



IEEE International Conference on Industrial Engineering  
and Engineering Management (IEEM)

# IEEM2024

**Bangkok, Thailand**

15 – 18 December 2024

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



## Eastin Grand Hotel Phayathai

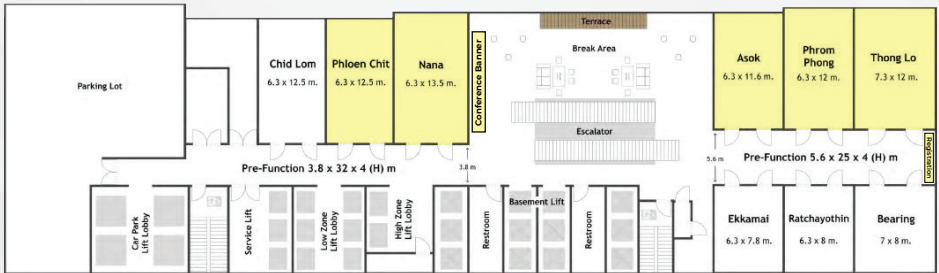
Level 4 & 6

The Unicorn Building, 18 Phaya Thai Rd, Thung Phaya Thai, Ratchathewi, Bangkok 10400, Thailand

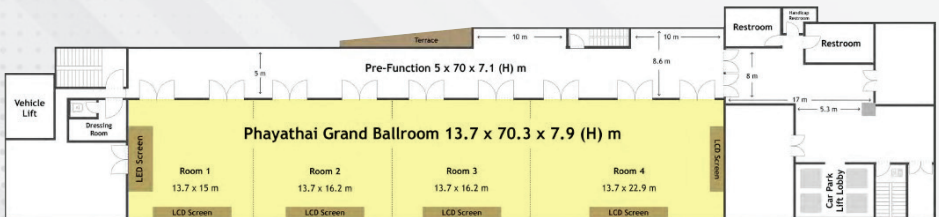
Travel by Public Transportation

- BTS Skytrain: Phayathai BTS Station, Exit 1
- Public Bus: Nos. 29, 34, 36, 54, 59, 172, 177, 187

### Floor Plan (4<sup>th</sup> Floor)



### Floor Plan (6<sup>th</sup> Floor)



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SCAN FOR SCHEDULE FINDER

# WELCOME MESSAGE

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*President  
Rajamangala University of  
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**XIE**

*City University of Hong Kong*

## WELCOME MESSAGE

Dear Esteemed Colleagues and Participants,

We are pleased to extend a warm welcome to you for the IEEE 2024 International Conference on Industrial Engineering and Engineering Management (IEEM2024), which is held from December 15 – 18, 2024, in Bangkok, Thailand.

The advancement of knowledge and research in industrial engineering and engineering management has always been the aim of the IEEM conference. IEEM2024 is anticipated to be another exceptional occasion, bringing together professionals, academics, and practitioners from around the world to exchange knowledge and ideas, encouraging cooperation and creativity. We are pleased to report that an astounding 850 submissions from more than 52 countries have been received this year. 550 entries were accepted for presentation and inclusion in the conference proceedings.

The accepted papers showcase state-of-the-art knowledge analysis, insights, and expertise that will shape the topics of our conference sessions. The core of IEEM is embodied by the breadth of topics covered, the depth of expertise, the stringent review process and the collaborative spirit of our presenters. The IEEM conference proceedings have been effectively released on IEEE Xplore digital library since the conference's founding in 2007.

Now in its eighteenth run, we are thankful for the interests that we have received thus far and we hope to see this meeting grow exponentially in the coming years. We hope our meeting has not only helped to gain insights, but also initiated our participants to develop fruitful connections within the community.

Additionally, we would like to express our sincere gratitude to the local committees composed of IEEE TEMS local chapter members, whose commitment and dedication have been crucial in ensuring the success of the event. We deeply appreciate their partnership and contributions.

Thank you for being a part of IEEM2024. We hope you find this gathering both productive and inspiring and we look forward to your active participation in the discussions and activities that lie ahead.

# COMMITTEES

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*Rajamangala University of Technology  
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*Shanghai Jiao Tong University*



## Workshop and Welcome Reception

Sunday, 15 December 2024 | 15:00 – 18:30

**15:00 – 17:00**

Workshop - Publishing in the  
Journal of Operations Management  
Level 4, Nana

**17:00 – 18:30**

Welcome Reception  
Level 6, Siam

## Opening and Keynote Presentations

Mon, 16 December 2024 | 08:30 - 10:30 | Level 6, Phayathai Ballroom

**08:30 - 09:00**

### Opening and Welcome Address

Guest Speaker

**Dr. Supavadee ARAMVITH**

*Associate Professor*

*Department of Electrical Engineering at Chulalongkorn University*



**09:00 - 09:45**

### Keynote Address

"Industry and Manufacturing Strategies and  
Technologies in the era of AI - Bridging Digital Horizons."

**Michael W. MCLEAN**

*Managing Director*

*McLean Management Consultants Pty Ltd (Australia) Establish 1988*



**09:45 - 10:30**

### Keynote Address

"Designing Products for Adaptability"

**Dr. Tyson R. BROWNING**

*Operations Management*

*Neeley School of Business at Texas Christian University*



# HIGHLIGHTS

## Closing, Awards and Conference Dinner

Tues, 17 December 2024 | 17:30 - 21:00 | Level 6, Phayathai Ballroom

**17:30 – 18:00**

Guest Arrival

**18:00 – 19:30**

Dinner Address and Dinner

**19:30 – 20:00**

Performance

**20:00 – 20:30**

IEEM2024 Awards Presentation

**20:30 – 20:45**

Performance

**20:45 - 21:00**

Next Meeting Presentation

IEEM2025 at Melbourne Convention and Exhibition Centre, Australia



## Michael W. MCLEAN

*Managing Director*

*McLean Management Consultants Pty Ltd (Australia) Establish 1988*

**"Industry and Manufacturing Strategies and Technologies in the era of AI - Bridging Digital Horizons."**

Monday, 16 December 2024 | 09:00 - 09:45  
Level 6, Phayathai Grand Ballroom

### About the Speaker

Michael is an internationally recognized speaker, author with co-authored academic journal research on his management consulting industry clients' cases-in-point in managing, preventing and solving complex supply chain client projects.

An Academic Fellow - Certified Management Consultant (ICMCI); Fellow Australian Institute of Company Directors; Senior Fellow - Australian Graduate School of Leadership Life Member Fellow AOQ and Dr JM Juran Medalist, Australian Defence Industry Management Consultant.

Lectured in the Master of Science University of Wollongong for Operations Management and Supply Chains. Guest industry lecturer in operations management, supply chains and project management for Macquarie University Business Schools; Sydney University Continuing Education; Western Sydney University, Thammasat University and RMIT Thailand. Swinburne University Competitive Systems, Practices and Leadership qualifications. Recent Australian Senate submission with University of NSW for Developing a Sovereign Tech Sector.

Member ISO TC 176 Chair's Strategy Advisory Group, ISO 9001 Revision WG 29 and ISO 9001 Brand Integrity TG02 Member.

## **"Industry and Manufacturing Strategies and Technologies in the era of AI - Bridging Digital Horizons."**

Artificial Intelligence (ISO 42001:2023) provides businesses, industry and manufacturing engineers, both risks and opportunities for assessment, adaption and adoption for providing incremental and step-change productivity and quality improvements.

However, AI as with all technologies and IT enabled business transformations, requires organisations to define and stabilized processes or, make what is done badly, just quicker.

Four aspects for management, manufacturing and industrial engineers along with university and technical college curricula to consider:

- AI and Intelligent Process Automation potentially offer both an incremental process change and step-change innovation for better improving supply chains
- Industry reality – the challenges for intelligent manufacturing but relevance of industrial engineering in this context for innovation and intelligent manufacturing
- Interoperability and interchangeability with International Organization for Standardization (ISO) as guided for implementing ISO 42001:2023 "AIMS"
- Innovative manufacturing by revitalising and respect for industrial engineering discipline when facing a plethora of AI based methodologies and IT enablers not constrainers
- Implications for technical colleges and pathways to undergraduate curriculum design, development and delivery blending AI with management, manufacturing and industrial engineering disciplines.

He will share insights from IT enabled business transformation such as AI, IPA and AVA technologies and digitisation engagements from defence, manufacturing and government.



## Dr. Tyson R. BROWNING

*Operations Management  
Neeley School of Business at Texas Christian University*

### "Designing Products for Adaptability"

Monday, 16 December 2024 | 09:45 - 10:30  
Level 6, Phayathai Grand Ballroom

#### About the Speaker

Professor Tyson Browning is an internationally recognized researcher, educator, and consultant. He is a full Professor of Operations Management in the Neeley School of Business where he conducts research on managing complex projects (integrating managerial and engineering perspectives) and teaches courses on project management, operations management, risk management, and process improvement in TCU's highly rated MBA program (e.g., The Economist, Princeton Review).

Tyson has trained and advised several organizations, often in industries such as aerospace concerned with developing complex systems using complex organizations and processes. He earned a B.S. in Engineering Physics from Abilene Christian University before two Master's degrees and a Ph.D. from the Massachusetts Institute of Technology.

Tyson's research results have been published in journals such as IEEE Transactions on Engineering Management, Information Systems Research, Journal of Operations Management, Manufacturing & Service Operations Management, MIT Sloan Management Review, Production & Operations Management, Project Management Journal, and Systems Engineering, among others. He is the co-author of the book Design Structure Matrix Methods and Applications and was the co-Editor-in-Chief of the Journal of Operations Management from 2018 - 2023.

## ”Designing Products for Adaptability”

Developing products that are more easily adaptable to future requirements can increase their overall value. Product adaptability is largely determined by choices about product architecture, especially modularity. Because it is possible to be too modular and/or inappropriately modular, deciding how and where to be modular in a cost-effective way is an important managerial decision.

I will present a model that accounts for trade-offs between components' option values and inter-module interface costs, thereby supporting product architecture decisions at the component level. I will show an example of optimizing a measure of architecture adaptability value (AAV) at one of four firms that re-architected an existing product to increase its profitability.

The evidence suggests that firms can benefit from designing products for adaptability, but that how they do so matters. I will share several key insights pertaining to modularity and adaptability that emerged from this research.

## Supply Chain Management 1

16/12/2024 11:00 AM-01:00 PM L4 Phloen Chit

**Session Chair(s):** Y.P. TSANG  
The Hong Kong Polytechnic University  
Aries SUSANTY  
Diponegoro University

### **IEEM24-F-0021/Loop-based Maritime Transport Optimization in Swedish National Freight Transport Models**

Jonas Westin<sup>1</sup>, Leif Olsson<sup>\*2</sup>, Per Åhag<sup>1</sup>

<sup>1</sup>Umeå University, Sweden

<sup>2</sup>Mid Sweden University, Sweden

### **IEEM24-F-0035/Unlocking IoT Potential: A Holistic Analysis of Implementation Success in Automotive Supply Chains**

Avinash Chauhan<sup>\*1</sup>, M. Vimala Rani<sup>1</sup>

<sup>1</sup>Indian Institute of Technology Kharagpur, India

### **IEEM24-F-0040/Mapping the Barrier Factor of Blockchain-based Halal Traceability System Adoption Among Chicken Meat-based Food Supply Chain Actors**

Aries Susanty<sup>\*1</sup>, Mohammad Dimas Yahya<sup>1</sup>, Nia Budi Puspitasari<sup>1</sup>, Diana Puspita Sari<sup>1</sup>, Zainal Fanani Rosyada<sup>1</sup>, Sumunar Jati<sup>2</sup>

<sup>1</sup>Diponegoro University, Indonesia

<sup>2</sup>Assessment Institution of Food, Drugs and Cosmetics Majelis Ulama Indonesia, Indonesia

### **IEEM24-F-0050/Optimizing Sustainable Production in the Readymade Garments Industry: A Multi-objective Approach**

Md Al Amin<sup>\*1</sup>, Roberto Baldacci<sup>1</sup>

<sup>1</sup>Hamad Bin Khalifa University, Qatar

### **IEEM24-F-0068/Unveiling Roadblocks to ESG Compliance in Supply Chain Management**

Y.P. Tsang<sup>\*1</sup>, Yanlin Li<sup>1</sup>, Cho Yu Wong<sup>1</sup>, Pornthipa Ongkunaruk<sup>2</sup>

<sup>1</sup>The Hong Kong Polytechnic University, Hong Kong SAR

<sup>2</sup>Kasetsart University, Thailand

### **IEEM24-F-0076/Used Product Prioritization in Reuse Process Using QUBO Model**

Tatsuya Inaba<sup>\*1</sup>

<sup>1</sup>Kanagawa Institute of Technology, Japan

### **IEEM24-F-0097/Relief Facility Locations Using P-median Weight Minimax Model**

Wichitsawat Suksawat Na Ayudhya<sup>\*1</sup>

<sup>1</sup>King Mongkut's Institute of Technology, Ladkrabang, Thailand

### **IEEM24-F-0166/Integrating Digital Product Passports in Multi-level Supply Chain for enabling Horizontal and Vertical Integration in the Circular Economy**

Mintra Thunyaluck<sup>1</sup>, Omid Fatahi Valilai<sup>\*1</sup>

<sup>1</sup>Constructor University, Germany

## Reliability & Maintenance Engineering 1

16/12/2024 11:00 AM-01:00 PM L4 Nana

Session Chair(s): **Yaqiong LV**  
Wuhan University of Technology

### **IEEM24-F-0104/Noise Mask Network-based Feature Learning of Vibration Signals for Machinery Fault Diagnosis Under Multiple Non-ideal Conditions**

Mengqi Miao<sup>1</sup>, Jianbo Yu<sup>1</sup>

<sup>1</sup>Tongji University, China

### **IEEM24-F-0105/Dynamic Contrast Analyzer for Generating Health Indicators in Machinery Monitoring Under Time-varying Speed Conditions**

Wenyi Liu<sup>1</sup>, Jianbo Yu<sup>1</sup>

<sup>1</sup>Tongji University, China

### **IEEM24-F-0206/Reliability–redundancy Allocation Problem with Homogeneous and Heterogeneous Redundant Subsystems**

Yongzheng Tian<sup>1</sup>, Zhiqiang Cai<sup>1</sup>, Shubin Si<sup>1</sup>, Honghao Song<sup>1</sup>

<sup>1</sup>Northwestern Polytechnical University, China

### **IEEM24-F-0435/A Conjoint Analysis on the Preference of Pipe Welding Materials and Procedures**

Erick D. Dela Cruz<sup>1</sup>, Yogi Tri Prasetyo<sup>2,3</sup>, Irene Dyah Ayuwati<sup>3</sup>, Maela Madel L. Cahigas<sup>1</sup>, Reny Nadlifatin<sup>4</sup>

<sup>1</sup>Mapúa University, Philippines

<sup>2</sup>Yuan Ze University, Taiwan

<sup>3</sup>University of Surabaya, Indonesia

<sup>4</sup>Institut Teknologi Sepuluh Nopember, Indonesia

### **IEEM24-F-0439/A Metal Surface Damage Recognition Method For Augmented Reality Assisted Maintenance Systems**

Hongduo Wu<sup>1,2</sup>, Dong Zhou<sup>1</sup>, Ziyue Guo<sup>1</sup>, Yan Wang<sup>1</sup>, Qidi Zhou<sup>1</sup>

<sup>1</sup>Beihang University, China

### **IEEM24-A-0031/Data-driven Monitoring and IoT-based Predictive Maintenance Solution in Water Management for Property Management**

Fanny Tang<sup>1,2</sup>, Shu Lun Mak<sup>2</sup>, Siu Kei Lam<sup>1</sup>

<sup>1</sup>Hong Kong Metropolitan University, Hong Kong SAR

<sup>2</sup>Vocational Training Council - Youth College (Kwai Chung), Hong Kong SAR

### **IEEM24-F-0583/Developing Predictive Maintenance Framework for Wind Turbine Blade Erosion: State of the Art and Concept Analysis**

Waqar Ali<sup>1,2</sup>, idriss El-Thalji<sup>1</sup>, Knut Erik Teigen Giljarhus<sup>1</sup>, Andreas Delimitis<sup>1</sup>

<sup>1</sup>University of Stavanger, Norway

### **IEEM24-A-0032/Development of Advanced Monitoring System for Deep Excavation Works Based on Time Lapse Ground Penetrating Radar (TLGPR) for Building and Construction Industry**

Fanny Tang<sup>1,2</sup>, Shu Lun Mak<sup>2</sup>, Ka Man Ma<sup>1</sup>, Kwan Nok Mak<sup>1</sup>, Chi Ho Li<sup>1</sup>

<sup>1</sup>Hong Kong Metropolitan University, Hong Kong SAR

<sup>2</sup>Vocational Training Council - Youth College (Kwai Chung), Hong Kong SAR



## Operations Research 1

16/12/2024 11:00 AM-01:00 PM L4 Asok

**Session Chair(s):** Fen XU  
Tsinghua University  
Vinay SINGH  
ABV-Indian Institute of Information Technology and  
Management Gwalior

### **IEEM24-F-0223/Dynamic Modeling for the Parking Allocation Problem: A Framework for Real-time Optimization**

Mohamed Abdelmagid<sup>1</sup>, Adriana Gabor<sup>1</sup>, Maher Maalouf<sup>\*1</sup>  
<sup>1</sup>*Khalifa University, United Arab Emirates*

### **IEEM24-F-0058/Portfolio Selection and Comparative Portfolio Analysis of Transportation Services, Hotel and Leisure, and Education Subsectors Against Service Sector in the Philippine Market Using Mean-variance Model**

Edi Lynne Cruz<sup>\*1</sup>, Michael Nayat Young<sup>\*1</sup>, TJ Troy Chuahay<sup>2</sup>, Yogi Tri Prasetyo<sup>3</sup>, Satria Fadil Persada<sup>4</sup>, Reny Nadilfatih<sup>5</sup>, Myra F. Contreras<sup>1</sup>  
<sup>1</sup>*Mapúa University, Philippines*  
<sup>2</sup>*Chung Yuan Christian University, Taiwan*  
<sup>3</sup>*Yuan Ze University, Taiwan*  
<sup>4</sup>*Binus University, Indonesia*  
<sup>5</sup>*Institut Teknologi Sepuluh Nopember, Indonesia*

### **IEEM24-F-0118/A Multi-objective Optimization of a Wastewater Treatment Plant Considering Maximizing Process Effectiveness of Each Treatment**

Jannsen Frialta<sup>1</sup>, Francis Escalona<sup>1</sup>, Ashlee Sigua<sup>1</sup>, Jayne Lois San Juan<sup>\*1</sup>  
<sup>1</sup>*De La Salle University, Philippines*

