technology, Kharagpur, WB- 721302, India
Rudra Prakash Pradhan, Vinod Gupta School of Management, Indian Institute of Technology, Kharagpur, WB- 721302, India
Himanshu Chandra, Vinod Gupta School of Management, Indian Institute of Technology, Kharagpur, WB- 721302, India

ID 170 AI-Driven Support Frameworks for Deep-Tech Startups in University-Based Incubators

Mohd Tabrej Alam and Rudra Prakash Pradhan, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, West Bengal, India

ID 207 Influence of exposure to Facebook gambling advertisements on the attitudes and behaviors of undergraduate students in Manila

Nestor R. Ong, Professor, Department of Industrial Engineering, University of Santo Tomas, Sampaloc, Manila, Philippines
Denzel Jess Mendez, David Andrei Pinto, Andrea Kyle Phua, Edward Joseph Villa, Faculty of Engineering, Industrial Engineering Department, University of Santo Tomas, Sampaloc, Manila, Philippines

3:30 – 5:00 pm, Wednesday, November 26**Onsite Room 1****Panel: Women in Industry and Academia Panel****Panel Chair:**

Dr Nilupa Herath
Lecturer, Department of Infrastructure Engineering
University of Melbourne, Australia

Speaker I:

Rahima Khatun
Electrical Engineer at K1 Save Energy &
Founder and CEO, Leading Women Australia and D RYMA Group
Melbourne, Australia

Speaker II:

Dr Achini Peiris
Senior Consultant, Digital Enablement, Aurecon
Melbourne, Australia

Speaker III:

Dr Alka Nand
Lecturer
Department of Management, Monash Business School
Monash University, Victoria, Australia

3:30 – 5:00 pm, Wednesday, November 26**Onsite Room 2**

3:30 – 5:00 pm, Wednesday, November 26**Virtual Room 3****Supply Chain and Logistics****Session Chair:** Aqib Islam, IEOM**ID 72 Improvement Model to Increase On Time Delivery Applying SLP and MRP Tools in Distribution Company**

Raiza Lizett Rodriguez-Rojas, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Ximena Nicolle Becerra-Rojas, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Gino Viacava-Campos, Research Professor, Carrera de Ingeniería Industrial, Universidad de Lima, Perú
Jorge Antonio Corzo-Chavez, Research Professor, Carrera de Ingeniería Industrial, Universidad de Lima, Perú

ID 90 The Human Side of Perfection: A Hermeneutic Phenomenology on the Logistics Perfect Order in Practice

Melecio A. Sy, Jr., DBM, University of Mindanao, Davao City Philippines

ID 155 Improvement of the Purchasing Process in a Spare Parts Trading Company through Forecasting, Supply Policy and RPA

Maria Fernanda Gómez Tello, Hikaru José Miguel Salcedo Baba, José Antonio Taquía Gutiérrez and María Teresa Noriega-Aranibar, Carrera de Ingeniería Industrial, Universidad de Lima

ID 171 Empirical Documentation of Operational Performance Gains from Blockchain and AI Integration: A SCOR Model Analysis of Industry Cases

C. Kalpani Dissanayake, Assistant Professor, Department of Business & Economics, Pennsylvania State University, Media, USA

5:00 – 6:30 pm, Wednesday, November 26**Onsite Room 1**

5:00 – 6:30 pm, Wednesday, November 26**Virtual Room 3**

Quality, Reliability and Maintenance**Session Chair:****ID 61 Quality Management Practices in The Context of Industry 5.0**

Nondumiso Goodness Mhlongo and Nita Inderlal Sukdeo, Department of Quality and Operations Management, Faculty of Engineering and the Built environment, University of Johannesburg, Johannesburg, South Africa

ID 62 Factors shaping Quality 5.0 adoption in South Africa: Exploratory Factor Analysis

Nondumiso Goodness Mhlongo and Nita Inderlal Sukdeo, Department of Quality and Operations Management, Faculty of Engineering and the Built environment, University of Johannesburg, Johannesburg, South Africa