### **IEEM24-F-0134/Optimization of Warehouse Management in Industrial Plants in the Philippines: Digitalization Approach**

Sophia Crisologo<sup>\*1</sup>, Klint Allen Mariñas<sup>\*1</sup>  
<sup>1</sup>*Mapúa University, Philippines*

### **IEEM24-F-0135/A Machine Learning Augmented Game Theory-Based Approach to Hybrid Renewable Energy System Optimization**

Jarvy Larz San Juan<sup>\*1</sup>, Charlle Sy<sup>1</sup>  
<sup>1</sup>*De La Salle University, Philippines*

### **IEEM24-F-0004/Two Formulations for Minimizing Weight-Distance Objective in Single Vehicle Routing Problem with Quadratic, Cubic Objective Function and its Linearization**

Vinay Singh<sup>\*1</sup>, R.R.K. Sharma<sup>2</sup>, K.K. Lai<sup>3</sup>  
<sup>1</sup>*ABV-Indian Institute of Information Technology and Management Gwalior, India*  
<sup>2</sup>*Indian Institute of Technology Kanpur, India*  
<sup>3</sup>*Chaoyang University of Technology, Taiwan*

## **IEEM24-F-0297/Profit and Sustainable Water Optimization for Irrigated Crop Planning Considering Environmental Conditions and Crop Seasonality**

Mateo Urera<sup>\*1</sup>, Charlle Sy<sup>1</sup>

<sup>1</sup>*De La Salle University, Philippines*

## **IEEM24-F-0238/Achieving Sustainability in Food Supply Chains: An Industry Case Comparison**

Arijit De<sup>\*1</sup>, Gibran Muhammad<sup>1</sup>, Barbara Tocco<sup>2</sup>, Matthew Gorton<sup>2</sup>

<sup>1</sup>*University of Manchester, United Kingdom*

<sup>2</sup>*Newcastle University, United Kingdom*

## **Technology & Knowledge Management 1**

16/12/2024 11:00 AM-01:00 PM L4 Phrom Phong

**Session Chair(s):** Mariza TSAKALEROU  
Nazarbayev University  
Ville OJANEN  
LUT University

## **IEEM24-F-0032/Global Innovation Network Patterns of Japanese Companies Based in ASEAN Countries**

Masayuki Kondo<sup>\*1</sup>

<sup>1</sup>*Kaishii Professional University, Japan*

## **IEEM24-F-0157/Cross-sector Analysis of Strategic Innovation Frameworks and Emergent Strategies in a Growing Regional Power**

Yevgeniy Lukhmanov<sup>\*1</sup>, Saltanat Akhmedi<sup>1</sup>, Mariza Tsakalerou<sup>\*1</sup>

<sup>1</sup>*Nazarbayev University, Kazakhstan*

## **IEEM24-A-0131/Subjective Well-being, External Knowledge Acquisition and Innovation Behavior**

Juanru Wang<sup>\*1</sup>

<sup>1</sup>*Northwestern Polytechnical University, China*

## **IEEM24-F-0213/Bio Approaches to Foster Innovation Supportive Environment for Talents**

Mait Rungi<sup>\*1</sup>

<sup>1</sup>*Tallinn University, Estonia*

## **IEEM24-F-0356/Navigating Internet-of-things Adoption in Port Logistics: Practical Insights for Success**

Binay Kumar Rajak<sup>\*1</sup>, Swagato Chatterjee<sup>2</sup>, Amit Upadhyay<sup>3</sup>

<sup>1</sup>*Indian Institute of Technology Kharagpur, India*

<sup>2</sup>*Queen Mary University of London, United Kingdom*

<sup>3</sup>*Indian Institute of Technology Roorkee, India*

## **IEEM24-F-0570/Which Shipping Segments are Most Suitable for Autonomous Ships?**

Sarah Marie Malmquist<sup>\*1</sup>, Ziaul Haque Munim<sup>\*1</sup>

<sup>1</sup>*University of South-Eastern Norway, Norway*

## IEEM24-F-0031/Reconstructing Reverse Innovation and Expansions

Song-Kyoo (Amang) Kim<sup>\*1</sup>

<sup>1</sup>*Macao Polytechnic University, Macau*

## Service Innovation & Management 1

16/12/2024 11:00 AM-01:00 PM L4 Thong Lo

**Session Chair(s):** **Augustina Asih RUMANTI**  
Telkom University  
**Sven SEIDENSTRICKER**  
Cooperative State University Baden-Wuerttemberg Mosbach

## IEEM24-F-0037/Green Innovation toward Knowledge Sharing and Open Innovation in Indonesian SMIs

Augustina Asih Rumanti<sup>1</sup>, Artamevia Salsabila Rizaldi<sup>\*1</sup>, Mia Amelia<sup>1</sup>

<sup>1</sup>*Telkom University, Indonesia*

## IEEM24-F-0047/A Study on the Impact of Work Self-efficacy on Innovative Work Behavior: The Mediating Effect of Psychological Capital

Jen-Chia Chang<sup>\*1</sup>, Wei-Cheng Huang<sup>\*2</sup>

<sup>1</sup>*National Taipei University of Technology, Taiwan*

<sup>2</sup>*Taipei University of Marine Technology, Taiwan*

## IEEM24-F-0221/Business Model Generation with Link Prediction

Saerom Lee<sup>\*1</sup>, Hakyoon Lee<sup>\*1</sup>

<sup>1</sup>*Seoul National University of Science and Technology, Korea, South*

## IEEM24-F-0252/Establishing the Relationship Between Key Performance Indicators in Automated Customer Support Services and the Factors that Drive Customer Satisfaction

Madeline Tee<sup>1</sup>, Richard Li<sup>\*1</sup>

<sup>1</sup>*De La Salle University, Philippines*

## IEEM24-F-0300/Customer Success Management: Subscription-based revenue models and platform business models for manufacturing companies

Sven Seidenstricker<sup>\*1</sup>

<sup>1</sup>*Cooperative State University Baden-Wuerttemberg Mosbach, Germany*

## IEEM24-F-0366/Competency Mapping and Network Position for Sustainability in SMEs: A Decision Tree Approach

Amelia Kurniawati<sup>\*1</sup>, Artamevia Salsabila Rizaldi<sup>\*1</sup>, Mia Amelia<sup>1</sup>, Rizki Fajar Ahmad Gurnita<sup>1</sup>

<sup>1</sup>*Telkom University, Indonesia*

## IEEM24-F-0457/Framework for Evaluating Productivity of Innovation for R&D

Kumi Jinzenji<sup>\*1</sup>, Akio Jin<sup>1</sup>

<sup>1</sup>*NTT Corporation, Japan*

## IEEM24-F-0145/Assessing Healthcare Service Quality in Educational Hospitals Using the SERVQUAL Model

Ahmad Hariri<sup>\*1</sup>, Jose Pedro Teixeira Domingues<sup>\*1</sup>, Paulo Sampaio<sup>1</sup>

<sup>1</sup>*University of Minho, Portugal*

## Decision Analysis & Methods 1

16/12/2024 11:00 AM-01:00 PM L6 Phayathai 1

**Session Chair(s):** S.C. Johnson LIM  
Universiti Teknologi MARA  
Younes BENSLIMANE  
York University

### **IEEM24-F-0053/Predicting Dota 2 Game Outcomes Using Logistic Regression and Decision Tree Models**

Yi Tao<sup>1</sup>, Zijiang Yang<sup>2\*</sup>, Younes Benslimane<sup>1</sup>, Grace Liu<sup>2</sup>

<sup>1</sup>York University, Canada

<sup>2</sup>Bayview Secondary School, Canada

### **IEEM24-F-0054/Applying and Analyzing A3 Architecture Overview for Technology Assessment and Communication with Decision Makers**

Omid Razbani<sup>1\*</sup>, Ebrahim Qaredaghi<sup>2</sup>

<sup>1</sup>University of South-Eastern Norway, Norway

<sup>2</sup>Altera Infrastructure, Norway

### **IEEM24-F-0167/A Study on the Factors Influencing Live Streaming Consumers' Purchase Decisions Based on Perceived Value Theory**

Hongnian Zhang<sup>1</sup>, Xin Hu<sup>1</sup>, Xinao Shi<sup>1\*</sup>, Jiao Xue<sup>1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

### **IEEM24-F-0452/Trust Relationship in Large Group Emergency Decision-Making**

Devy Dwi Orshella<sup>1\*</sup>, Nur Aini Masrur<sup>1</sup>, Hilya Arini<sup>1</sup>

<sup>1</sup>Universitas Gadjah Mada, Indonesia

### **IEEM24-F-0262/Combined Utilization of Extreme Gradient Boosting and Portfolio Optimization on Vanguard S&P 500 ETF**

Roi Jacob Olfindo<sup>1\*</sup>, Michael Nayat Young<sup>1</sup>, TJ Troy Chuahay<sup>2</sup>, Yogi Tri Prasetyo<sup>3</sup>, Satria Fadil Persada<sup>4</sup>, Reny Nadilfatin<sup>5</sup>

<sup>1</sup>Mapúa University, Philippines

<sup>2</sup>Chung Yuan Christian University, Taiwan

<sup>3</sup>Yuan Ze University, Taiwan

<sup>4</sup>Binus University, Indonesia

<sup>5</sup>Institut Teknologi Sepuluh Nopember, Indonesia

### **IEEM24-F-0319/Proposed Integrated Model to Conserve Energy and Mitigate Greenhouse Gas**

Oludolapo Olanrewaju<sup>1\*</sup>

<sup>1</sup>Durban University of Technology, South Africa

### **IEEM24-F-0359/Towards Energy-efficient Indoor Environment Quality Using Artificial Intelligence: A Bibliometric Analysis**

S.C. Johnson Lim<sup>1\*</sup>, Boon Tuan Tee<sup>2</sup>, Peng Wah Siew<sup>3</sup>, Ming Foong Lee<sup>4</sup>

<sup>1</sup>Universiti Teknologi MARA, Malaysia

<sup>2</sup>Universiti Teknikal Malaysia Melaka, Malaysia

<sup>3</sup>Seikou Systec Sdn. Bhd., Malaysia

<sup>4</sup>Universiti Tun Hussein Onn Malaysia, Malaysia

## **IEEM24-F-0454/Impact of Competition on the Relationship Between Relative Performance and Motivation to Develop Radical Technology**

Shin Meguro<sup>\*1</sup>, Naoki Takahashi<sup>1</sup>, Noritomo Ouchi<sup>\*1</sup>

<sup>1</sup>*Aoyama Gakuin University, Japan*

## **Safety, Security & Risk Management 1**

16/12/2024 11:00 AM-01:00 PM L6 Phayathai 2

**Session Chair(s):** Ziaul Haque MUNIM  
University of South-Eastern Norway  
Yan-Ling CAI  
Zhengzhou University

## **IEEM24-A-0159/Dynamics of Safety Consciousness of Scaffolder in Construction**

Jihyun Lee<sup>\*1</sup>, Gitae Kim<sup>\*1</sup>

<sup>1</sup>*Hanbat National University, Korea, South*

## **IEEM24-F-0132/A Collaborative Framework for Risk Management: Enhancing Integrated Approaches**

Liane Okdinawati<sup>\*+1</sup>, Jovanska Arfianda Imran<sup>1</sup>

<sup>1</sup>*Institute of Technology Bandung, Indonesia*

## **IEEM24-F-0241/Musculoskeletal Risk Modeling Using Sensors and Machine Learning**

Hardik Vora<sup>\*1</sup>, Fatemeh Davoudi Kakhki<sup>\*1</sup>, Armin Moghadam<sup>2</sup>, Maria Kyrarini<sup>1</sup>

<sup>1</sup>*Santa Clara University, United States*

<sup>2</sup>*San Jose State University, United States*

## **IEEM24-F-0257/Analysis of the Possibility of Using Eye-tracking in Evaluating the Work of an Airport Security Control Operator**

Artur Kierzkowski<sup>1</sup>, Tomasz Kisiel<sup>1</sup>, Ewa Mardeusz<sup>\*+1</sup>, Jacek Ryczyński<sup>1</sup>

<sup>1</sup>*Wroclaw University of Science and Technology, Poland*

## **IEEM24-F-0375/Integrating the Circular Ecosystem Perspective into the PDCA Cycle for Enhanced Occupational Safety and Health Management**

Valeria Panio<sup>1</sup>, Gaia Vitranio<sup>\*+1</sup>, Guido J.L. Micheli<sup>1</sup>, Armando Guglielmi<sup>2</sup>, Diego Demerich<sup>2</sup>, Mauro Pellicci<sup>2</sup>

<sup>1</sup>*Politecnico di Milano, Italy*

<sup>2</sup>*National Institute for Insurance against Accidents at Work (INAIL), Italy*

## **IEEM24-F-0410/Mindfulness and Reporting Incentives in Risk Management: An Analysis of Japanese High-reliability Organizations**

Naoe Imura<sup>\*+1</sup>

<sup>1</sup>*Nagoya Institute of Technology, Japan*

## **IEEM24-F-0605/Development and Validation of an Ergonomic Posture Assessment System Utilizing Workplace Video Analysis**

Heeyoung Kim<sup>\*1</sup>, Yein Song<sup>1</sup>, Myung Hwan Yun<sup>\*1</sup>, Gyungbhin Kim<sup>1</sup>

<sup>1</sup>*Seoul National University, Korea, South*

## Manufacturing Systems 1

16/12/2024 11:00 AM-01:00 PM L6 Phayathai 3

**Session Chair(s):** Harumi HARAGUCHI  
Ibaraki University  
Carman Ka Man LEE  
The Hong Kong Polytechnic University

### **IEEM24-F-0111/A Cauchy-mutation-based Self-adapted Multi-objective Equilibrium Optimizer for Hybrid Flowshop Scheduling Problem with Shared-track Transporting Robots**

Kaiyuan Zhang<sup>1</sup>, Binghai Zhou<sup>1</sup>  
<sup>1</sup>Tongji University, China

### **IEEM24-F-0146/An Enhanced Bees Algorithm for Multi-Hole Drill Tool Path Optimization**

Vijay Rathod<sup>1</sup>, Om Prakash Yadav<sup>1,2</sup>, S.P. Kadam<sup>1</sup>, Ajay Pal Singh Rathore<sup>3</sup>, Vinod Lall<sup>4</sup>  
<sup>1</sup>Government Polytechnic, India  
<sup>2</sup>North Carolina Agricultural and Technical State University, United States  
<sup>3</sup>Malaviya National Institute of Technology, India  
<sup>4</sup>Minnesota State University, United States

### **IEEM24-F-0150/Joint Optimization Method of Cell Formation and Layout Problems with Square Constraints Based on Improved Multi-objective Grey Wolf Algorithm**

Rui Li<sup>1</sup>, Shi Qian<sup>1</sup>  
<sup>1</sup>Tongji University, China

### **IEEM24-F-0228/Adoption of Open-Source Enterprise Resource Planning in Small and Medium Industries: A Literature Review**

Muhammad Zainuddin Fathoni<sup>1</sup>, Anna Maria Sri Asih<sup>1</sup>, Muhammad Arif Wibisono<sup>1</sup>  
<sup>1</sup>Universitas Gadjah Mada, Indonesia  
<sup>2</sup>Universitas Muhammadiyah Gresik, Indonesia

### **IEEM24-F-0235/Optimizing Operator Allocation in Labor-intensive Cell Production Systems: A Comparative Study of Fatigue-aware and Proficiency-based Models**

Moe Endo<sup>1</sup>, Harumi Haraguchi<sup>1</sup>  
<sup>1</sup>Ibaraki University, Japan

### **IEEM24-F-0256/An Intelligent Fault Diagnosis Method Based on L2 Regularization and Deep Transfer LSTM**

Misbah Iqbal<sup>1</sup>, Carman Ka Man Lee<sup>1</sup>, K. L. Keung<sup>1</sup>  
<sup>1</sup>The Hong Kong Polytechnic University, Hong Kong SAR

### **IEEM24-F-0412/Business Process Models in Small and Medium Manufacturing Industries: An Overview**

Muhammad Zainuddin Fathoni<sup>1</sup>, Anna Maria Sri Asih<sup>1</sup>, Muhammad Arif Wibisono<sup>1</sup>  
<sup>1</sup>Universitas Gadjah Mada, Indonesia  
<sup>2</sup>Universitas Muhammadiyah Gresik, Indonesia

## **IEEM24-F-0321/Industrial Waste for Sustainable Cement Production: A Review on the Use of Fly Ash**

Busola Dorcas Akintayo<sup>\*1</sup>, Oludolapo Olanrewaju<sup>1</sup>

<sup>1</sup>*Durban University of Technology, South Africa*

## **Supply Chain Management 2**

16/12/2024 02:00 PM-04:00 PM L4 Phloen Chit

**Session Chair(s):** Zahra HOSSEINIFARD  
The University of Melbourne  
Amirhossein MOSTOFI  
Auckland University of Technology

## **IEEM24-F-0102/Attended Home Delivery or Self-Collecting Delivery: A Comparison Analysis of Consumer Attitudes**

Bertha Maya Sopha<sup>\*1</sup>

<sup>1</sup>*Universitas Gadjah Mada, Indonesia*

## **IEEM24-F-0108/Strategic Integration of Sustainable Development Goals in Supply Chain Management: Prioritizing SCM Strategies Aligned with Government Policies**

Pituk Puraeng<sup>1</sup>, Nisakorn Somsuk<sup>2</sup>, Tritos Laosirihongthong<sup>1</sup>, Premaratne Samaranyake<sup>\*3</sup>

<sup>1</sup>*Thammasat University, Thailand*

<sup>2</sup>*Rajamangala University of Technology Thanyaburi, Thailand*

<sup>3</sup>*Western Sydney University, Australia*

## **IEEM24-F-0117/An Implementation of Lean Six Sigma in the sortation process in Flash Express, San Jose, Occidental Mindoro: A Case Study of Optimizing Manual Sorting Delivery**

Jenel Ituriaga<sup>1</sup>, Klint Allen Mariñas<sup>1</sup>, Charmine Sheena Saflor<sup>2</sup>, Welajane Enano<sup>3</sup>, Daphne Javier<sup>3</sup>, Marianne Joy Dequilla<sup>3</sup>, Noriel Cabutaje<sup>3</sup>

<sup>1</sup>*Mapúa University, Philippines*

<sup>2</sup>*De La Salle University, Philippines*

<sup>3</sup>*Occidental Mindoro State College, Philippines*

## **IEEM24-F-0119/Modeling the Buy-back Contract in the Supply Chain of Pharmaceutical Aid by Considering the Investment in the Expired Drugs Reprocess**