ID 64 Applying SWOT Analysis to Examine Quality 5.0 Adoption in the South African manufacturing sector

Nondumiso Goodness Mhlongo and Nita Inderlal Sukdeo, Department of Quality and Operations Management, Faculty of Engineering and the Built environment, University of Johannesburg, Johannesburg, South Africa

ID 66 Addressing the High Failure Rate Of Haulage with Large Shopping Centers: Developing Country Approach for Improving Maintenance of Haulage

Bantubenzani Nelson Mdlolo, Lecturer, Department of Industrial Engineering and Management Engineering, University of South Africa (UNISA), Johannesburg, South Africa

Matshepo Mokoka, Secretary, Department of Industrial Engineering and Management Engineering, University of South Africa (UNISA), Johannesburg, South Africa

November 27, 2025 (Thursday)

8:00 – 9:00 am, Thursday, November 27**Onsite Room 1****Sustainability, Green Systems and Energy**

Session Chair: Dr. Nilupa Herath, Lecturer, Department of Infrastructure Engineering, University of Melbourne, Australia

ID 2 Categorization and Recycling of Solid Waste Generated by Health Care Entities in Rajshahi City Area

Md. Kamrul Hasan Chowdhury, Swadip Chandra Shil, Arabinda Kumar Sarker, Tapas Barai, Protik Kumar Das, Department of Mechanical Engineering, Rajshahi University of Engineering and Technology, Rajshahi 6204, Bangladesh
Farhan Hossen, BRAC Business School, BRAC University, Dhaka, Bangladesh.
Papia Akter, Deputy Management Director (Finance), Matrix Sweaters Ltd, Gazipur, Bangladesh

ID 5 Mapping the Cost and Revenue Structure of Circular Economy Business: A Framework Based on LLM-Assisted Scoping Review

Hirotsugu Kitada, Associate Professor, Faculty of Business Administration, Hosei University, Tokyo, Japan

ID 9 Factors Influencing the Adoption of Photovoltaic Panels as a Method of Sustainable Construction Material: A Case of Zambia

Sinokubekezela P Dube, Department of Civil & Environmental Engineering, The University of Zambia

Lusaka, Zambia

Sibusisiwe Dube, Department of Informatics and Analytics, National University of Science and Technology

Bulawayo, Zimbabwe

ID 32 Evaluating Smart Technology Integration In Landscape Construction: Enhancing Efficiency And Sustainability In K. Atoll Resort Development: Case Study Of Maldives

Muhammad Shahzeb Khan, Senior Lecturer, QISB, Villa College, Maldives

ID 58 Mini-hydro feasibility, design and implementation at Dalung Village, Vanimo

Stoney Daniel, Department of Mechanical Engineering, Papua New Guinea University of Technology, Lae, Papua New Guinea

Nigel Palau, Department of Mechanical Engineering, Papua New Guinea University of Technology, Lae, Papua New Guinea

Mr. Brian N'Drelan, Department of Mechanical Engineering, Papua New Guinea University of Technology

ID 91 Aligning Incentives with Outcomes: How Green Procurement Shapes Innovation Quality and Supply Chain Emissions

Xu Jianxiang, Lecturer, School of Business, Singapore University of Social Sciences, Singapore

Zhao Qitong, Senior Lecturer, School of Business, Singapore University of Social Sciences, Singapore

ID 113 Digital Automation for Scope 3 Emissions Reporting of Complex Value Chains: A Machine Learning Based Approach

Ishara Mudiyansege, School of Business, University of Wollongong, Wollongong, 2522, NSW, Australia
Komudya Kumari, School of Business, University of Wollongong, Wollongong, 2522, NSW, Australia
Matthew Pepper, Professor, School of Business, University of Wollongong, Wollongong, 2522, NSW, Australia
Clayton McDowell, Associate Director Sustainability, Infrastructure and Property Division (IPD), University of Wollongong, Wollongong, 2522, NSW, Australia
Anura De Zoysa, Associate Professor, School of Business, University of Wollongong, Wollongong, 2522, NSW, Australia