Amirhossein Mostofi<sup>\*1</sup>, Soheil Javaheri Fazel<sup>2</sup>, Amirmehdi Mostofi<sup>2</sup>

<sup>1</sup>*Auckland University of Technology, New Zealand*

<sup>2</sup>*Azad University, Iran*

## **IEEM24-F-0120/Intelligent Freight Optimization in High Semiconductor Industries Using Advanced Data Analytics**

Tzu-Cheng Cheng<sup>1</sup>, Hongrui Liu<sup>1</sup>

<sup>1</sup>*San Jose State University, United States*

## **IEEM24-F-0149/Multi-Resource Flow Problem for Relief Supply Planning in Humanitarian Logistics**

Yufeng Guo<sup>\*1</sup>, Etsuko Nishimura<sup>1</sup>

<sup>1</sup>*Kobe University, Japan*

## **IEEM24-F-0171/An Optimization of Cold-chain Logistics Routing for Cost and Carbon Reduction**

Chaofan Wang<sup>\*1</sup>, Takashi Hasuike<sup>1</sup>  
<sup>1</sup>Waseda University, Japan

## **IEEM24-F-0202/Barriers to Prosperity: Evaluating the Challenges of Agricultural Export from India to the European Union**

Pandurang Kishanrao Kawale<sup>1</sup>, Omid Fatahi Valilai<sup>\*1</sup>  
<sup>1</sup>Constructor University, Germany

## **Supply Chain Management 3**

16/12/2024 02:00 PM-04:00 PM L4 Nana

**Session Chair(s):** Y.P. TSANG  
The Hong Kong Polytechnic University  
Fadwa DABABNEH  
German Jordanian University

## **IEEM24-F-0201/Consumer Behavior Toward End of Useful Life Smartphones**

Lathiifah Thawafani<sup>\*1</sup>, Bertha Maya Sopha<sup>1</sup>, I Gusti Bagus Budi Dharma<sup>1</sup>  
<sup>1</sup>Universitas Gadjah Mada, Indonesia

## **IEEM24-F-0204/Optimized Key Recovery for Blockchain Wallets in Sustainable Supply Chains**

Aaliya Sarfaraz<sup>\*1</sup>, Ripon K. Chakraborty<sup>2</sup>, Saad Aslam<sup>1</sup>, Ahmad Sahban Rafsanjani<sup>1</sup>  
<sup>1</sup>Sunway University, Malaysia  
<sup>2</sup>University of New South Wales, Australia

## **IEEM24-F-0240/Spent EV Battery Circularity Challenges and Opportunities: A Case For Jordan**

Fadwa Dababneh<sup>\*1</sup>, Talal Hamzeh<sup>1</sup>, Yiran Yang<sup>2</sup>, Hossein Taheri<sup>3</sup>  
<sup>1</sup>German Jordanian University, Jordan  
<sup>2</sup>University of Texas at Arlington, United States  
<sup>3</sup>Georgia Southern University, United States

## **IEEM24-F-0254/Advancing Financial Inclusion in Agri-food Supply Chains: A Policy Intervention Through the Lens of Microfinancing and Risk-based Thinking**

Madushan Madhava Jayalath<sup>\*1</sup>, H. Niles Perera<sup>1</sup>, R.M. Chandima Ratnayake<sup>2</sup>, Amila Thibbotuwawa<sup>1</sup>  
<sup>1</sup>University of Moratuwa, Sri Lanka  
<sup>2</sup>University of Stavanger, Norway

## **IEEM24-F-0317/Systematic Literature Review with Bibliometric Analysis in Supply Chain on Industrial Estate**

Siti Afiani Musyarofah<sup>\*1</sup>, Alva Edy Tontowi<sup>1</sup>, Nur Aini Masruroh<sup>1</sup>, Budhi Wibowo<sup>1</sup>  
<sup>1</sup>Universitas Gadjah Mada, Indonesia

## **IEEM24-F-0324/Towards Sustainable Transportation: Hydrogen's Evolution in Road Freight Transportation and Its Adoption in the Gulf-Europe Transportation Corridor**

Md. Habibur Rahman<sup>1</sup>, Carlos Méndez<sup>2</sup>, Roberto Baldacci<sup>1</sup>, Brenno C. Menezes<sup>\*1</sup>  
<sup>1</sup>Hamad Bin Khalifa University, Qatar



## **IEEM24-F-0331/Simulating the Impact of Defective Rates on the Bullwhip Effect in a Supply Chain: A Reciprocating Compressor Manufacturing Case Study with Exponential Smoothing Forecasting**

Pradthana Rattanapuchong<sup>1</sup>, Natanaree Soaksaksun<sup>2</sup>, Kittiwat Sirikasesuk<sup>1</sup>

<sup>1</sup>King Mongkut's Institute of Technology Ladkrabang, Thailand

<sup>2</sup>King Mongkut's University of Technology North Bangkok, Thailand

## **IEEM24-F-0164/Exploring Supply Chain Efficiency: Unravelling Root Causes of Waste in Sugar Refining Operations**

Bongakonke Mthembu<sup>1</sup>, Bongumenzi Mncwango<sup>1</sup>, Oludolapo Olanrewaju<sup>1</sup>

<sup>1</sup>Durban University of Technology, South Africa

## **Operations Research 2**

16/12/2024 02:00 PM-04:00 PM L4 Asok

**Session Chair(s):** Fen XU  
Tsinghua University

## **IEEM24-A-0130/Optimization of Lighting Control to Improve Energy Efficiency in Buildings**

Siu Kei Lam<sup>\*1</sup>, Fanny Tang<sup>1</sup>, Ying Wang<sup>1</sup>

<sup>1</sup>Hong Kong Metropolitan University, Hong Kong SAR

## **IEEM24-F-0175/Constant Scheduling Policy in Appointment Scheduling Systems**

Fen Xu<sup>\*1</sup>, Li Xiao<sup>2</sup>

<sup>1</sup>Tsinghua University, China

<sup>2</sup>Southern University of Science and Technology, China

## **IEEM24-F-0259/Applying NSGA-II in Multi-objective Unequal Area Facility Layout Problem by Considering Department Orientation**

Anas Saifurrahman<sup>\*1</sup>, Arulloh Sonja<sup>1</sup>, Vincentia Roselynd Jeannete Dhian Rastyaningrum<sup>1</sup>, Anna Maria Sri Asih<sup>1</sup>

<sup>1</sup>Universitas Gadjah Mada, Indonesia

## **IEEM24-F-0275/An Optimization of the Vehicle Routing Problem in Consideration of a Heterogeneous Fleet and Multiple Day Service Windows**

Matthew Keh<sup>\*1</sup>, Charlle Sy<sup>1</sup>

<sup>1</sup>De La Salle University, Philippines

## **IEEM24-F-0354/A Mixed-integer Programming Model for the Bin Packing Problem with Piecewise Linear Loading Cost and Time Windows**

Mariem Mhiri<sup>\*1</sup>

<sup>1</sup>Qatar University, Qatar

## **IEEM24-F-0022/Network Design Optimization for Regional Electric Aviation in Northern Scandinavia**

Jonas Westin<sup>1</sup>, Leif Olsson<sup>\*1,2</sup>, Per Åhag<sup>1</sup>

<sup>1</sup>Umeå University, Sweden

<sup>2</sup>Mid Sweden University, Sweden

# ORAL PRESENTATIONS

## **IEEM24-A-0118/Optimal Joint Decision-making on 3D Printing Adoption in Spare Parts Supply Chain**

Shuang Ma<sup>\*1</sup>, Yujie Ma<sup>2</sup>, Linda Zhang<sup>3</sup>

<sup>1</sup>University of Science and Technology Beijing, China

<sup>2</sup>Tsinghua University, China

<sup>3</sup>IESEG School of Management, France

## **IEEM24-F-0432/Construction Material Ordering Policy Framework: Mamdani Approach**

Girish Kumar<sup>\*1</sup>, Tayyab Khan<sup>1</sup>

<sup>1</sup>Delhi Technological University, India

## **Healthcare Systems & Management 1**

16/12/2024 02:00 PM-04:00 PM L4 Phrom Phong

**Session Chair(s):** Yang WANG  
Northwestern Polytechnical University  
Kae-Kuen HU  
National Taiwan University

## **IEEM24-F-0030/The Use of Digital AI-based Tools for Prevention of Workload Injuries - An Intervention Study**

Behzad Ghodrati<sup>\*1</sup>, Mohammad Javad Rahimdel<sup>2</sup>, Seyed Hadi Hosseinie<sup>3</sup>

<sup>1</sup>Luleå University of Technology, Sweden

<sup>2</sup>University of Birjand, Iran

<sup>3</sup>Isfahan University of Technology, Iran

## **IEEM24-F-0189/Immigration-specific Stress and Its Impact on Overseas Qualified Nurses' Performance**

Xinyi Chang<sup>\*1</sup>, Xiuzhu Gu<sup>\*1</sup>

<sup>1</sup>Tokyo Institute of Technology, Japan

## **IEEM24-F-0200/Elevating Inpatient Admissions Forecasting Through Sequential Feature Inclusion**

Anil Gurjar<sup>\*1</sup>, Anupam Ghosh<sup>1</sup>

<sup>1</sup>Indian Institute of Technology Kharagpur, India

## **IEEM24-A-0116/Robust Master Surgery Scheduling Under Uncertainty in Surgery Durations**

Jinfeng Li<sup>\*1</sup>, Songzheng Zhao<sup>\*1</sup>, Yang Wang<sup>1</sup>, Mingjun Huang<sup>2</sup>, Abraham Punnen<sup>3</sup>

<sup>1</sup>Northwestern Polytechnical University, China

<sup>2</sup>Sichuan University, China

<sup>3</sup>Simon Fraser University, Canada

## **IEEM24-F-0266/A Preliminary Study on the Key Factors of Biopharmaceutical CDMO Ecosystem Development and Digital Resilience Building**

Kae-Kuen Hu<sup>\*1</sup>, Meng-Hsien Wu<sup>2</sup>, Yu-Wen Liu<sup>\*1</sup>, Chia-Min Lin<sup>1</sup>

<sup>1</sup>National Taiwan University, Taiwan

<sup>2</sup>National Sun Yat-Sen University, Taiwan

## **IEEM24-F-0269/The Construction of Telemedicine Platform in Rural Areas and Evaluation Criteria**

Kae-Kuen Hu<sup>1</sup>, Meng-Hsien Wu<sup>2</sup>, Chen Peng<sup>1</sup>, Li-Ling Cho<sup>1</sup>

<sup>1</sup>National Taiwan University, Taiwan

<sup>2</sup>National Sun Yat-Sen University, Taiwan

## **IEEM24-F-0309/Enhancing Behavioural Anomaly Detection Under Concept Drift within Healthcare Sector: Application of Change Point Detection and Batch Learning**

Cho Ching Wong<sup>1</sup>, Amirhossein Salehi-Amiri<sup>1</sup>, Richard Allmendinger<sup>1</sup>, Arijit De<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

## **IEEM24-F-0557/Evaluating Determinants of Health Insurance Premiums Using Advanced Multiple Linear Regression Techniques**

Mariam Bader<sup>1</sup>, Maher Maalouf<sup>2</sup>

<sup>1</sup>Khalifa University of Science and Technology, United Arab Emirates

<sup>2</sup>Khalifa University, United Arab Emirates

## **Big Data & Analytics 1**

16/12/2024 02:00 PM-04:00 PM L4 Thong Lo

**Session Chair(s):** **Chih-Hsuan WANG**  
National Yang Ming Chiao Tung University  
**Pulkit TIWARI**  
O.P. Jindal Global University

## **IEEM24-F-0559/The Comparisons of Prediction Models on Leukemia Incidence and Mortality Age-Standardized Rate in Children and Adolescents**

Gabriela Grace Tanubrata<sup>1</sup>, Priscilia Audy Wijaya<sup>1</sup>, Jonathan Christian<sup>1</sup>, Helena Margaretha<sup>1</sup>, Ferry Vincentius Ferdinand<sup>2</sup>

<sup>1</sup>Universitas Pelita Harapan, Indonesia

<sup>2</sup>Pelita Harapan University, Indonesia

## **IEEM24-F-0611/Predictive Analysis of Public Transportation Delays Using Machine Learning Models on GTFS Data**

Annas Vijaya<sup>1</sup>, Bati Lemma Gudissa<sup>1</sup>, Linda Salma Angreani<sup>1</sup>, Hendro Wicaksono<sup>1</sup>

<sup>1</sup>Constructor University, Germany

## **IEEM24-A-0058/Integrating Feature Engineering with Deep Learning Into Electricity Demand Forecasting**

Chih-Hsuan Wang<sup>1</sup>

<sup>1</sup>National Yang Ming Chiao Tung University, Taiwan

## **IEEM24-A-0063/Enhancing PCA: A Dual Strategy of Robustness and Sparsity Based on Huber Loss**

Yun Liu<sup>1</sup>, Lianjie Shu<sup>1</sup>, Wenpo Huang<sup>2</sup>

<sup>1</sup>University of Macau, Macau

<sup>2</sup>Hangzhou Dianzi University, China

# ORAL PRESENTATIONS

## **IEEM24-A-0140/Study on Optimal Movie Theater Seat Allocation Based on Forecasting Model Considering Competition and Word-of-mouth Effects**

Yejin Park<sup>1</sup>, Soyeon Yang<sup>1</sup>, Taegu Kim<sup>1</sup>, Jaesun Yeom<sup>1</sup>  
<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0141/Changes in the Korean Film Market's Distribution Structure Before and After COVID-19: Considering Word-of-mouth and Competition Effects**

Soyeon Yang<sup>1</sup>, Yeojin Park<sup>1</sup>, Taegu Kim<sup>1</sup>, Taebeum Ryu<sup>1</sup>  
<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0183/The Decision Support System for Smart Transportation**

Pulkit Tiwari<sup>1</sup>, Sachin Yadav<sup>1</sup>, Rupesh Kumar<sup>1</sup>, Amit Yadav<sup>1</sup>  
<sup>1</sup>O.P. Jindal Global University, India

## **IEEM24-F-0173/Geospatial and Spearman Correlation Study of Seismic Hazard and Railway Infrastructure Accidents in California**

Patcharaporn Maneerat<sup>1</sup>, Panrawee Rungskunroch<sup>1</sup>  
<sup>1</sup>Rajamangala University of Technology Thanyaburi, Thailand

## **Information Processing and Engineering 1**

16/12/2024 02:00 PM-04:00 PM L6 Phayathai 1

**Session Chair(s):** Aries SUSANTY  
Diponegoro University  
Janne HARKONEN  
University of Oulu

## **IEEM24-F-0057/Mean Variance Portfolio Selection Utilizing Services Subsector's (Media, Telecommunications, and Information Technology) 30-Year Philippine Stock Exchange Trading Data**

Eunique Salazar<sup>1</sup>, Michael Nayat Young<sup>1</sup>, TJ Troy Chuahay<sup>2</sup>, Yogi Tri Prasetyo<sup>3</sup>, Satria Fadil Persada<sup>4</sup>, Reny Nadilfatin<sup>5</sup>, Myra F. Contreras<sup>1</sup>  
<sup>1</sup>Mapúa University, Philippines  
<sup>2</sup>Chung Yuan Christian University, Taiwan  
<sup>3</sup>Yuan Ze University, Taiwan  
<sup>4</sup>Binus University, Indonesia  
<sup>5</sup>Institut Teknologi Sepuluh Nopember, Indonesia

## **IEEM24-F-0061/Validation of the Barrier to Digital Technology Adoption by Textile SMEs with Content Validation Method**

Aries Susanty<sup>1</sup>, Nia Budi Puspitasari<sup>1</sup>, Selvrida Eka Junaidi<sup>1</sup>  
<sup>1</sup>Diponegoro University, Indonesia

## **IEEM24-F-0063/Portfolio Selection Using Mean Variance Theory Based on the 30-year Historical Returns of Selected Subsectors of the Philippine Industrial Sector**

Akihiro Yamanaka<sup>1</sup>, Michael Nayat Young<sup>1</sup>, TJ Troy Chuahay<sup>2</sup>, Yogi Tri Prasetyo<sup>3</sup>, Satria Fadil Persada<sup>4</sup>, Reny Nadlifatin<sup>5</sup>

<sup>1</sup>Mapúa University, Philippines

<sup>2</sup>Chung Yuan Christian University, Taiwan

<sup>3</sup>Yuan Ze University, Taiwan

<sup>4</sup>Binus University, Indonesia

<sup>5</sup>Institut Teknologi Sepuluh Nopember, Indonesia

## **IEEM24-F-0160/Mitigating the Social Impact of Delayed Salary Payments of Part-time Instructors in a Provincial State University in the Philippines**

Dyan Rodriguez<sup>1,2\*</sup>, Jayne Lois San Juan<sup>1</sup>, Charlle Sy<sup>1</sup>

<sup>1</sup>De La Salle University, Philippines

<sup>2</sup>Bulacan State University, Philippines

## **IEEM24-F-0261/Industry 5.0: Data Analytics & Product Management Perspective**

Janne Harkonen<sup>\*1</sup>, Joni Koskinen<sup>1</sup>, Tuomas Kotilainen<sup>2</sup>

<sup>1</sup>University of Oulu, Finland

<sup>2</sup>Industrial Engineering and Management, University of Oulu, Finland

## **IEEM24-F-0416/A Comparative Analysis of Modular Design Methods: A Case Study of a Horizontal Flipping Workpiece Machine**

Tossaporn Assawarungsri<sup>\*1</sup>, Naruedon Tunsakul<sup>1</sup>, Nattawut Janthong<sup>1</sup>

<sup>1</sup>King Mongkut's University of Technology North Bangkok, Thailand

## **IEEM24-F-0082/An Ontology-based Semantic Integration Approach for Dynamic Scheduling in Cyber-physical Production System**

Mingzhi Chen<sup>\*1</sup>, Xiaofeng Hu<sup>2</sup>, Yahui Zhang<sup>3</sup>, Mingyuan Xia<sup>1</sup>

<sup>1</sup>School of Mechanical Engineering, Shanghai Jiao Tong University, China

<sup>2</sup>Shanghai Jiao Tong University, China

<sup>3</sup>Research Center of Marine Digital Twin Manufacturing Technology, Institute of Marine Equipment, Shanghai Jiao Tong University, China

## **IEEM24-F-0116/Industry 4.0 in Portugal - Economic Sectors Maturity**

André Guimarães<sup>\*1</sup>, Pedro Reis<sup>2</sup>, Antonio J. Marques Cardoso<sup>1</sup>