ID 115 Unveiling the Overlooked: Challenges and Drivers for Higher Education Institutes in Scope 3 Emission Reporting

Komudya Aththudawe Gamachchige, Faculty of Business and Law, University of Wollongong, NSW, Australia
Ishara Mudiyansege, Faculty of Business and Law, University of Wollongong, NSW, Australia
Matthew Pepper, Professor, Faculty of Business and Law, University of Wollongong, NSW, Australia
Clayton McDowell, University of Wollongong, NSW, Australia
Anura De Zoysa, Associate Professor, Faculty of Business and Law, University of Wollongong, NSW, Australia

ID 175 Energy Efficiency in Very Large Gas Carrier (VLGC) by Implementing Combined Energy Saving Device (ESD): Accelerating Pathways to Net Zero Emission 2050

Santi Manurung, Kemas Ahmad Widad, Mira Tyas Annisa, Sustainability, Directorate of Business Planning
PT Pertamina International Shipping, Jakarta, Indonesia
Sidha Asmawangi, Muhammad Shidqi Hibatullah, Lizar Afiq Fadli, Agung Ibrahim, Aden, Directorate of Fleet, PT Pertamina International Shipping, Jakarta, Indonesia

8:00 – 9:00 am, Thursday, November 27**Onsite Room 2****Simulation, Optimization and Productivity Improvement**

Session Chair: Dr Aman Ullah, Lecturer in Management and Marketing, University of Melbourne, Melbourne, Australia

ID 67 Genetic Algorithm with The Square Mutation Method for Fair Load Distribution and Resource Assignment in Nurse Scheduling at a Pediatric Intensive Care Unit

Hamoud Bin Obaid, King Saud University, Saudi Arabia

ID 109 Simulation and Optimization Approaches for Productivity Improvement in Soft-Drink Industry Wastewater Management

Hifza Waseem, Department of Food Engineering, NED University of Engineering & Technology, Karachi, Pakistan

ID 117 Optimal Cooking Scheduling in Mass Cooking Facilities Considering Hygiene and Operational Constraints

Yuki Ozaki, Department of Industrial Engineering and Management, Graduate School of Engineering, Kanagawa University, Kanagawa, Japan
Hideki Katagiri, Department of Industrial Engineering and Management, Faculty of Engineering, Kanagawa University, Kanagawa, Japan

ID 158 An Optimization of Charging Infrastructure Locations for Public Transport Electrification: A MILP-Based Approach

Gopi R, Lakshay, Saurabh Pratap, Department of Mechanical Engineering, Indian Institute of Technology, Varanasi, India

ID 162 Genetic Algorithm with The Square Mutation Method for Fair Load Distribution and Resource Assignment in Nurse Scheduling at a Pediatric Intensive Care Unit

Hamoud Bin Obaid, Professor, Department of Industrial Engineering, King Saud University, Riyadh, KSA

ID 208 Electric Bus Charger Scheduling with Peak Load & Battery Degradation Costs under Mixed-Mode Operation

Gopi R, Lakshay, Saurabh Pratap, Department of Mechanical Engineering, Indian Institute of Technology, Varanasi

9:00 – 11:00 am, Thursday, November 27

Onsite Room 1

Plenary: Global Business Management Education**Chair:**

Dr Arshia Kaul
Associate Lecturer
Management and Marketing
University of Melbourne, Melbourne, Australia

Co-chair:

Dr Aman Ullah
Lecturer in Management and Marketing
University of Melbourne, Melbourne, Australia

Speaker I:

Dr Jesse Olsen
Senior Lecturer, Department of Management and Marketing
Faculty of Business and Economics
University of Melbourne, Australia

Speaker II:

Dr Michael "Maxx" Schmitz
Curriculum Designer, Faculty of Arts
University of Melbourne, Australia

Speaker III:

Ts. Dr. Mehran Doulat
Director of Asia-Pacific Centre for Operational Excellence (APCOE)
Universiti Teknikal Malaysia, Melaka
Malaysia

9:00 – 11:00 am, Thursday, November 27

Onsite Room 2

Engineering Management and Project Management/ Case Studies and Best practices

Session Chair: Mohan Ganavarapu (CPEng, MII EA), Federal President, Industrial Engineers Australia (IEA), Australia

ID 41 Strategic Planning for Bike-Train Integration: A Comparative Cost Analysis of Strategies Using Continuous Approximation

Regine A. Tejada, School of Civil Engineering, The University of Sydney, New South Wales, Australia
Department of Industrial Engineering and Operations Research, University of the Philippines, Quezon City, Philippines
Andrés Fielbaum, School of Civil Engineering, The University of Sydney, New South Wales, Australia

ID 135 The Mediating Role of Digital Transformation Between Dynamic Capabilities and Organisational Resilience in the Construction Sector

Navodi Wijayarathne, Indra Gunawan and Frank Schultmann, Adelaide Business School, The University of Adelaide, Adelaide, SA 5005, Australia

ID 144 Development and Implementation of an Intermediate Frequency Video Monitoring System for Real-Time Error Detection and Localization in Broadcast Networks

Febwin E Villaceran, University Dean, College of Business Administration and Accountancy, Philippine Christian University, Manila, Philippines

ID 151 Pipe Material Properties and their Role in Water Leakage Behaviour through Longitudinal Cracks: An Experimental and Numerical Analysis to Reduce Non-Revenue Water

Didier Ilunga, PhD Student and Senior Pipeline Engineer, Dept. Of Pipeline Asset Management, Rand Water, Johannesburg, South Africa
Dinka Mergesa and Daniel Madyira, Dept. Of Civil Engineering Science/Dept. Mechanical Engineering, University of Johannesburg, South Africa

ID 168 How to efficiently use BPMN for stakeholders of Product Development Process

Yoon, Kyong Ryol, Teresa Montrone, Hyundai Motors R&D, Esteco, South Korea

ID 15 Proposal of a Maturity Assessment Approach for the Implementation of an Environmental Monitoring System
Khalid Benhida, Ahmed Boulahoual, Nouredine Dahmani, Sanaa El Hidaoui, Cadi ayyad University, UCA, EST Safi/LAPSSII, Route Dar Si-Aïssa BP 89 Safi, Marrakesh, Morocco

ID 17 Adaptive Neighborhood Search with Constraint Programming For Hybrid Flow Shop Sequence Dependent Group Scheduling Problems

Ahmed Boulahoual, Khalid Benhida, Hiacham Oualla, University Cadi ayyad, UCA, EST de Safi, LAPSSII, Marakech, Morocco

11:00 – 1:00 pm, Thursday, November 27

Onsite Room 1

Keynotes

Moderator: Dr Imran Ali, Senior Lecturer in Operations and Innovation Management, School of Business and Law, Central Queensland University, Australia

11:00 – 11:40 am: Keynote VII: Dr Tetsuo Yamada, Dr Eng., Professor, Program Chair of Management Science and Social Informatics, Director of Laboratory for Environment-Conscious Life Cycle Design with Products Information, Department of Informatics, Graduate School of Informatics and Engineering, The University of Electro-Communications, Japan

11:40 – 12:20 pm: Keynote VIII: Dr. Nurbek Kurbonov, PhD, Associate Professor, Tashkent State Technical University (TSTU), Tashkent, Uzbekistan

12:20 – 01:00 pm: Keynote IX: Dr David Paynter, MBA Meng (Adv. Manuf. Tech) BE (Indust.) (Hons) GC (Learn & each), UniMelb, Monash, Chisholm & Swinburne, Australia

1:00 – 2:30 pm, Thursday, November 27

Onsite Room 1

Award Luncheon

2:30 – 4:00 pm, Thursday, November 27

Onsite Room 1

Workshop 2: Industry 4.0: Digital Manufacturing Made Easy!