<sup>1</sup>University of Beira Interior, Portugal

<sup>2</sup>Polytechnic Institute of Viseu, Portugal

## Quality Control & Management 1

16/12/2024 02:00 PM-04:00 PM L6 Phayathai 2

**Session Chair(s):** Amitava MUKHERJEE  
XLRI - Xavier School of Management

### **IEEM24-F-0002/Collection Quality-oriented Recycling Channel Design for End-of-life Vehicles (ELVs) based on a Fuzzy Matter-element Modeling Approach**

Zhou Fuli<sup>1\*</sup>, Wei Xie<sup>2</sup>, Jieyin Lv<sup>3</sup>, Panpan Ma<sup>1</sup>, Shouqin Zhou<sup>4</sup>, Saurabh Pratap<sup>5</sup>

<sup>1</sup>Zhengzhou University of Light Industry, China

<sup>2</sup>South China University of Technology, China

<sup>3</sup>Shenzhen CIMC Intelligent Technology Co. Ltd., China

<sup>4</sup>Xiangtan University, China

<sup>5</sup>Indian Institute of Technology (IIT BHU), India

### **IEEM24-F-0127/Adaptive Gaussian Mixture Model-based Variational Autoencoder Network for Process Fault Isolation in Industrial Processes**

Shijin Li<sup>1\*</sup>, Xufei Chen<sup>1</sup>, Hao Li<sup>2</sup>, Mingyan Ma<sup>2</sup>, Peilun Liu<sup>2</sup>, Jianbo Yu<sup>1</sup>

<sup>1</sup>Tongji University, China

<sup>2</sup>COMAC Shanghai Aircraft Manufacturing, China

### **IEEM24-F-0154/Anomaly Detection for Multivariate Time Series Data in Sintering Processes**

Olçay Özgün<sup>1\*</sup>, Nils Niedernostheide<sup>1</sup>, Ravza Korkmaz<sup>1</sup>, Bernd Kuhlenkötter<sup>1</sup>, Marcel Struve<sup>2</sup>

<sup>1</sup>Ruhr-Universität Bochum, Germany

<sup>2</sup>Bleistahl GmbH & Co. Holding KG, Germany

### **IEEM24-F-0203/A Critical Review on Pet Dog Toy Products Safety**

Shu Lun Mak<sup>1\*</sup>, Shu Lun, Jonathan Au<sup>2</sup>, Ka Man Ma<sup>2</sup>, Tsz Him Chan<sup>2</sup>, Fanny Tang<sup>2</sup>, Wai Ying Chak<sup>2</sup>

<sup>1</sup>Vocational Training Council - Youth College (Kwai Chung), Hong Kong SAR

<sup>2</sup>Hong Kong Metropolitan University, Hong Kong SAR

### **IEEM24-F-0209/LASSO-BN for Selection and Optimization of Product Critical Quality Features**

Jiali Cheng<sup>1\*</sup>, Zhiqiang Cai<sup>1\*</sup>, Chen Shen<sup>2</sup>, Ting Wang<sup>1</sup>

<sup>1</sup>Northwestern Polytechnical University, China

<sup>2</sup>Aero Engine Corporation of China, China

### **IEEM24-F-0445/Investigation of Quality Criteria in the Production of PEM Electrolyzer Stacks**

Idris Yorgun<sup>1\*</sup>, Sezer Sahan<sup>2</sup>, Kai Lemmerz<sup>1</sup>, Lennart Lamers<sup>1</sup>, Bernd Kuhlenkötter<sup>2</sup>

<sup>1</sup>RIF Institut für Forschung und Transfer e. V., Germany

<sup>2</sup>Ruhr-University-Bochum, Germany

### **IEEM24-F-0572/A Prior Knowledge-Based SimpleNet Model for Fuel Cell Bipolar Plates Defect Detection**

Chenghong Jiang<sup>1\*</sup>, Changhui Liu<sup>1\*</sup>, XiangYong Du<sup>2</sup>, Xin Li<sup>1</sup>

<sup>1</sup>Tongji University, China

<sup>2</sup>Shanghai Jiao Tong University, China

## **IEEM24-F-0390/Circular Economy in Healthcare Sector: Cloud-based HST with GT to Minimize Healthcare-associated Infections**

Kartika Nur Alfina<sup>\*1</sup>, R.M. Chandima Ratnayake<sup>2</sup>

<sup>1</sup>*Institut Teknologi Bandung (ITB), Indonesia*

<sup>2</sup>*University of Stavanger, Norway*

## **Intelligent Systems 1**

16/12/2024 02:00 PM-04:00 PM L6 Phayathai 3

**Session Chair(s):** **Hendri SUTRISNO**  
**National Dong Hwa University**  
**Tzu Yang LOH**  
**National University of Singapore**

## **IEEM24-F-0009/Relating Strategy of Organization To Newer Technologies of Industry 5.0**

Shivangi Rai<sup>\*1</sup>, R.R.K. Sharma<sup>1</sup>

<sup>1</sup>*Indian Institute of Technology Kanpur, India*

## **IEEM24-F-0090/Application of Automation in Building Construction; A Case Study in Heating Ventilation & Air Conditioning Ducting Fabrication Process**

Algrec Paras<sup>1</sup>, Klint Allen Mariñas<sup>\*2</sup>

<sup>1</sup>*Mapua University, Philippines*

<sup>2</sup>*Mapua University, Philippines*

## **IEEM24-F-0125/Current State, Potentials and Challenges for the Use of Artificial Intelligence in the early Phase of Product Development: A Survey**

Sarah Steininger<sup>\*1</sup>, Hasan Camci<sup>1</sup>, Johannes Fottner<sup>1</sup>

<sup>1</sup>*Technical University of Munich, Germany*

## **IEEM24-F-0177/Bridging Perspectives: Enhancing Trustworthy AI Through Transparency, Reliability, and Safety**

Gustav Jonelid<sup>1</sup>, Rikard Karl<sup>1</sup>, Lama Alkhaled<sup>1</sup>, Hamam Mokayed<sup>\*1</sup>

<sup>1</sup>*Luleå University of Technology, Sweden*

## **IEEM24-F-0243/Object Detection in Container Terminals Based on Deep Learning Approach: A Systematic Literature Review**

Mirna Lusiani<sup>\*1</sup>, Zulkarnain<sup>1</sup>, Komarudin<sup>1</sup>

<sup>1</sup>*Universitas Indonesia, Indonesia*

## **IEEM24-F-0350/Exploring Urban Traffic: Uncovering Sectional Anomalies through an Optimization Framework**

Ang Prisila Kartini<sup>1</sup>, Hendrik Tampubolon<sup>2</sup>, Hendri Sutrisno<sup>\*3</sup>

<sup>1</sup>*Universitas Katolik Soegijapranata, Indonesia*

<sup>2</sup>*Universitas Kristen Krida Wacana, Indonesia*

<sup>3</sup>*National Dong Hwa University, Taiwan*

## **IEEM24-F-0405/Optimized Dairy Cow Identification and Tracking with PTZ Camera Technology**

Ryota Tsukamoto<sup>\*1</sup>, Niken Prasasti Martono<sup>1</sup>, Hayato Ohwada<sup>1</sup>

<sup>1</sup>*Tokyo University of Science, Japan*

## **IEEM24-F-0620/Identifying Factors for Enhancing Usability and Satisfaction in Platform Services: Comparative Case Study**

Jiyeon Shin<sup>1</sup>, Jaehoo Bae<sup>1</sup>, Jungyeon Park<sup>1</sup>, Eunseo Ryu<sup>1</sup>, Honghua Lyu<sup>1</sup>, Myung Hwan Yun<sup>2</sup>

<sup>1</sup>Department of Industrial Engineering, Seoul National University, Korea, South

<sup>2</sup>Seoul National University, Korea, South

## **Supply Chain Management 4**

16/12/2024 04:30 PM-06:00 PM L4 Phloen Chit

**Session Chair(s):** **Aries SUSANTY**  
**Diponegoro University**  
**Bertha Maya SOPHA**  
**Universitas Gadjah Mada**

## **IEEM24-F-0487/Collaboration Strategy Using Pooled Purchasing Model**

Stefani Prima Dias Kristiana<sup>1</sup>, Andi Sudiarmo<sup>1</sup>, Anna Maria Sri Asih<sup>1</sup>

<sup>1</sup>Universitas Gadjah Mada, Indonesia

## **IEEM24-F-0515/Using Fuzzy Delphi Method in Selecting Sustainable Remanufacturing Elements: Supply Chain Perspectives**

Mohamad Fariz Mohamed Nasir<sup>1</sup>, Halim Shah Hamzah<sup>1</sup>, Anies Faziehan Zakaria<sup>2</sup>

<sup>1</sup>Universiti Teknologi Malaysia, Malaysia

<sup>2</sup>Universiti Kebangsaan Malaysia, Malaysia

## **IEEM24-F-0522/Approach Towards Correlation-based Storage Assignment: A Systematic Literature Review**

Nilendra Singh Pawar<sup>1</sup>, Subir S. Rao<sup>1</sup>, Gajendra K. Adil<sup>2</sup>

<sup>1</sup>S. P. Jain Institute of Management and Research, India

<sup>2</sup>Indian Institute of Technology Bombay, India

## **IEEM24-F-0535/A Simulation-Optimization Approach for Inventory Management in a Multi-Echelon Supply Chain Network**

Tianjiao Sun<sup>1</sup>, Ziheng Huang<sup>2</sup>, Dengnan Wu<sup>1</sup>, Jiajun Li<sup>3</sup>, Liping Zhou<sup>1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

<sup>2</sup>Shanghai Maritime University, China

<sup>3</sup>Ningbo Annto Logistics Technology Co., Ltd., China

## **IEEM24-F-0537/Unlocking Circular Economy Opportunities in the Electric Motorcycle Conversion Sector: Insights from Indonesia**

Karsi Widiawati<sup>1</sup>, Bertha Maya Sopha<sup>1</sup>, Benny Tjahjono<sup>2</sup>, Naly Rakoto<sup>3</sup>, Wahyudi Sutopo<sup>4</sup>

<sup>1</sup>Universitas Gadjah Mada, Indonesia

<sup>2</sup>Coventry University, United Kingdom

<sup>3</sup>IMT Atlantique, France

<sup>4</sup>Universitas Sebelas Maret, Indonesia

## **IEEM24-F-0547/Design of Supply Chain Performance Measurement Using A Hybrid of SCOR Model and Multi Criteria Decision Making Method in the Seaweed Industry**

Muhammad Achirudin Buchari<sup>1</sup>, Alva Edy Tontowi<sup>1</sup>

<sup>1</sup>Universitas Gadjah Mada, Indonesia



## Human Factors 1

16/12/2024 04:30 PM-06:00 PM L4 Nana

**Session Chair(s):** Shahed OBEIDAT  
The University of Jordan

### **IEEM24-F-0023/Organizational Botany: Lessons in Management from the Plant Kingdom**

Mait Rungi<sup>1,2</sup>  
<sup>1</sup>Tallinn University, Estonia

### **IEEM24-F-0159/Enhancing Employee Work Engagement Through High-performance Work Systems: Evidence from an ICT Company**

Maria Kutt<sup>1</sup>, Meelike Terasmaa<sup>2</sup>  
<sup>1</sup>Tallinn University of Technology, Estonia  
<sup>2</sup>Tallinn University, Estonia

### **IEEM24-F-0180/Long-term Effects of Wearable Health Technology and Future MHealth Usage for Older Adults**

Xiuzhu Gu<sup>1</sup>, Xinyi Chang<sup>1</sup>  
<sup>1</sup>Tokyo Institute of Technology, Japan

### **IEEM24-F-0183/The Design and Experimental Study of Eye-hand Integrated Dual-channel Interaction Strategies**

Haobin Chen<sup>1</sup>, Weichi Huang<sup>1</sup>, Yiyan Wang<sup>1</sup>, Jin Liu<sup>1</sup>, Yafeng Niu<sup>1</sup>  
<sup>1</sup>Southeast University, China

### **IEEM24-F-0198/A Framework for Power Dynamics in AR/MR-Aided Design Collaboration**

Yue Xu<sup>1</sup>, Weiyue Gao<sup>1</sup>, Henry Duh<sup>1</sup>  
<sup>1</sup>Hong Kong Polytechnic University, Hong Kong SAR

### **IEEM24-F-0247/Risk Perception in the Presentation Style of Loan Proposals by SME Bankers**

Dewi Sari Pinandita<sup>1</sup>, Budi Hartono<sup>1</sup>, Budhi Wibowo<sup>1</sup>  
<sup>1</sup>Universitas Gadjah Mada, Indonesia

## Operations Research 3

16/12/2024 04:30 PM-06:00 PM L4 Asok

**Session Chair(s):** Leif OLSSON  
Mid Sweden University

### **IEEM24-F-0504/Portfolio Selection Utilizing Analytical Hierarchy Process (AHP) with Mean-Variance Theory and Safety-first Model: A Study on the Top 30 Companies in the Philippine Stock Exchange**

Ma. Kathleen Duran<sup>1</sup>, Michael Nayat Young<sup>1</sup>, Klint Allen Mariñas<sup>1</sup>  
<sup>1</sup>Mapúa University, Philippines  
<sup>2</sup>National University, Philippines

## **IEEM24-F-0532/Application of the Orienteering Problem Model to Tourist Locations in Bandung City**

Giovano Alberto<sup>\*†1</sup>

<sup>1</sup>*Parahyangan Catholic University, Indonesia*

## **IEEM24-F-0533/A More Concise and Efficient Formulation of Order Picker Routing in a Rectangular Single-Block Warehouse**

Yuqi Liu<sup>†1</sup>, Haihui Shen<sup>†1</sup>, Jun Xia<sup>†1</sup>

<sup>1</sup>*Shanghai Jiao Tong University, China*

## **IEEM24-F-0538/A Study on Customer Utility Based on Differences in Stage Configuration and Ticket Sales Methods**

Katsuki Motodaka<sup>\*†1</sup>, Takashi Hasuike<sup>†1</sup>

<sup>1</sup>*Waseda University, Japan*

## **IEEM24-F-0549/DEA-R Model-based Efficiency Evaluation of Japanese Banks**

Xu Wang<sup>\*†1</sup>, Hiroki Iwamoto<sup>†2</sup>, Takashi Hasuike<sup>†2</sup>

<sup>1</sup>*Gunma University, Japan*

<sup>2</sup>*Waseda University, Japan*

## **IEEM24-F-0081/Trends and Challenges of Combination Carriers in Airline Revenue Management**

Oki Anita Candra Dewi<sup>†1</sup>, Nur Aini Masruroh<sup>†1</sup>, Budhi Wibowo<sup>†1</sup>

<sup>1</sup>*Universitas Gadjah Mada, Indonesia*

<sup>2</sup>*Universitas Internasional Semen Indonesia, Indonesia*

## **Technology & Knowledge Management 2**

16/12/2024 04:30 PM-06:00 PM L4 Phrom Phong

**Session Chair(s):** Mariza TSAKALEROU  
Nazarbayev University  
Say Wei FOO  
NTC

## **IEEM24-F-0508/Mastering Industry's Skill Gap - Matching Employee Needs with New Learning Challenges**

Greta Braun<sup>\*†1</sup>, Mattias Bokinge<sup>†2</sup>, Bengt-Göran Rosén<sup>†1</sup>, Anna Syberfeldt<sup>†1</sup>, Johan Stahre<sup>†1</sup>

<sup>1</sup>*Chalmers University of Technology, Sweden*

<sup>2</sup>*Halmstad University, Sweden*

## **IEEM24-F-0226/Leveraging AI in Software Testing: Applying ADKAR for Effective Change Management**

Aki Laine<sup>†1</sup>, Ville Ojanen<sup>†1</sup>

<sup>1</sup>*LUT University, Finland*

## **IEEM24-F-0158/Innovating the Future: Decoding the Startup Ecosystem in a Nascent Emerging Economy**

Aset Zhumatai<sup>†1</sup>, Diana Kairula<sup>†1</sup>, Anastassiya Kim<sup>†1</sup>, Ali Temirgali<sup>†1</sup>, Saltanat Akhmedi<sup>†1</sup>, Mariza Tsakalerou<sup>†1</sup>

<sup>1</sup>*Nazarbayev University, Kazakhstan*

## **IEEM24-A-0143/How Low- and High-performing Firms Differ in Digital Transformation? From the Perspective of BTOF**

Pi Hui Chung<sup>1</sup>, Cheng-Yu Lee<sup>2</sup>

<sup>1</sup>*Fu Jen Catholic University, Taiwan*

<sup>2</sup>*National Chiayi University, Taiwan*

## **IEEM24-A-0162/Role of Radical Socio-technical Regime Change and Cross-border Mobility of Engineers in Industrial Leadership Change: Evidence From Display Sector**

Kiho Kwak<sup>1</sup>, Jeongin Kwon<sup>2</sup>, Haneul Lee<sup>3</sup>, Haoyu Zhang<sup>4</sup>

<sup>1</sup>*Hanbat National University, Korea, South*

<sup>2</sup>*Science and Technology Policy Institute, Korea, South*

<sup>3</sup>*Thoth Business and Advisory Co., Inc., Korea, South*

<sup>4</sup>*Leeds University Business School, United Kingdom*

## **IEEM24-A-0043/Technology Management and Knowledge Spillover: The Roles of Technology Road-mapping and Perceived Organizational Support**

Jeewhan Yoon<sup>1</sup>

<sup>1</sup>*Korea University, Korea, South*

## **E-Business & E-Commerce 1**

16/12/2024 04:30 PM-06:00 PM L4 Thong Lo

**Session Chair(s):** **Lin LIU**  
**Beihang University**  
**Asle FAGERSTRØM**  
**Kristiania University College**

## **IEEM24-A-0036/Bargaining in Live Streaming Commerce with Online Celebrity**

Lin Liu<sup>1</sup>, Qianqian Chen<sup>2</sup>, Shouchang Chen<sup>2</sup>, Yi Yang<sup>2</sup>

<sup>1</sup>*Beihang University, China*

<sup>2</sup>*Zhejiang University, China*

## **IEEM24-F-0464/Effect of Changes in the Image of Other Users on the Attitude Toward the Intention to Continuous Use: A Case Study of Fashion E-commerce**

Kaito Niwa<sup>1</sup>, Rumi Yamamoto<sup>1</sup>, Naoki Takahashi<sup>1</sup>, Noritomo Ouchi<sup>1</sup>

<sup>1</sup>*Aoyama Gakuin University, Japan*

## **IEEM24-F-0520/Enhancing Consumer Trust and Preference in Online Grocery Shopping Through Blockchain-enabled Information**

Asle Fagerstrøm<sup>1</sup>, Vilde Lysgård<sup>1</sup>, Ada Kristine Vatne<sup>1</sup>, Valdimar Sigurdsson<sup>2</sup>

<sup>1</sup>*Kristiania University College, Norway*

<sup>2</sup>*Reykjavik University, Iceland*

## **IEEM24-F-0552/Exploring the Relative Impact of Blockchain-enabled Information on Consumers' Trust, Purchase Intention, and Repeat Purchase Intentions**

Katrina Xue-Lønmo<sup>1</sup>, Asle Fagerstrøm<sup>1</sup>, Sanchit Pawar<sup>1</sup>

<sup>1</sup>*Kristiania University College, Norway*

## **IEEM24-A-0164/Enhancement of Customer Experience and Marketing Strategy Through Personalized AI**

Shota Chimoto<sup>1</sup>, Satoru Yamamoto<sup>1</sup>, Hajime Sasaki<sup>2</sup>

<sup>1</sup>*Dentsu Digital Inc., Japan*

<sup>2</sup>*The University of Tokyo, Japan*

## **IEEM24-F-0462/Customers' Free Riding Effects on the Centralized Dual Channel Supply Chain**

Chengli Liu<sup>1</sup>, Carman Ka Man Lee<sup>1</sup>, Zhonghao Zhao<sup>1</sup>

<sup>1</sup>*The Hong Kong Polytechnic University, Hong Kong SAR*

## **Systems Modeling & Simulation 1**

16/12/2024 04:30 PM-06:00 PM L6 Phayathai 1

**Session Chair(s):** Panrawee RUNGSKUNROCH  
Rajamangala University of Technology Thanyaburi

## **IEEM24-F-0455/Sustainable Ecotourism Development Through Open Innovation and Infrastructure Facilities: Systems Modeling Approach**

Ibnu Zulkarnain<sup>1</sup>, Augustina Asih Rumanti<sup>1</sup>, Yudha Prambudia<sup>1</sup>, Artamevia Salsabila Rizaldi<sup>1</sup>, Mia Amelia<sup>1</sup>

<sup>1</sup>*Telkom University, Indonesia*

## **IEEM24-F-0526/Simultaneous Optimization of Placement Planning and Motion Planning for a Single Robotic Arm Using Genetic Algorithm**

Takato Taniguchi<sup>1</sup>, Tatsushi Nishi<sup>1</sup>, Ziang Liu<sup>1</sup>, Tomofumi Fujiwara<sup>1</sup>

<sup>1</sup>*Okayama University, Japan*

## **IEEM24-A-0087/New Scheduling Model and Algorithm for Product Shipping in Steel Works**

Katsuki Shimada<sup>1\*</sup>, Shinji Tomiyama<sup>1</sup>

<sup>1</sup>*JFE Steel Corporation, Japan*

## **IEEM24-A-0169/Energy and Daylighting Performances of Traditional Automatic Shading Devices Control of a Commercial Building Under Urban Topography in Hong Kong**

Kin Wai Tsang<sup>1\*</sup>, Siu Kei Lam<sup>1</sup>, Shuyang Li<sup>1</sup>

<sup>1</sup>*Hong Kong Metropolitan University, Hong Kong SAR*

## **IEEM24-F-0174/A Feasibility Study on Route Changing of University's Shutter Bus by Using Arena Simulation**

Panrawee Rungskunroch<sup>1\*</sup>, Patcharaporn Maneerat<sup>1</sup>

<sup>1</sup>*Rajamangala University of Technology Thanyaburi, Thailand*

## **IEEM24-F-0391/Modeling the Food Wastes from Hospital Food Service Operations Using the System Dynamics Approach**

Kelsey Adrienne Cua<sup>1</sup>, Ezekiel Bernardo<sup>1</sup>, Richard Li<sup>1\*</sup>

<sup>1</sup>*De La Salle University, Philippines*

## Production Planning Control

16/12/2024 04:30 PM-06:00 PM L6 Phayathai 2

**Session Chair(s):** Jianxin (Roger) JIAO  
Georgia Institute of Technology

### **IEEM24-F-0217/Optimizing Manufacturing Processes Through the Integration of Dynamic Job Shop Scheduling and Maintenance Planning**

Rifqi Fauzi<sup>1</sup>, Nur Aini Masruroh<sup>1</sup>  
<sup>1</sup>*Universitas Gadjah Mada, Indonesia*

### **IEEM24-F-0267/An Improved Adaptive NSGA-II For Multi-objective Comprehensive Scheduling Problem of Flexible Assembly Job Shop**

Haofan Yang<sup>2,1</sup>, Shigeru Fujimura<sup>1</sup>  
<sup>1</sup>*Waseda University, Japan*

### **IEEM24-F-0361/Modularization Concept for Agile Assembly in Special Machine Construction**

Michael Riesener<sup>1</sup>, Esben Schukat<sup>1</sup>, Florian Bröhl<sup>1</sup>, Manuel G. J. Lauer<sup>2,1</sup>  
<sup>1</sup>*RWTH Aachen University, Germany*

### **IEEM24-F-0580/Implementing Advanced Distribution Requirement Planning and Scheduling System (DRPS) for Lens Manufacturing Company**

Wei Qing Lee<sup>2,1</sup>, Tay Jin Chua<sup>1</sup>, Ravi Kumar Katru<sup>1</sup>, Tian Xiang Cai<sup>1</sup>  
<sup>1</sup>*Advanced Remanufacturing and Technology Centre (ARTC), Singapore*

### **IEEM24-A-0133/Human Robot Collaboration in a Material Recycling Facility: A Multi-objective Optimization Approach**

Mahima Gupta<sup>2,1</sup>  
<sup>1</sup>*Indian Institute of Management Amritsar, India*

### **IEEM24-A-0065/Reducing Warehouse Occupancy in Manufacturing: Strategies and Practices**

Bing Qian Lim<sup>2,1</sup>  
<sup>1</sup>*Independent, Singapore*

## Engineering Economy & Cost Analysis

16/12/2024 04:30 PM-06:00 PM L6 Phayathai 3

**Session Chair(s):** R.M. Chandima RATNAYAKE  
University of Stavanger  
Christian KOBER  
Helmut Schmidt University

### IEEM24-F-0568/Assessing Unemployment Rate Forecasting Accuracy During COVID-19 Using Machine Learning

Aldo Nelson Natigor Sibarani<sup>1</sup>, Matthew Engelbert Bastiaan<sup>1</sup>, Ferry Vincenttius Ferdinand<sup>\*1</sup>, Johan Sebastian Edbert<sup>1</sup>

<sup>1</sup>*Pelita Harapan University, Indonesia*

### IEEM24-A-0184/Sunbio: Towards Widespread Implementation of Wave Energy Converters

Mayorkinos Papaelias<sup>\*1</sup>, Farzad Hayati<sup>1</sup>, Sanaz Roshanmanesh<sup>1</sup>, Gerard Franklin Fernando<sup>1</sup>, Matthew Gee<sup>1</sup>, Zhuocheng Zhang<sup>1</sup>, Maximilian Hlatky<sup>1</sup>, Jacopo Aguzzi<sup>2</sup>, Giacomo Picardi<sup>2</sup>, Ivan Masmitja<sup>2</sup>, Damianos Chatzievangelou<sup>2</sup>, Nixon Bajamon<sup>2</sup>, Jordi Grinyó<sup>2</sup>, Nathan Robinson<sup>2</sup>, Morane Clavel-Henry<sup>2</sup>, Joan Baptista Company<sup>2</sup>, Joaquin Del Rio<sup>3</sup>, Marco Francescangeli<sup>3</sup>, Daniel Mihai Toma<sup>3</sup>, Matias Carandell<sup>3</sup>, Enoc Martinez<sup>3</sup>, Elias Chatzidouros<sup>4</sup>, Louis Constantinou<sup>4</sup>, Antonis Chronakis<sup>4</sup>, Fausto Pedro García Márquez<sup>5</sup>, Isaac Segovia Ramirez<sup>5</sup>, Pedro Bernalte Sanchez<sup>5</sup>, Georgios M. Katsaounis<sup>6</sup>, Gregory Grigoropoulos<sup>6</sup>

<sup>1</sup>*The University of Birmingham, United Kingdom*

<sup>2</sup>*Institute of Marine Sciences (ICM) - Consejo Superior de Investigaciones Científicas (CSIC), Spain*

<sup>3</sup>*Universitat Politècnica de Catalunya, Spain*

<sup>4</sup>*ENGITEC SYSTEMS International Limited, Cyprus*

<sup>5</sup>*University of Castilla-La Mancha, Spain*

<sup>6</sup>*National Technical University of Athens, Greece*

### IEEM24-F-0294/Digital Twins: A Critical Perspective and Research Trends

Christian Kober<sup>\*1</sup>, Sonja Buxbaum-Conradi<sup>1</sup>, Marc Fette<sup>1</sup>, Jens Peter Wulfsberg<sup>1</sup>

<sup>1</sup>*Helmut Schmidt University, Germany*

### IEEM24-F-0576/Enhancing Sustainable Performance Through Circular Economy and Industry 4.0: A Conceptual Framework for Leveraging Drivers and Mitigating Barriers

Than'a AlSaoudi<sup>\*1</sup>, Adolf Acquaye<sup>1</sup>, Malik Khalfan<sup>1</sup>, Vikas Swarnakar<sup>1</sup>

<sup>1</sup>*Khalifa University, United Arab Emirates*

### IEEM24-F-0348/Mean-variance and Safety-first Portfolio Selection Strategy for High-volume/High-value Traded Stocks in Philippine Stock Exchange (PSE)

Tirso De Guzman<sup>\*1</sup>, Michael Nayat Young<sup>2</sup>, Yogi Tri Prasetyo<sup>3</sup>, Satria Fadil Persada<sup>4</sup>, Reny Nadlifatin<sup>5</sup>

<sup>1</sup>*Mapua University, Philippines*

<sup>2</sup>*Mapua University, Philippines*

<sup>3</sup>*Yuan Ze University, Taiwan*

<sup>4</sup>*Binus University, Indonesia*

<sup>5</sup>*Institut Teknologi Sepuluh Nopember, Indonesia*

### IEEM24-F-0442/Transitioning to Circular Economy in Power Distribution Utilities: A Framework Integrating ISO 9001 Quality Management Standards

A. M. Sakura R. H. Attanayake<sup>\*1</sup>, R.M. Chandima Ratnayake<sup>1</sup>

<sup>1</sup>*University of Stavanger, Norway*

<sup>2</sup>*Ceylon Electricity Board, Sri Lanka*

## Supply Chain Management 5

17/12/2024 08:30 AM-10:30 AM L4 Phloen Chit

**Session Chair(s):** Y.P. TSANG  
The Hong Kong Polytechnic University  
Zahra HOSSEINIFARD  
The University of Melbourne

### **IEEM24-F-0376/Optimizing Fulfillment and Transportation of Shoring Materials: An Integer Programming Approach**

Siyuan Wang<sup>1</sup>, Jun Xia<sup>1</sup>, Sixiang Zhao<sup>1</sup>, Junli Zheng<sup>1</sup>, Yun Liu<sup>1</sup>, Yang Pan<sup>2</sup>  
<sup>1</sup>Shanghai Jiao Tong University, China  
<sup>2</sup>Horizon Construction Development Limited, China

### **IEEM24-F-0444/Navigating Barriers: AI Adoption in Air Cargo Industry**

Arnab Chakraborty<sup>1,2</sup>, M. Vimala Rani<sup>1</sup>  
<sup>1</sup>Indian Institute of Technology Kharagpur, India

### **IEEM24-F-0470/Investigating the Potential of Causal Reinforcement Learning in Collaborative Urban Logistics: A Systematic Literature Review**

Kutut Aji Prayitno<sup>1</sup>, Hendro Wicaksono<sup>2</sup>  
<sup>1</sup>Politeknik ATK Yogyakarta, Indonesia  
<sup>2</sup>Constructor University, Germany

### **IEEM24-F-0476/Supplier Selection and Order Allocation for Assembly Products using Multi-stage Stochastic Bi-objective Approach**

Ashutosh Kumar Thakur<sup>1,2</sup>, Indrajit Mukherjee<sup>1</sup>  
<sup>1</sup>Indian Institute of Technology Bombay, India

### **IEEM24-A-0037/Predict+Optimize for Inventory Management With a Finite Fill Rate Agreement**

Zahra HosseiniFard<sup>1</sup>  
<sup>1</sup>The University of Melbourne, Australia

### **IEEM24-F-0192/Sustaining Innovation in Changing Context: Impact of Dynamic Network Capability and Mediation of Dynamic Positioning and Resource Orchestration**

Siyu Cui<sup>1</sup>, Naiding Yang<sup>1</sup>, Yan Wang<sup>1</sup>  
<sup>1</sup>Northwestern Polytechnical University, China

### **IEEM24-F-0553/Real-Time Ergonomic Risk Assessment Using Inertial Measurement Units: A Case Study in the Manufacturing Industry**

Nader Salem<sup>1,2</sup>, Souha Baklouti<sup>2</sup>, Mohamed-ali Kammoun<sup>1</sup>, Taysir Rezgui<sup>3</sup>, Zied Hajej<sup>1</sup>, Sami Bennour<sup>2</sup>  
<sup>1</sup>Lorraine University, France  
<sup>2</sup>University of Sousse, Tunisia  
<sup>3</sup>Tunisia Polytechnic School, Tunisia

## **IEEM24-F-0251/On the Necessity for Policy Analysis for Sustainable Value in Smallholder Agri-food Supply Chains: A Developing Economy Case Study**

W. Madushan Fernando<sup>\*1</sup>, R.M. Chandima Ratnayake<sup>2</sup>, H. Niles Perera<sup>1</sup>, Amila Thibbotuwawa<sup>1</sup>

<sup>1</sup>University of Moratuwa, Sri Lanka

<sup>2</sup>University of Stavanger, Norway

## **Project Management**

17/12/2024 08:30 AM-10:30 AM L4 Nana

**Session Chair(s):** Yuan CHAI  
The University of Adelaide

## **IEEM24-F-0610/Workload-balancing Constraints in a Continuous-Time Integer Programming Formulation for the Resource-Constrained Project Scheduling Problem**

Nina Ackermann<sup>1</sup>, Tamara Bigler<sup>1</sup>, Norbert Trautmann<sup>\*1</sup>

<sup>1</sup>University of Bern, Switzerland

## **IEEM24-F-0195/Construction and Empirical Research on Evaluation Indicator System for Innovation Capacity of Complex Product R&D Network from Project Perspective**

Yan Wang<sup>1</sup>, Naiding Yang<sup>1</sup>, Yan Xu<sup>1</sup>, Siyu Cui<sup>\*1</sup>

<sup>1</sup>Northwestern Polytechnical University, China

## **IEEM24-F-0216/Do Cooperations Always Do Good to R&D Firms' Innovation Performance? -Evidence from Chinese R&D Industries**

Fangmei WangDu<sup>\*1</sup>, Yunhui Geng<sup>2</sup>, Lei Huang<sup>1</sup>

<sup>1</sup>Xi'an Shiyou University, China

<sup>2</sup>Northwestern Polytechnical University, China

## **IEEM24-F-0371/Disaster Response System Framework Analysis of the SoS Approach**

Yuan Chai<sup>\*1</sup>, Indra Gunawan<sup>1</sup>, Nam Nguyen<sup>1</sup>

<sup>1</sup>The University of Adelaide, Australia

## **IEEM24-F-0575/Factors Influencing Household Intentions to Embrace Solar Power Systems: A Systematic Literature Review for Indonesia**

Syamsul Ma'arif<sup>\*1</sup>, Budi Hartono<sup>1</sup>, Hilya Arini<sup>1</sup>, Deendarlianto Deendarlianto<sup>1</sup>

<sup>1</sup>Universitas Gadjah Mada, Indonesia

## **IEEM24-F-0089/Top Management Support as a Catalyst for Program Management Maturity in Higher Education IT Departments: An Empirical Investigation**

Devi Pratami<sup>\*1</sup>, Nor Hasrul Akhmal Ngadiman<sup>2</sup>, Syed Ahmad Helmi Syed Hassan<sup>3</sup>, Muhd Ikmal Isyraf Mohd Maulana<sup>2</sup>

<sup>1</sup>Universiti Teknologi Malaysia, Indonesia

<sup>2</sup>Universiti Teknologi Malaysia, Malaysia

<sup>3</sup>Purdue University, United States

## **IEEM24-A-0161/Maximizing the Net Present Value of a Project Under Uncertainty: Activity Delays and Dynamic Policies**

Salim Rostami<sup>\*1</sup>, Stefan Creemers<sup>1</sup>, Roel Leus<sup>2</sup>

<sup>1</sup>IESEG School of Management, France

<sup>2</sup>KU Leuven, Belgium



## **IEEM24-A-0174/Identification of Key Influencing Factors of Using Carbon Regulatory Mechanism to Promote Modular Construction in Hong Kong**

Ying Wang<sup>\*1</sup>, Heng Li<sup>2</sup>, Siu Kei Lam<sup>1</sup>, Fanny Tang<sup>1</sup>

<sup>1</sup>Hong Kong Metropolitan University, Hong Kong SAR

<sup>2</sup>The Hong Kong Polytechnic University, Hong Kong SAR

## **Operations Research 4**

17/12/2024 08:30 AM-10:30 AM L4 Asok

**Session Chair(s):** Hieu T. NGUYEN  
North Carolina Agricultural and Technical State University  
Roel LEUS  
KU Leuven

## **IEEM24-F-0556/Maximizing the Project's Net Present Value Under Earliness Penalties**

Lena Sophie Wohler<sup>\*1</sup>, Juergen Zimmermann<sup>1</sup>

<sup>1</sup>Clausthal University of Technology, Germany

## **IEEM24-A-0066/A New Compact Formulation for Parallel Machine Scheduling with Conflicts**

Roel Leus<sup>\*1</sup>, Phablo Moura<sup>1</sup>, Hande Yaman<sup>1</sup>

<sup>1</sup>KU Leuven, Belgium

## **IEEM24-A-0092/Routing of Automated Spraying Vehicles in Agricultural Areas**

Qian Wan<sup>\*1</sup>, Andreas Ernst<sup>1</sup>, Rodolfo Garcia-Flores<sup>2</sup>, Phillip Kilby<sup>2</sup>, Andreas Schutt<sup>2</sup>, Simon Bowly<sup>3</sup>

<sup>1</sup>Monash University, Australia

<sup>2</sup>CSIRO Data 61, Australia

<sup>3</sup>Gurobi, Australia

## **IEEM24-A-0112/Drone Scheduling for Area Monitoring**

Yun Liu<sup>\*1</sup>, Jun Xia<sup>\*1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