Facilitator:

Vikram Sachdeva
Director – Manufacturing Excellence and Transformation
Swinburne University of Technology
Melbourne, Australia

2:30 – 4:00 pm, Thursday, November 27

Onsite Room 2

2:30 – 4:00 pm, Thursday, November 27

Virtual Room 3

Session Chair: Aqib Islam, IEOM

Case Studies and Best Practices

ID 137 Raising Project Delivery Reliability: An Integrated Baseline Validation Model for Industrial Engineering Using Design Science Research

Michael Bosch, Jan Harm C Pretorius, Leon Pretorius, University of Johannesburg, South Africa

Engineering Education and Curriculum Improvement

ID 36 Development of a Computer Aided Learning Tool for PIC18F4550 Microcontroller

Mainur Rahman Tarafder, ICT, BUET

Engineering Management and Project Management

ID 176 Project Closeout: Essential but Neglected Practice in Construction Project Management

Iliya A. Imil, Directorate of Physical Facilities, University of Jos, Nigeria

Nacit Zwalda, Directorate of Physical Facilities, University of Jos, Nigeria

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

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

ID 204 Exit Facilities and Emergency Preparedness in Academic Space: A Case Study

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

Terna M. Iornem, Directorate of Physical Facilities, University of Jos, Nigeria

Halima G. Auta, Directorate of Physical Facilities, University of Jos, Nigeria

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

Facilities Planning and Layout

ID 136 Drivers of compartmentalization for fire safety in high-rise buildings.

Lungisile Siso Hlophe, Nelson Mandela University, South Africa

Lean Six Sigma and Operations Excellence

ID 138 Lean Six Sigma for the Optimization of the Operations Area of a Microenterprise in the Alcoholic Beverage Sector

María Alexandra Sarmiento Díaz, Faculty of Industrial Engineering, University of Lima, Lima, Perú

Valeria Velazco Collantes, Faculty of Industrial Engineering, University of Lima, Lima, Perú

ID 212 Designing Sustainable Quality Systems: Moving from Compliance to Culture

Sainyam Arora, Quality Assurance & Systems Engineer, Johnson Matthey, USA

4:00 – 5:00 pm, Thursday, November 27

Onsite Room 1

4:00 – 5:00 pm, Thursday, November 27

Virtual Room 3

Session Chair:

Simulation, Optimization and Productivity Improvement

ID 65 Simulation-Based Production Process Modeling and Performance Analysis

Dereje Geleta Oljira, Department of Industrial Engineering, Faculty of Technology, Wollega University, Ethiopia

ID 167 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, Philippines

Sustainability, Green Systems and Energy

ID 142 Sustainability In Industry 4.0 Context: A Meta-Analysis Review

Mammolele Malomane, University of Johannesburg, South Africa

Chuks Medoh, University of South Africa, South Africa

Jan Harm C Pretorius, University of Johannesburg, South Africa

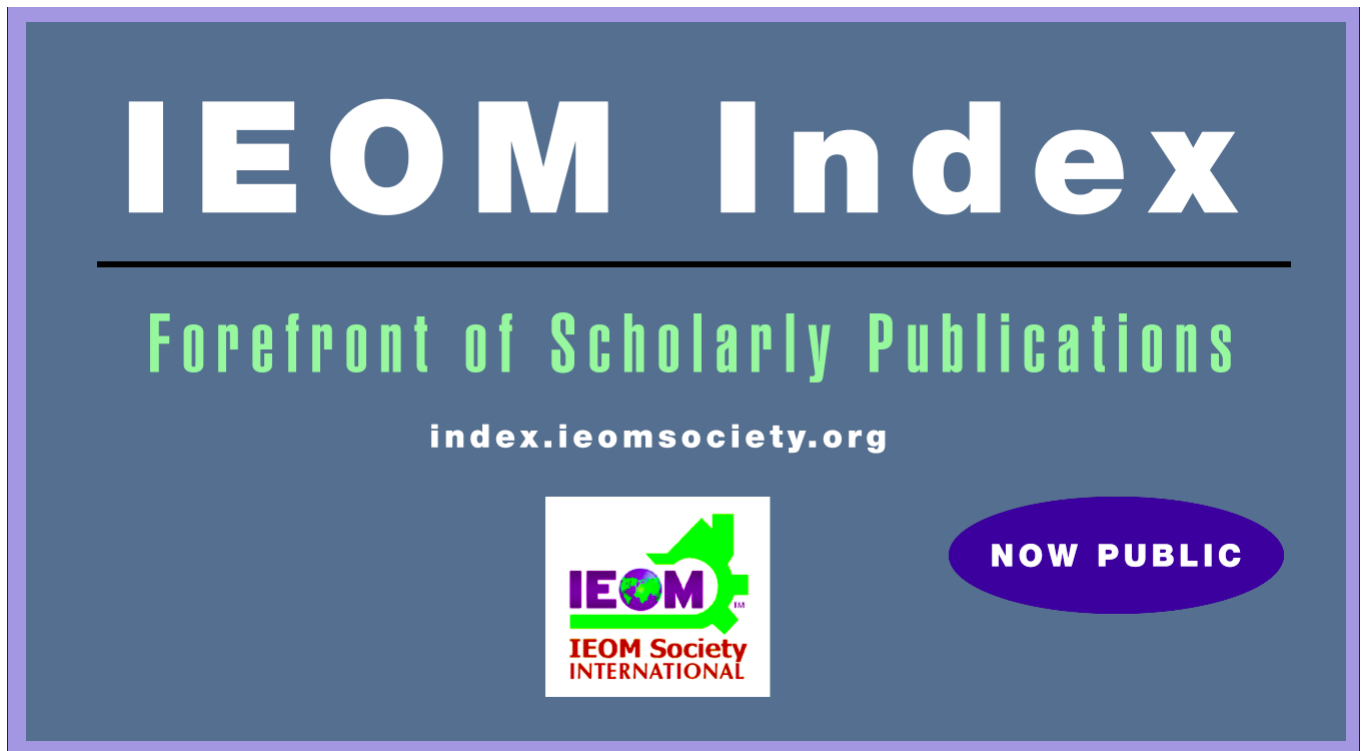
ID 205 The Policy for Sustainability, Security, and Green Growth with Renewable Energy Using Green Microfinance

Mohit Kumar Gautam, Rekhi Centre of Excellence for the Science of Happiness, Indian Institute of Technology Kharagpur, West Bengal, India

Rudra Prakash Pradhan, Vinod Gupta School of Management, Indian Institute of Technology Kharagpur

West Bengal, India

Atasi Mohanty, Rekhi Centre of Excellence for the Science of Happiness, Indian Institute of Technology Kharagpur, West Bengal, India