## **IEEM24-F-0588/A Two-stage Stochastic Programming Approach for Aircraft to Ground Resource Assignment**

Lidia Zewde<sup>\*1</sup>, Hieu T. Nguyen<sup>\*1</sup>, Steven Jiang<sup>1</sup>, Om Prakash Yadav<sup>1</sup>

<sup>1</sup>North Carolina Agricultural and Technical State University, United States

## **IEEM24-F-0448/Enhancing Employee Empowerment in Railway Manufacturing: The Impact of Industry 4.0 Digital Technologies**

Khathutshelo Mushavhanamadi<sup>1</sup>, Eric Mikobi Bakama<sup>\*1</sup>, Todani Sitholimela<sup>1</sup>

<sup>1</sup>University of Johannesburg, South Africa

## **IEEM24-A-0151/Using Machine Learning to Improve the Integrated Optimization of Loading and Routing**

He Zhang<sup>\*1</sup>, Jun Xia<sup>\*1</sup>, Biao YUAN<sup>1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

## **IEEM24-F-0491/Algorithms for Fair Repetitive Scheduling**

Dvir Shabtay<sup>\*1</sup>, Andrei Plotkin<sup>\*1</sup>, Yali Fink<sup>1</sup>

<sup>1</sup>Ben Gurion University of the Negev, Israel

## Technology & Knowledge Management 3

17/12/2024 08:30 AM-10:30 AM L4 Phrom Phong

**Session Chair(s):** Ville OJANEN  
LUT University  
Say Wei FOO  
NTC

### **IEEM24-F-0218/A Data-driven Morphological Analysis: A Novel Approach to Identifying New Innovative Ideas Using WordNet/Wikipedia Reinforcement**

Myoungkyun Woo<sup>1</sup>, Woojin Choi<sup>1</sup>, Jinsu Lee<sup>1</sup>, Youngjung Geum<sup>1</sup>  
<sup>1</sup>Seoul National University of Science and Technology, Korea, South

### **IEEM24-F-0378/A Study on the Advancedness of Technological Development of Electronic Components Using Patent Information**

Iori Nakaoka<sup>1\*</sup>, Hirochika Akaoka<sup>2</sup>  
<sup>1</sup>Shimonoseki City University, Japan  
<sup>2</sup>Kyoto Sangyo University, Japan

### **IEEM24-F-0407/Communication Patterns in Innovation Ecosystems: A Data Space Design Framework**

Martin Schellander<sup>1\*</sup>, Matthias Pörtl<sup>1</sup>, Michael Heiss<sup>2</sup>, Rudolf Pichler<sup>1</sup>, Franz Haas<sup>1</sup>  
<sup>1</sup>Graz University of Technology, Austria  
<sup>2</sup>Siemens AG Österreich, Austria

### **IEEM24-F-0480/Exploring the Role of Digital Transformation for Agile and Resilience Business: A Conceptual Model Based on Dynamic Capabilities View**

Afrin Fauzya Rizana<sup>1\*</sup>, Iwan Inrawan Wiratmadja<sup>1</sup>, Muhammad Akbar<sup>1</sup>  
<sup>1</sup>Bandung Institute of Technology, Indonesia

### **IEEM24-F-0484/An Embedding Inversion Approach to Interpretation of Patent Vacancy**

Sungsoo Lee<sup>1</sup>, Hakyoon Lee<sup>1</sup>, Jeonghwan Jeon<sup>2</sup>  
<sup>1</sup>Seoul National University of Science and Technology, Korea, South  
<sup>2</sup>Gyeongsang National University, Korea, South

### **IEEM24-A-0083/Sustainability Integration in Project Portfolio Management: An Investigation of Challenges and Enablers in Extractive Companies**

Masoud Aghajani<sup>1\*</sup>, Reza Kiani Mavi<sup>1</sup>, Gesa Ruge<sup>2</sup>  
<sup>1</sup>Edith Cowan University, Australia  
<sup>2</sup>Curtin University, Australia

### **IEEM24-F-0122/A New Family Member? The Intentional Acceptance of a Social Robot in the Home**

Fan-Chuan Tseng<sup>1\*</sup>, Yi-Chen Lin<sup>1</sup>  
<sup>1</sup>National University of Tainan, Taiwan

### **IEEM24-F-0205/Does Trademark Internationalization Contribute to Enterprise Performance? The Moderating Effect of Patent Internationalization**

Mucheng Han<sup>1</sup>, Suli Zheng<sup>1</sup>, Boyang Wu<sup>1</sup>  
<sup>1</sup>China Jiliang University, China

## E-Business & E-Commerce 2

17/12/2024 08:30 AM-10:30 AM L4 Thong Lo

**Session Chair(s):** Hakyeon LEE  
Seoul National University of Science and Technology  
Ahn KWANGWON  
Yonsei University

### **IEEM24-F-0067/Determining Factors Affecting Customer Loyalty and Satisfaction in Online Food Delivery Service During the COVID-19 Pandemic: A UTAUT2 Approach**

Krisna Chandra Susanto<sup>1</sup>, Yogi Tri Prasetyo<sup>\*1</sup>, Maela Madel L. Cahigas<sup>2</sup>, Reny Nadlifatin<sup>3</sup>, Satria Fadil Persada<sup>4</sup>, Irene Dyah Ayuwati<sup>5</sup>

<sup>1</sup>*Yuan Ze University, Taiwan*

<sup>2</sup>*Mapúa University, Philippines*

<sup>3</sup>*Institut Teknologi Sepuluh Nopember, Indonesia*

<sup>4</sup>*Binus University, Indonesia*

<sup>5</sup>*University of Surabaya, Indonesia*

### **IEEM24-F-0123/Factors of Organizational Culture Affecting the Promotion of Digital Transformation – A Comparison Based on Company Size –**

Tomoyuki Kawamura<sup>\*1</sup>, Haruyasu Noguchi<sup>1</sup>, Yoshinori Washitani<sup>1</sup>, Tetsuya Toma<sup>1</sup>

<sup>1</sup>*Keio University, Japan*

### **IEEM24-F-0139/Consumer Intention to Use Mobile Applications for Buying Surplus Food: A Research Model**

Niklas Eriksson<sup>\*1</sup>, Minna Stenius<sup>1</sup>

<sup>1</sup>*Arcada University of Applied Sciences, Finland*

### **IEEM24-F-0169/Mediating Roles of Trust and Interest in Influencing Consumer Purchase Decisions in Live Streaming E-commerce Scenarios**

Yixun Liu<sup>1</sup>, Tongrui Yang<sup>1</sup>, Xinao Shi<sup>1</sup>, Yige Fan<sup>\*1</sup>, Jiao Xue<sup>1</sup>

<sup>1</sup>*Shanghai Jiao Tong University, China*

### **IEEM24-F-0360/User Preferences for a Smart City Transportation Ticketing Service**

Asle Fagerstrom<sup>\*1</sup>, Gael Regades Rivera<sup>1</sup>, Niklas Eriksson<sup>2</sup>, Moutaz Haddara<sup>1</sup>, Valdimar Sigurdsson<sup>3</sup>

<sup>1</sup>*Kristiania University College, Norway*

<sup>2</sup>*Arcada University of Applied Sciences, Finland*

<sup>3</sup>*Reykjavik University, Iceland*

### **IEEM24-F-0418/How to Enhance Customers' Brand Attachment of Mobile Commerce Platforms by Gamification Based on the Mechanism-dynamic-emotion Framework?**

Li-Ting Huang<sup>\*1</sup>, Sin-Hao Chen<sup>2</sup>

<sup>1</sup>*Chang Gung University, Taiwan*

<sup>2</sup>*KPMG, Taiwan*

### **IEEM24-F-0434/A Conjoint-based Approach on Determining the Factors Affecting on Preference of Subscribing a Netflix Plan**

Ji Yong Park<sup>1</sup>, Yogi Tri Prasetyo<sup>\*2</sup>, Maela Madel L. Cahigas<sup>1</sup>, Reny Nadlifatin<sup>3</sup>

<sup>1</sup>*Mapúa University, Philippines*

<sup>2</sup>*Yuan Ze University, Taiwan*

<sup>3</sup>*Institut Teknologi Sepuluh Nopember, Indonesia*

## IEEM24-F-0482/A Knowledge Tracing-like Approach to Modeling Dynamic User Preferences

Jungmin Hwang<sup>\*1</sup>, Hakyoon Lee<sup>\*1</sup>

<sup>1</sup>Seoul National University of Science and Technology, Korea, South

## Decision Analysis & Methods 2

17/12/2024 08:30 AM-10:30 AM L6 Phayathai 1

**Session Chair(s):** Thomas WEBER  
École Polytechnique Fédérale de Lausanne (EPFL)

## IEEM24-F-0244/Role of Type of Aircraft in the Decision of Ancillary Services for Medium Haul Flights During International Travel

Sourav Kumar Mandal<sup>\*1</sup>, Swagato Chatterjee<sup>2</sup>, Amit Upadhyay<sup>3</sup>

<sup>1</sup>Indian Institute of Technology Kharagpur, India

<sup>2</sup>Queen Mary University of London, United Kingdom

<sup>3</sup>Indian Institute of Technology Roorkee, India

## IEEM24-F-0461/Digitalization in Shipping Industry: Embracing Industry 4.0 Technologies in the Sultanate of Oman

Meilinda Fitriani Nur Maghfiroh<sup>\*1</sup>, Esmail Al Riyami<sup>2</sup>

<sup>1</sup>Muscat University, Oman

<sup>2</sup>Asyad Shipping, Oman

## IEEM24-F-0511/Sustainable Raw Material Supplier Selection with Imprecise Information for Tire Production in the Context of Extended Producer Responsibility

Arup Ratan Paramanik<sup>\*1</sup>, Biswajit Mahanty<sup>1</sup>

<sup>1</sup>Indian Institute of Technology Kharagpur, India

## IEEM24-A-0113/Relatively Robust Multicriteria Optimization

Thomas Weber<sup>\*1</sup>

<sup>1</sup>École Polytechnique Fédérale de Lausanne (EPFL), Switzerland

## IEEM24-F-0249/A User-centric Development Approach for Smart Park Shuttle Service System

Luyao Wang<sup>\*1</sup>, Zou Yaxi<sup>1</sup>, Yan Xiang<sup>1</sup>, Danni Chang<sup>\*1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

## IEEM24-A-0056/An Innovative Optimization Approach to Support Farmers Transitioning to Organic Farming

Babak Abbasi<sup>\*1</sup>

<sup>1</sup>RMIT University, Australia

## IEEM24-F-0344/Pareto Set Representation Learning with Application to Multi-criteria Order Optimization

Chin Sheng Tan<sup>\*1</sup>, Abhishek Gupta<sup>2</sup>, Yew Soon Ong<sup>3</sup>, Siew Kei Lam<sup>3</sup>, Mahardhika Pratama<sup>4</sup>, Puay Siew Tan<sup>1</sup>

<sup>1</sup>Agency for Science, Technology and Research (A\*STAR), Singapore

<sup>2</sup>Indian Institute of Technology Goa, India

<sup>3</sup>Nanyang Technological University, Singapore

<sup>4</sup>University of South Australia, Australia

## Safety, Security & Risk Management 2

17/12/2024 08:30 AM-10:30 AM L6 Phayathai 2

**Session Chair(s):** Yan-Ling CAI  
Zhengzhou University

### **IEEM24-F-0473/IT-Security Risk Based Approach for Secure Operation of Distributed Data Platforms in Supply Chains**

Marvin Voß<sup>\*1</sup>, Jonas Kallisch<sup>2</sup>, Maxim Runge<sup>1</sup>, Tobias Theus<sup>3</sup>, Karl-Heinz Niemann<sup>1</sup>, Christoph Wunck<sup>2</sup>

<sup>1</sup>University of Applied Sciences and Arts Hannover, Germany

<sup>2</sup>University of Applied Sciences Emden/Leer, Germany

<sup>3</sup>Ludwig Maximilian University, Germany

### **IEEM24-F-0499/A Web-based Platform to Support Near Miss Management Systems in Industrial Companies: the Condivido Tool**

Maria Grazia Gnoni<sup>\*1</sup>, Valerio Elia<sup>1</sup>, Fabiana Tornese<sup>1</sup>, Diego Demerich<sup>2</sup>, Armando Guglielmi<sup>2</sup>, Mauro Pellicci<sup>2</sup>

<sup>1</sup>University of Salento, Italy

<sup>2</sup>National Institute for Insurance against Accidents at Work (INAIL), Italy

### **IEEM24-F-0544/An Empirical Analysis of Social Media Users' Disengagement Behavior based on Privacy Fatigue and Privacy Helplessness Perspectives**

Yan-Ling Cai<sup>\*1</sup>, Hao Sun<sup>1</sup>, Junyi Wu<sup>\*1</sup>

<sup>1</sup>Zhengzhou University, China

### **IEEM24-F-0595/A Framework Based on Natural Language Processing for Risk Management in Engineering**

Mingquan Yang<sup>\*1</sup>, Jelena Petronijevic<sup>2</sup>, Alain Etienne<sup>3</sup>, Ali Siadat<sup>3</sup>

<sup>1</sup>Arts et Metiers Institute of Technology, Université de Lorraine, LCFC, F-57070 Metz, France

<sup>2</sup>Arts et Métiers, France

<sup>3</sup>Arts et Métiers Institute of Technology, France

### **IEEM24-A-0073/Exploring Historical Maritime Accident Records Using Machine Learning**

Ziaul Haque Munim<sup>\*1</sup>

<sup>1</sup>University of South-Eastern Norway, Norway

### **IEEM24-A-0081/A Conceptual Data Protection Impact Assessment Framework Using Hybrid Risk Management Methods in Maritime Industries**

Sutthipong Yungratog<sup>\*1</sup>, Floris Goerlandt<sup>2</sup>, Wonsiri Punurai<sup>1</sup>, Sotarath Thammaboosadee<sup>\*1</sup>

<sup>1</sup>Mahidol University, Thailand

<sup>2</sup>Dalhousie University, Canada

### **IEEM24-A-0180/Safety Assessment for Floating Offshore Structures Through Random Fatigue Analysis for Mooring Systems in Vietnam**

Hien Hau Pham<sup>\*1</sup>, Quan Mai Hong<sup>1</sup>, Yi Liu Liu<sup>2</sup>

<sup>1</sup>Hanoi University of Civil Engineering, Viet Nam

<sup>2</sup>Norwegian University of Science and Technology, Norway

## **IEEM24-F-0075/Analysis of Factors Contributing to Train Derailments: The Perspective of South African Authorities**

Bheki Makhanya<sup>\*1</sup>, Jan Harm Pretorius<sup>1</sup>, Hannelie Nel<sup>1</sup>

<sup>1</sup>University of Johannesburg, South Africa

## **Manufacturing Systems 2**

17/12/2024 08:30 AM-10:30 AM L6 Phayathai 3

**Session Chair(s):** Harumi HARAGUCHI  
Ibaraki University

## **IEEM24-F-0314/The Role and Challenges of Visual Inspection in Electric Vehicle Battery Repurposing**

Sandra Jakšić<sup>\*1</sup>, Clarissa Alejandra González Chávez<sup>1</sup>, Björn Johansson<sup>1</sup>, Johan Stahre<sup>1</sup>

<sup>1</sup>Chalmers University of Technology, Sweden

## **IEEM24-F-0301/Development of a Comprehensive Description Model for Manufacturing Changes**

Jan-Philipp Rammo<sup>\*1</sup>, Nerma Custovic<sup>1</sup>, Michael F. Zaeh<sup>1</sup>

<sup>1</sup>Technical University of Munich, Germany

## **IEEM24-F-0521/Smart Pick and Place as an Application of Digital Transformation in Small and Medium-Sized Enterprises (SMEs)**

Ethan Reinhard<sup>1</sup>, Shiva Abdoli<sup>\*1</sup>

<sup>1</sup>University of New South Wales, Australia

## **IEEM24-F-0545/Information Modeling for Digitalized Sustainability Assessment in Manufacturing**

Daniel Schneider<sup>\*1</sup>, Cristina Macanás Azcona<sup>1</sup>, Markus Woerle<sup>1</sup>, Gunther Reinhart<sup>1</sup>

<sup>1</sup>Technical University of Munich, Germany

## **IEEM24-F-0607/Enhancing Formability of Non-Symmetrical Conical Geometries in Single Point Incremental Forming**

Pongsakorn Leetrakul<sup>1</sup>, Vitoon Uthaisangsk<sup>2</sup>, Sirichai Torsakul<sup>\*1</sup>

<sup>1</sup>Rajamangala University of Technology Thanyaburi, Thailand

<sup>2</sup>King Mongkut's University of Technology Thonburi, Thailand

## **IEEM24-A-0125/Efficient and Economical Synthesis of Diversified Benzimidazolyl Phosphine Ligands for Industrial Manufacturing Level: A Novel One-pot Assembly and Cross-matching Approach**

Shun Man Wong<sup>\*1</sup>

<sup>1</sup>Hong Kong Metropolitan University, Hong Kong SAR

## **IEEM24-F-0197/Method for Gripping a Freely Hanging Cable with a 2D-Camera for Automated Control Cabinet Wiring**

Robert Egel<sup>\*1</sup>, Bernd Kuhlenkötter<sup>2</sup>

<sup>1</sup>Ruhr-Universität Bochum, Germany

<sup>2</sup>Ruhr-University-Bochum, Germany

## **IEEM24-F-0291/Towards Service Innovation Readiness in Outcome-based Business Models**

Gholamhossein Kazemi<sup>\*1</sup>, Asle Fagerstrøm<sup>1</sup>

<sup>1</sup>*Kristiania University College, Norway*

## **Supply Chain Management 6**

17/12/2024 11:00 AM-01:00 PM L4 Phloen Chit

**Session Chair(s): Anders THORSTENSON**  
**Aarhus University**

## **IEEM24-F-0625/Collaboration of Polyethylene Terephthalate (PET) Waste Management in Reverse Logistics Network: A Conceptual Model**

Hilyatun Nuha<sup>\*1</sup>, Nurhadi Siswanto<sup>1</sup>, Erwin Widodo<sup>1</sup>

<sup>1</sup>*Institut Teknologi Sepuluh Nopember, Indonesia*

## **IEEM24-A-0062/Stochastic Optimized Model for the Floating Digital Food Supply Chain**

Sachin Yadav<sup>\*1</sup>, Rupesh Kumar<sup>1</sup>, Pulkit Tiwari<sup>1</sup>, Amit Yadav<sup>1</sup>

<sup>1</sup>*O.P. Jindal Global University, India*

## **IEEM24-A-0099/Risk Analysis in Basestock Inventory Systems Under Short-term Fill Rate Audits**

Jakub Wojtasik<sup>\*1</sup>, Joanna Bruzda<sup>1</sup>, Babak Abbasi<sup>2</sup>