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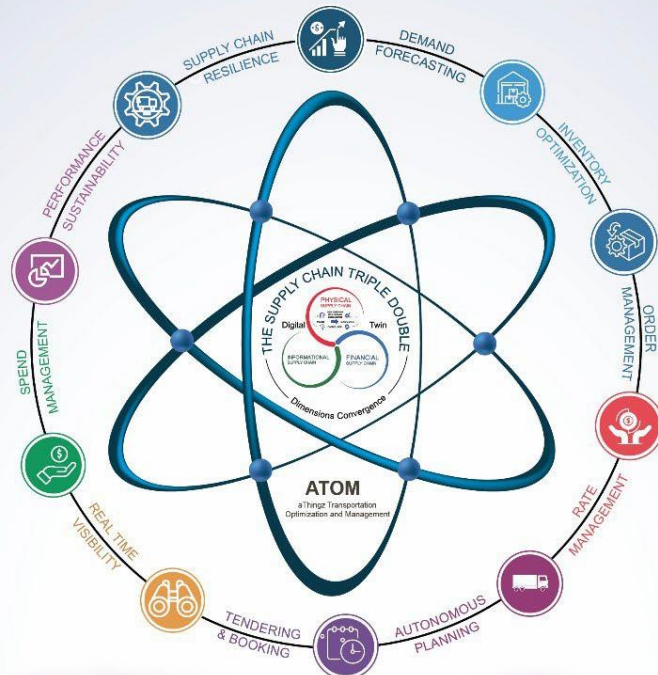
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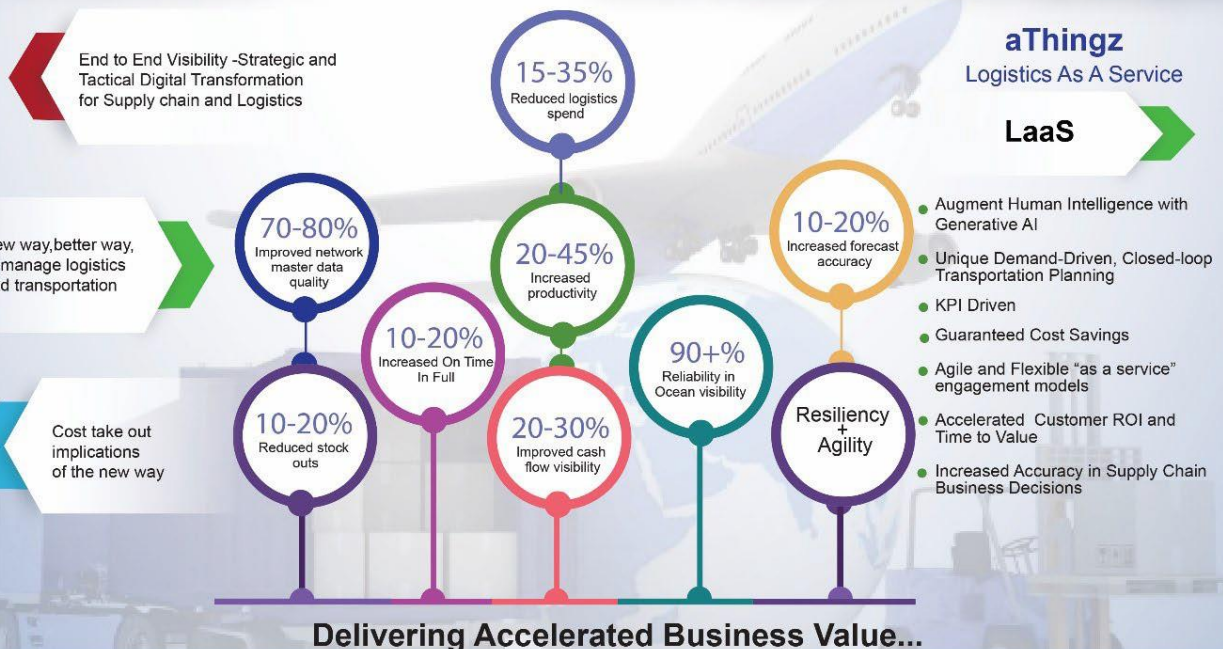
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Faculty Advisors

Dr. Lee Wells

Associate Professor
Industrial and Entrepreneurial Engineering &
Engineering Management
Western Michigan University
Kalamazoo MI, USA

Dr. Jim Burns

Assistant Professor
Industrial and Entrepreneurial Engineering &
Engineering Management
Western Michigan University
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Lean Six Sigma Certification
Lawrence Tech Chapter Visit



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Faculty Advisor:

Dr. Simone Kubowitsch
 Professor for Personnel Psychology
 School of Business
 Technical University of Applied Sciences Augsburg
 Augsburg, Germany

University or Department Website: <https://www.tha.de/>
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Dr. Abdelaziz Berrado
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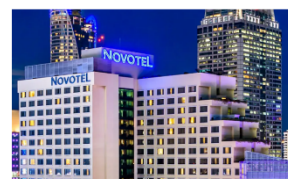
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3rd GCC International Conference on Industrial Engineering & Operations Management
Tabuk, Saudi Arabia, Dec. 1-3, 2025
Host & Venue: University of Tabuk



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



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