<sup>1</sup>*Nicolaus Copernicus University in Toruń, Poland*

<sup>2</sup>*MIT University, Australia*

## **IEEM24-F-0234/Improving a Logistic Complaints Process Through a Six Sigma Project**

Ines Costa<sup>1</sup>, Eusebio Nunes<sup>1</sup>, Sergio Sousa<sup>\*1</sup>

<sup>1</sup>*University of Minho, Portugal*

## **IEEM24-A-0158/Coordinated Replenishment Policies for a Single-supplier Multi-retailer Cold Chain for Fresh Produce**

Cheng Guo<sup>1</sup>, Mohamed Wahab Mohamed Ismail<sup>\*2</sup>, Liping Fang<sup>2</sup>

<sup>1</sup>*Wuhan Technology and Business University, China*

<sup>2</sup>*Toronto Metropolitan University, Canada*

## **IEEM24-F-0554/Optimized Production Plan Under Ergonomic Aspects and Operational Effectiveness**

Oumayma El Mabrouk<sup>\*1</sup>, Mohamed-ali Kammoun<sup>1</sup>, Zied Hajej<sup>1</sup>, Abdelbadia Chaker<sup>2</sup>, Sami Bennour<sup>2</sup>

<sup>1</sup>*Lorraine University, France*

<sup>2</sup>*University of Sousse, Tunisia*

## **IEEM24-F-0165/Enhancing Supply Chain Performance: Strategies for Material Waste Reduction and Process Efficiency Enhancement**

Bongakonke Mthembu<sup>\*1</sup>, Bongumenzi Mncwango<sup>1</sup>, Oludolapo Olanrewaju<sup>1</sup>

<sup>1</sup>*Durban University of Technology, South Africa*

## **IEEM24-A-0123/Promoting Electric Vehicles: Reducing Charging Inconvenience and Price Via Station and Consumer Subsidies**

Suresh P. Sethi<sup>\*1</sup>, Lingling Shi<sup>2</sup>, Metin Cakanyildirim<sup>1</sup>

<sup>1</sup>The University of Texas at Dallas, United States

<sup>2</sup>McMaster University, Canada

## **Human Factors 2**

17/12/2024 11:00 AM-01:00 PM L4 Nana

**Session Chair(s):** Mahima GUPTA  
Indian Institute of Management Amritsar  
Jianxin (Roger) JIAO  
Georgia Institute of Technology

## **IEEM24-F-0246/Manufacturing Nudging Personalization Through Optimization of Nudge Configuration Using 2D Genetic Algorithm**

Shu Wang<sup>1</sup>, Feng Zhou<sup>2</sup>, Jianxin (Roger) Jiao<sup>\*1</sup>

<sup>1</sup>Georgia Institute of Technology, United States

<sup>2</sup>University of Michigan-Dearborn, United States

## **IEEM24-F-0250/Experimental Study of Combinatorial Optimization Based on Single Intentional Blinking Action**

Qiaojia Zeng<sup>\*1</sup>, Rui Chen<sup>1</sup>, Xueqi Shao<sup>1</sup>, Yafeng Niu<sup>\*1</sup>

<sup>1</sup>Southeast University, China

## **IEEM24-F-0316/The Effect of Job Conditions on Workers Feeling as a Measure of Mental Health: A Cross-Sectional Study**

Shahed Obeidat<sup>\*1</sup>, Waldemar Karwowski<sup>2</sup>, Mustafa Rawshdeh<sup>3</sup>

<sup>1</sup>The University of Jordan, Jordan

<sup>2</sup>University of Central Florida, United States

<sup>3</sup>The Hashemite University, Jordan

## **IEEM24-F-0374/Ergonomic Risk Assessment in Construction: Integrating Vision-based Postural Assessment and EMG-based Fatigue Analysis**

Tao Yu<sup>\*1</sup>, Hao Hu<sup>\*1</sup>, Feng Xu<sup>1</sup>, Zhipeng Zhang<sup>1</sup>, Ruoxuan Wang<sup>1</sup>, He Huang<sup>1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

## **IEEM24-F-0207/Does Increasing Takeover Time Budget Improve Driver Takeover Performance in Different Hazard Visibility Scenarios?**

Mingjie Li<sup>\*1</sup>, Weichi Huang<sup>1</sup>, Yiyang Wang<sup>1</sup>, Zijian Han<sup>1</sup>, Yafeng Niu<sup>\*1</sup>

<sup>1</sup>Southeast University, China

## **IEEM24-F-0613/Mediating Effects of Technostress on the Interplay of Workplace Design and Physical Discomfort Among Employees of Business Outsourcing Industries**

Ryan Jeffrey P. Curbano<sup>\*1</sup>

<sup>1</sup>Lyceum of the Philippines Laguna, Philippines

## **IEEM24-A-0132/Equity Driven Approach for Enhancing E-mobility Infrastructure**

Mahima Gupta<sup>\*1</sup>

<sup>1</sup>Indian Institute of Management Amritsar, India



## **IEEM24-F-0352/Evaluating Mental Workload Measures in Human-robot Collaborative Assembly**

Xiranai Dai<sup>\*1</sup>, Gaia Vitrano<sup>1</sup>

<sup>1</sup>*Politecnico di Milano, Italy*

## **Systems Modeling & Simulation 2**

17/12/2024 11:00 AM-01:00 PM L4 Asok

**Session Chair(s):** **Augustina Asih RUMANTI**  
Telkom University  
Tatsushi NISHI  
Okayama University

## **IEEM24-F-0038/Organizational Performance for Tourism Industry through Human Resource, Quality Service, and Tourism Development: Indonesian Tourism Perspective**

Augustina Asih Rumanti<sup>1</sup>, Mia Amelia<sup>\*1</sup>, Artamevia Salsabila Rizaldi<sup>1</sup>

<sup>1</sup>*Telkom University, Indonesia*

## **IEEM24-F-0214/Developing Conceptual Model for Estimating Waste Volume of Retired Electric Vehicle Battery**

Laksmi Ambarwati<sup>1</sup>, Romadhani Ardi<sup>\*1</sup>, Komarudin<sup>1</sup>

<sup>1</sup>*Universitas Indonesia, Indonesia*

## **IEEM24-F-0298/Comparative Analysis of Machine Learning-based Surrogate Modeling Approaches for Multi-body Dynamic Simulation in Railway Digital Twin Platform**

Shiyang Zhou<sup>\*1</sup>

<sup>1</sup>*Vienna University of Technology, Austria*

## **IEEM24-F-0318/Evaluating Business Resilience of a Startup in Indonesia: a System Dynamics Modeling**

Romadhani Ardi<sup>1</sup>, Elzi Muhammad<sup>1</sup>, Dyas Citraningrum<sup>\*1</sup>

<sup>1</sup>*Universitas Indonesia, Indonesia*

## **IEEM24-F-0383/Empowering Disability-Inclusive MSMEs Through Triple Helix Innovation: A PLS-SEM Based Modeling Approach**

Luciana Andrawina<sup>1</sup>, Mia Amelia<sup>\*1</sup>, Artamevia Salsabila Rizaldi<sup>1</sup>

<sup>1</sup>*Telkom University, Indonesia*

## **IEEM24-F-0438/Simultaneous Optimization of Task Allocation and Route Planning for Multiple Mobile Robots**

Makiko Hosoda<sup>1</sup>, Tatsushi Nishi<sup>\*1</sup>, Ziang Liu<sup>1</sup>, Tomofumi Fujiwara<sup>1</sup>

<sup>1</sup>*Okayama University, Japan*

## **IEEM24-F-0365/A Multi-objective Green Vehicle Routing Problem with Node Functionality Decisions and Location-dependent Demand for the Recycling Waste Sector**

Madeline Tee<sup>1</sup>, Dennis Cruz<sup>\*1</sup>

<sup>1</sup>*De La Salle University, Philippines*

# ORAL PRESENTATIONS

## IEEM24-A-0054/Modeling a Joint Network Design Problem for Truck Electrification Through an Industry-led Charging Infrastructure Development Strategy

Hao Yu<sup>\*1</sup>, Amit Adhikari<sup>1</sup>, Xu Sun<sup>1</sup>

<sup>1</sup>UiT The Arctic University of Norway, Norway

## Healthcare Systems & Management 2

17/12/2024 11:00 AM-01:00 PM L4 Phrom Phong

**Session Chair(s):** Supapat PHUANGKAEW  
Rajamangala University of Technology Krungthep  
Li HUANG  
Panzhuhua University

## IEEM24-F-0380/Optimal Rendezvous Points of Mobile Stroke Units and Emergency Medical Services in the Thon Buri Side, Bangkok

Krin Yongvongphaiboon<sup>1</sup>, Ronnachai Sirovetnukul<sup>1</sup>, Yongchai Nilanont<sup>1</sup>

<sup>1</sup>Mahidol University, Thailand

## IEEM24-F-0421/Preliminary Design of Rapid Response AED Delivery Unmanned Aerial System

Bartłomiej Dziewoński<sup>\*1</sup>, Krzysztof Kaliszuk<sup>1</sup>, Artur Kierzkowski<sup>1</sup>, Tomasz Kisiel<sup>1</sup>, Mateusz Kucharski<sup>1</sup>, Maciej Milewski<sup>1</sup>, Jacek Napora<sup>1</sup>

<sup>1</sup>Wroclaw University of Science and Technology, Poland

## IEEM24-F-0468/Design Thinking Approach for Resource Allocation in Emergency Departments

Eman Ouda<sup>\*1</sup>, Andrei Sleptchenko<sup>1</sup>, Mecit Can Emre Simsekler<sup>1</sup>

<sup>1</sup>Khalifa University, United Arab Emirates

## IEEM24-F-0230/Research on Nurse Scheduling Considering Fairness Preference and Fatigue Risk Under Hierarchical Management System

Li Huang<sup>1</sup>, Yang Xu<sup>1</sup>, Po-Chou Shih<sup>\*2</sup>

<sup>1</sup>Panzhuhua University, China

<sup>2</sup>National Yunlin University of Science and Technology, Taiwan

## IEEM24-A-0126/Selection Hyper-heuristic for Collaborative Operating Room Scheduling With Patient Preferences

Daiqiang Yin<sup>1</sup>, Yang Wang<sup>\*1</sup>, Juanru Wang<sup>1</sup>, Abraham Punnen<sup>2</sup>

<sup>1</sup>Northwestern Polytechnical University, China

<sup>2</sup>Simon Fraser University, Canada

## IEEM24-F-0186/Stock Price Reactions to Research and Development News on Pharmaceutical Companies in Japan

Terutaka Imai<sup>1</sup>, Fumiko Takeda<sup>\*2</sup>

<sup>1</sup>The University of Tokyo, Japan

<sup>2</sup>Keio University, Japan

## **IEEM24-F-0424/Healthcare Facility Layout Analysis: Case Study of Jordanian Blood Bank**

Mustafa Rawshdeh<sup>\*1</sup>, Shahed Obeidat<sup>2</sup>

<sup>1</sup>The Hashemite University, Jordan

<sup>2</sup>The University of Jordan, Jordan

## **IEEM24-F-0514/Application of the Kano Model in the Design and Development of a Breastmilk Cooler Bag**

Supapat Phuangkaew<sup>\*1</sup>, Phadej Phuangkaew<sup>2</sup>, Piya Rontlaong<sup>3</sup>

<sup>1</sup>Rajamangala University of Technology Krungthep, Thailand

<sup>2</sup>King Mongkut's University of Technology North Bangkok, Thailand

<sup>3</sup>Bansomdejchaopraya Rajaphat University, Thailand

## **Big Data & Analytics 2**

17/12/2024 11:00 AM-01:00 PM L4 Thong Lo

**Session Chair(s):** Shino IWAMI  
IEEE

## **IEEM24-F-0098/Does It Pay to Be Green? Investigating Alternative Fuels Impact on Vessel Value**

Vegard Enerstvedt<sup>\*1</sup>

<sup>1</sup>Norwegian School of Economics, Norway

## **IEEM24-F-0242/Research on Flight Attitude Prediction Method for Multi-rotor UAV Based on CNN-LSTM-attention Model**

Xuanlu Chen<sup>\*1</sup>, Shenghan Zhou<sup>1</sup>, Wenbing Chang<sup>1</sup>, Fajie Wei<sup>1</sup>, Linchao Yang<sup>2</sup>

<sup>1</sup>Beihang University, China

<sup>2</sup>North China Electric Power University, China

## **IEEM24-F-0328/Estimating Saving Electricity Potential for Peak Electricity Demand Reduction**

Shunsuke Mitsuhashi<sup>\*1</sup>, Shunichi Hattori<sup>2</sup>, Takashi Ito<sup>1</sup>, Takasi Onoda<sup>1</sup>

<sup>1</sup>Aoyama Gakuin University, Japan

<sup>2</sup>Central Research Institute of Electric Power Industry, Japan

## **IEEM24-F-0336/Applicability of Machine Learning to Improve Mastitis Prediction in Livestock**

Hiroaki Shiotsu<sup>\*1</sup>, Niken Prasasti Martono<sup>1</sup>, Hayato Ohwada<sup>1</sup>

<sup>1</sup>Tokyo University of Science, Japan

## **IEEM24-F-0496/A Transfer Learning for Estimation of Operation Time for 6-axis Robot Arms**

Hiyou Matsuda<sup>1</sup>, Tatsushi Nishi<sup>\*1</sup>, Ziang Liu<sup>1</sup>, Tomofumi Fujiwara<sup>1</sup>

<sup>1</sup>Okayama University, Japan

## **IEEM24-F-0463/Searching for Prescriptions for Countries in Economic Decline**

Shino Iwami<sup>\*1</sup>

<sup>1</sup>IEEE, United States

<sup>2</sup>NEC Corporation, Japan

# ORAL PRESENTATIONS

## **IEEM24-F-0096/Uncovering Insights from Restaurant Health Inspection Records to Enhance Public Food Safety**

Carmen Kar Hang Lee<sup>\*1</sup>

<sup>1</sup>*Singapore University of Social Sciences, Singapore*

## **IEEM24-F-0313/Predictive Maintenance and Data Analytics: Current Insights**

Thalente Nkosi<sup>\*1</sup>, Fidelis Emuze<sup>2</sup>

<sup>1</sup>*Durban University of Technology, South Africa*

<sup>2</sup>*Central University of Technology, South Africa*

# Information Processing & Engineering 2

17/12/2024 11:00 AM-01:00 PM L6 Phayathai 1

**Session Chair(s):** **Aries SUSANTY**  
**Diponegoro University**  
**Nita SUKDEO**  
**University of Johannesburg**

## **IEEM24-F-0518/Battery Ontology: A Systematic Literature Review**

Sido Auvia<sup>\*1</sup>, Wahyudi Sutopo<sup>2</sup>, Dwi Agustina Kurniawati<sup>3</sup>, Hendro Wicaksono<sup>4</sup>

<sup>1</sup>*Universitas Sebelas Maret, Indonesia*

<sup>2</sup>*Universitas Sebelas Maret, Indonesia*

<sup>3</sup>*Universitas Islam Negeri Sunan Kalijaga, Indonesia*

<sup>4</sup>*Constructor University, Germany*

## **IEEM24-F-0564/3D Reconstruction of Construction Sites Using Neural Radiance Fields for Progress Monitoring**

Haksun Kim<sup>\*1</sup>, Gitaek Lee<sup>2</sup>, Seokho Chi<sup>1</sup>

<sup>1</sup>*Department of Civil and Environmental Engineering, Seoul National University, Korea, South*

<sup>2</sup>*Institute of Construction and Environmental Engineering (ICEE), Korea, South*

## **IEEM24-A-0157/Traffic Signal Optimization Considering Pe destrians in an Intersection Using Reinforcement Learning**

Sehee Kim<sup>\*1</sup>, Gitae Kim<sup>\*1</sup>

<sup>1</sup>*Hanbat National University, Korea, South*

## **IEEM24-F-0503/Exploring User Evaluations of Visualization of Chart Features of Experimental Data**

Fangning Hao<sup>\*1</sup>, Xiang Ben<sup>1</sup>, Jintang Zhou<sup>1</sup>, Jianyu Shi<sup>1</sup>, Yajing Kan<sup>\*1</sup>

<sup>1</sup>*Southeast University, China*

## **IEEM24-F-0440/UAV-based Change Detection on Construction Sites for Rapid 3D Reconstruction**

Jaemin Shin<sup>\*1</sup>, Gitaek Lee<sup>2</sup>, Seokho Chi<sup>\*1</sup>

<sup>1</sup>*Department of Civil and Environmental Engineering, Seoul National University, Korea, South*

<sup>2</sup>*Institute of Construction and Environmental Engineering (ICEE), Korea, South*

## **IEEM24-F-0044/Investigating the Impact of Digital Transformation on Organizational Strategy Performance**

Dina Funah Moatshe<sup>1</sup>, Kemlall Ramsaroop Ramdass<sup>2</sup>, Nita Sukdeo<sup>3\*</sup>

<sup>1</sup>Regent Business School, South Africa

<sup>2</sup>University of South Africa, South Africa

<sup>3</sup>University of Johannesburg, South Africa

## **Quality Control & Management 2**

17/12/2024 11:00 AM-01:00 PM L6 Phayathai 2

**Session Chair(s):** Amitava MUKHERJEE  
XLRI - Xavier School of Management

## **IEEM24-F-0501/Evaluating Industry 4.0 Readiness and Investment Feasibility in an SME Industrial Factory**

Sakraan Sitcharangsi<sup>\*1</sup>

<sup>1</sup>Rajamangala University of Technology Phra Nakhon, Thailand

## **IEEM24-F-0478/Quality Management in a Production Network of Local MSEs from the Manufacturing Sector – A Literature Review**

Julia Christina Markert<sup>\*1</sup>, Dominik Saubke<sup>1</sup>, Pascal Krenz<sup>1</sup>, Jens Peter Wulfsberg<sup>1</sup>

<sup>1</sup>Helmut-Schmidt-University, Germany

## **IEEM24-F-0558/Evaluation of the Critical Failure Factors of Process Improvement Methodologies: An AHP Approach**

Mariam Bader<sup>\*1</sup>, Raja Jayaraman<sup>1</sup>, Ravindra S Goonetilleke<sup>1</sup>

<sup>1</sup>Khalifa University of Science and Technology, United Arab Emirates

## **IEEM24-A-0100/Optimal Design, Implementation and Comparisons of Distribution-free Phase-II Multi-aspect CUSUM Schemes**

Amitava Mukherjee<sup>\*1</sup>

<sup>1</sup>XLRI - Xavier School of Management, India

## **IEEM24-F-0072/Candidate Models for Modeling Quality Characteristics in Process Capability Analysis**

Renyan Jiang<sup>\*1</sup>, Wei Xue<sup>1</sup>, Yu Cao<sup>1</sup>

<sup>1</sup>Wenzhou University, China

## **IEEM24-F-0147/How Industry 4.0 Components Can Enhance the Competitiveness of a Small Household Electrical Appliance Manufacturer in China?**

Eric Cheung<sup>\*1</sup>, Fanny Tang<sup>1</sup>, Shu Lun Mak<sup>1</sup>

<sup>1</sup>Hong Kong Metropolitan University, Hong Kong SAR

## **IEEM24-F-0498/A Comparative Investigation Introducing Regularization Techniques in Linear Regression Models for Quality Prediction in Forming Technology**

Alejandra Vicaria<sup>\*1</sup>, Birgit Vogel-Heuser<sup>1</sup>, Marius Krüger<sup>1</sup>, Marion Merklein<sup>2</sup>, Michael Lechner<sup>2</sup>

<sup>1</sup>Technical University of Munich, Germany

<sup>2</sup>Friedrich-Alexander-Universität, Germany

## **IEEM24-F-0034/Application of a Problem-solving Lean Model to Evaluate Kaizen Projects for Good Quality Assurance**

Matshidiso Moso<sup>\*1</sup>, Oludolapo Olanrewaju<sup>1</sup>

<sup>1</sup>*Durban University of Technology, South Africa*

## **Engineering Education & Training**

17/12/2024 11:00 AM-01:00 PM L6 Phayathai 3

**Session Chair(s):** **Anies Faziehan ZAKARIA**  
**Universiti Kebangsaan Malaysia**  
**S.C. Johnson LIM**  
**Universiti Teknologi MARA**

## **IEEM24-F-0074/Predicting Factors Influencing the Actual Use of E-learning Platform Among Medical Students in the Philippines**

Omar Paolo Benito<sup>1</sup>, Yogi Tri Prasetyo<sup>\*1</sup>, Ralph Andre C. Roque<sup>2</sup>, Fernan Patrick Flores<sup>1</sup>, Maela Madel L. Cahigas<sup>2</sup>, Reny Nadlifatin<sup>3</sup>, Irene Dyah Ayuwati<sup>4</sup>

<sup>1</sup>*Yuan Ze University, Taiwan*

<sup>2</sup>*Mapúa University, Philippines*

<sup>3</sup>*Institut Teknologi Sepuluh Nopember, Indonesia*

<sup>4</sup>*University of Surabaya, Indonesia*

## **IEEM24-F-0258/Innovative Pedagogy in Engineering Ethics: A Digital Game-based Approach for Malaysian Pre-university Students**

Raja Muhammad Khairuddin Raja Rosli<sup>\*1</sup>, Anies Faziehan Zakaria<sup>\*1</sup>

<sup>1</sup>*Universiti Kebangsaan Malaysia, Malaysia*

## **IEEM24-F-0271/Digital Twins Training in TIC Industry: Review and Case Study**

Chi Ho Li<sup>\*1</sup>, Tsun Sang David Lam<sup>1</sup>, Chiu Kit Dickson Lo<sup>2</sup>

<sup>1</sup>*Hong Kong Metropolitan University, Hong Kong SAR*

<sup>2</sup>*Youth College (International), Hong Kong SAR*

## **IEEM24-F-0303/Study on Simulator Sickness and Its Symptoms During Personnel Training in Slow-moving Virtual Reality Tools**

Franciszek Restel<sup>\*1</sup>, Anna Jodejko-Pietruczuk<sup>1</sup>, Agnieszka Tubis<sup>1</sup>

<sup>1</sup>*Wroclaw University of Science and Technology, Poland*

## **IEEM24-F-0370/Collaborative Smart Manufacturing with Process Operation Diagrams: A Case Study from Tec's Smart Factory**

Diego I. Quintero-Sanchez<sup>1</sup>, Emma E. de la Garza-Inzunza<sup>1</sup>, Josué García-Ávila<sup>2</sup>, Erick Ramirez<sup>\*2,3</sup>

<sup>1</sup>*Tecnológico de Monterrey, Mexico*

<sup>2</sup>*Stanford University, United States*

<sup>3</sup>*School of Engineering and Sciences, Tecnológico de Monterrey, Mexico*

## **IEEM24-F-0505/Design and Development of Testing Kit for KNX Devices Reliability and Performance Measurement**

Mohammad Aizam Mohammad Akmal Ruzaini<sup>1</sup>, Ming Foong Lee<sup>2</sup>, Peng Wah Siew<sup>2</sup>, S.C. Johnson Lim<sup>3</sup>, Boon Tuan Tee<sup>4</sup>

<sup>1</sup>*Universiti Tun Hussein Onn Malaysia, Malaysia*

<sup>2</sup>*Seikou System Sdn. Bhd., Malaysia*

<sup>3</sup>*Universiti Teknologi MARA, Malaysia*

<sup>4</sup>*Universiti Teknikal Malaysia Melaka, Malaysia*

## **Supply Chain Management 7**

17/12/2024 02:00 PM-03:30 PM L4 Phloen Chit

**Session Chair(s):** Sang Jin KWEON  
Ulsan National Institute of Science and Technology  
Anders THORSTENSON  
Aarhus University

## **IEEM24-A-0110/An Analysis of Pick Travel Distances for Non-traditional Unit Load Warehouses with Multiple P/D Points**

Subir S. Rao<sup>\*1</sup>

<sup>1</sup>*S. P. Jain Institute of Management and Research, India*

## **IEEM24-A-0122/Enhancing Electric Vehicle Battery Lifecycle Management With GS1 Standards: A Digital Product Passport Approach**

Sang Jin Kweon<sup>1</sup>, Jaesung Kim<sup>1</sup>, Seokho Yoon<sup>1</sup>, Taeyeop Kang<sup>1</sup>, Yuseon Yun<sup>1</sup>, Dago Kweon<sup>1</sup>, Yujin Song<sup>1</sup>

<sup>1</sup>*Ulsan National Institute of Science and Technology, Korea, South*

## **IEEM24-A-0152/Non-crossing vs. Independent Lead Times in a Lost-sales Inventory System With Compound Poisson Demand**

Søren Glud Johansen<sup>1</sup>, Anders Thorstenson<sup>\*1</sup>

<sup>1</sup>*Aarhus University, Denmark*

## **IEEM24-A-0102/An Approximation Algorithm for Single Source Multiple Depot Pipeline Scheduling Problem**

Rahul Patil<sup>\*1</sup>

<sup>1</sup>*Indian Institute of Technology Bombay, India*

## **IEEM24-F-0191/Balancing Act: Optimizing Ship Safety and Cost-efficiency in the Face of Political Turmoil in the Red Sea**

Abebaw Ashenafi<sup>\*1</sup>, Ramzi Hammami<sup>1</sup>, Jason. Bian<sup>1</sup>

<sup>1</sup>*Rennes School of Business, France*

## **IEEM24-A-0064/Integrating Crowdsourcing for Cost-efficient and Sustainable Last Mile Deliveries**

Jaesung Kim<sup>1</sup>, Sang Jin Kweon<sup>\*1</sup>

<sup>1</sup>*Ulsan National Institute of Science and Technology, Korea, South*

## Intelligent Systems 2

17/12/2024 02:00 PM-03:30 PM L4 Nana

**Session Chair(s):** Hendro WICAKSONO  
Constructor University  
Hendri SUTRISNO  
National Dong Hwa University

### **IEEM24-F-0466/Causal AI in the Automotive Industry: Impact Analysis Through Carbon Emission Case Study**

Syed Muhammad Ali Hashmi<sup>1</sup>, Tamas Fekete<sup>1</sup>, Hendro Wicaksono<sup>\*1</sup>

<sup>1</sup>Constructor University, Germany

### **IEEM24-F-0488/Unveiling the Potential of Artificial Intelligence in Cooperative, Connected, and Automated Mobility (CCAM) Solutions: A Systematic Literature Review**

Abraham Amanu Eshetu<sup>1</sup>, Omid Fatahi Valilai<sup>1</sup>, Hendro Wicaksono<sup>\*1</sup>

<sup>1</sup>Constructor University, Germany

### **IEEM24-F-0492/A Microcontroller Operating Strategy for (Micro-)Pitting and Temperature Increase Detection in Sensor-Integrating Gears Evaluated with Pre-recorded Sensor Data**

Bernhard Rupperecht<sup>1</sup>, Birgit Vogel-Heuser<sup>1</sup>, Dominik Hujo<sup>1</sup>, Alejandra Vicaria<sup>1</sup>, Erich Knoll<sup>1</sup>, Karsten Stahl<sup>1</sup>, Matthias Ochs<sup>1</sup>, Ralf Brederlow<sup>1</sup>

<sup>1</sup>Technical University of Munich, Germany

### **IEEM24-F-0626/Enhancing Transparency in Public Transportation Delay Predictions with SHAP and LIME**

Annas Vijaya<sup>\*1</sup>, Shubhankar Bhattarai<sup>1</sup>, Linda Salma Angreani<sup>1</sup>, Hendro Wicaksono<sup>1</sup>

<sup>1</sup>Constructor University, Germany

### **IEEM24-F-0088/Risk of Fully Autonomous Vehicle Operations, a Fault Tree Analysis**

Jiaqing Huang<sup>1</sup>, Jiarui Wen<sup>1</sup>, Zheyuan Xiang<sup>1</sup>, Qiting Ye<sup>1</sup>, Shiyi Zhu<sup>1</sup>, Tzu Yang Loh<sup>\*1</sup>

<sup>1</sup>National University of Singapore, Singapore

### **IEEM24-F-0523/Development and Validation of a Smart Failure Management System for SMEs in Manufacturing**

Turgut Refik Caglar<sup>\*1</sup>, Elena Andrushchenko<sup>1</sup>, Lennart Müller-Stein<sup>1</sup>, Roland Jochem<sup>1</sup>

<sup>1</sup>Technical University of Berlin, Germany



## Reliability & Maintenance Engineering 2

17/12/2024 02:00 PM-03:30 PM L4 Asok

**Session Chair(s):** David VALIS  
University of Defence  
Bheki MAKHANYA  
University of Johannesburg

### **IEEM24-F-0039/Engine Degradation Assessment Based on Tribodiagnostic Data Backed up by Bayesian Approach**

David Valis<sup>1,2</sup>, Libor Zak<sup>2</sup>, Zdenek Vintr<sup>1</sup>, Matej Benko<sup>2</sup>

<sup>1</sup>University of Defence, Czech Republic

<sup>2</sup>Brno University of Technology, Czech Republic

### **IEEM24-F-0592/Maintenance Knowledge Inference Based on Relational Graph Convolutional Networks**

Yaqiong Lv<sup>1,2</sup>, Yan Chen<sup>1</sup>, Pan Zheng<sup>1</sup>, Di Sun<sup>2</sup>

<sup>1</sup>Wuhan University of Technology, China

<sup>2</sup>S.F. Express Group Co., Ltd, China

### **IEEM24-A-0059/Parallelizing Adaptive Reliability Analysis Through Penalizing the Learning Function**

Guangchen Wang<sup>1,2</sup>, Michael Monaghan<sup>1</sup>, Mimi Zhang<sup>1</sup>

<sup>1</sup>Trinity College Dublin, Ireland

### **IEEM24-A-0181/Quantitative Monitoring of Mine Rotating Equipment Using Acoustic Emission**

Elias Chatzidouros<sup>1</sup>, Antonis Chronakis<sup>1</sup>, Matina Karakitsiou<sup>1</sup>, Louis Constantinou<sup>1</sup>, Nikolaos Vlachos<sup>2</sup>,

Marios Markogiannis<sup>2</sup>, Ioannis Chasiotis<sup>3</sup>, Mayorkinos Papaelias<sup>4</sup>

<sup>1</sup>ENGITEC SYSTEMS International Limited, Cyprus

<sup>2</sup>Hellas Gold, Greece

<sup>3</sup>Satways Limited, Greece

<sup>4</sup>The University of Birmingham, United Kingdom

### **IEEM24-A-0166/Semi-quantitative Risk Assessment on the Use of Hydrocarbon Refrigerant in Air Conditioner and Chiller in Indonesia**

Ardiyansyah Yatim<sup>1,2</sup>, Ahmad Syihan Auzani<sup>1</sup>, Ridho Irwansyah<sup>1</sup>, Naufal Makarim<sup>1</sup>, Yi Liu Liu<sup>2</sup>

<sup>1</sup>Universitas Indonesia, Indonesia

<sup>2</sup>Norwegian University of Science and Technology, Norway

### **IEEM24-F-0033/Forecasting Asset Failures with Auto-regressive Models: A Statistical Approach**

Bheki Makhanya<sup>1,2</sup>, Jan Harm Pretorius<sup>1</sup>, Hannelie Nel<sup>1</sup>

<sup>1</sup>University of Johannesburg, South Africa

## Crisis Management

17/12/2024 02:00 PM-03:30 PM L4 Phrom Phong

**Session Chair(s):** Michael DZANDU  
University of Westminster

### IEEM24-F-0227/Exploring the Systems Dynamics of Rice Security: A Bibliometric Analysis

Lou Simon Catimbang<sup>\*1</sup>, Charlle Sy<sup>1</sup>

<sup>1</sup>De La Salle University, Philippines

<sup>2</sup>Polytechnic University of the Philippines, Philippines

### IEEM24-F-0345/From Disaster to Relief: A Systematic Literature Review on Humanitarian Logistics

Sima Kundu<sup>1</sup>, Sourav Kumar Mandal<sup>\*1</sup>, Binay Kumar Rajak<sup>1</sup>, M. Vimala Rani<sup>1</sup>

<sup>1</sup>Indian Institute of Technology Kharagpur, India

### IEEM24-F-0565/Crisis Management in Catastrophe Insurance: Applying Bühlmann-Straub, Subsidy, and Cross-Subsidy Methods in Indonesia

Fabianus Fangri Altrawidadi<sup>1</sup>, Dion Krisnadi<sup>2</sup>, Ferry Vincenttius Ferdinand<sup>\*3</sup>, Helena Margaretha<sup>1</sup>, Eric Jobiliong<sup>1</sup>

<sup>1</sup>Universitas Pelita Harapan, Indonesia

<sup>2</sup>University of Lausanne, Switzerland

<sup>3</sup>Pelita Harapan University, Indonesia

### IEEM24-F-0586/Mitigating Pandemics Through the Adaptation of Digital Technologies – Towards a Digital Resilience Framework

Michael Dzandu<sup>\*1</sup>, Sergio de Cesare<sup>1</sup>, Richard Evans<sup>2</sup>, Yinshan Tang<sup>3</sup>

<sup>1</sup>University of Westminster, United Kingdom

<sup>2</sup>Dalhousie University, Canada

<sup>3</sup>University of Reading, United Kingdom

### IEEM24-F-0155/Modeling and Optimizing Aircraft-cargo Compatibility and Risk Exposure Challenges in 1-M/M-1 Transportation Network

Deepak Kumar Kushwaha<sup>\*1</sup>, Goutam Sen<sup>2</sup>

<sup>1</sup>Indian Institute of Technology Kharagpur, India

<sup>2</sup>Indian Institute of Technology Kharagpur, India

## Service Innovation & Management 2

17/12/2024 02:00 PM-03:30 PM L4 Thong Lo

**Session Chair(s):** Hao YU  
UiT The Arctic University of Norway

### IEEM24-F-0542/Defining Smart Product-service System Configuration: A Systematic Literature Review

Mar'atus Sholihah<sup>\*1</sup>, Yuya Mitake<sup>2</sup>, Atikah Aghdhi Pratiwi<sup>1</sup>

<sup>1</sup>Institut Teknologi Sepuluh Nopember, Indonesia

<sup>2</sup>The University of Tokyo, Japan

## **IEEM24-F-0543/Private Shopping Trolley Design to Raise Customers' Convenience and Increase Supermarkets' Income**

Christina Wirawan<sup>\*1</sup>, Elty Sarvia<sup>1</sup>, Wawan Yudiantyo<sup>1</sup>, Martin<sup>1</sup>  
<sup>1</sup>*Universitas Kristen Maranatha, Indonesia*

## **IEEM24-F-0600/Analysis of The Potential Packaging Solution for Madura Satay Based on Customer's Preferences**

Elty Sarvia<sup>1</sup>, Christina Wirawan<sup>\*1</sup>, Noek Sulandari<sup>1</sup>, Pin Panji Yapinus<sup>1</sup>, Markus Tanubrata<sup>1</sup>, Gabriel Koesuma Salim<sup>1</sup>, Tubagus Panji Ismail<sup>1</sup>  
<sup>1</sup>*Universitas Kristen Maranatha, Indonesia*

## **IEEM24-A-0055/Analyzing the Impact of Large Language Models on Improving Chatbot Performance - A Case Study of chatUiT**

Mathis Roubille<sup>1</sup>, Hao Yu<sup>\*2</sup>  
<sup>1</sup>*ISIMA, France*  
<sup>2</sup>*UiT The Arctic University of Norway, Norway*

## **IEEM24-F-0574/Exploring User Attitudes and Innovative System Design for Remote Lighting Control Systems in Thailand's Creative Industries**

Thammanoon Jeerasottikule<sup>\*1</sup>, Nagul Cooharojananone<sup>1</sup>, Kanokwan Atchariyanvanich<sup>2</sup>  
<sup>1</sup>*Chulalongkorn University, Thailand*  
<sup>2</sup>*King Mongkut's Institute of Technology Ladkrabang, Thailand*

## **IEEM24-F-0043/Exploring the Emergence of Retailers Within the Pharmaceutical Industry and Their Impact on Medical Service Delivery**

Joshlyn Manickum<sup>1</sup>, Kemlall Ramsaroop Ramdass<sup>2</sup>, Nita Sukdeo<sup>\*3</sup>  
<sup>1</sup>*Regent Business School, South Africa*  
<sup>2</sup>*University of South Africa, South Africa*  
<sup>3</sup>*University of Johannesburg, South Africa*

# POSTER PRESENTATIONS

17/12/2024 03:30 PM-05:30 PM L6 Phayathai 4

## **IEEM24-A-0009/Analysing the Influence of Big Data and Analytics on Project Management: A Bibliometric Study**

Bogolo Ntombela<sup>1</sup>, Molusiwa Ramabodu<sup>1</sup>

<sup>1</sup>Durban University of Technology, South Africa

## **IEEM24-A-0010/Dynamic Analysis of Cylindrical Gear Under Tooth Fracture**

Jakub Gajewski<sup>2\*1</sup>, Lukasz Jedlinski<sup>1</sup>

<sup>1</sup>Lublin University of Technology, Poland

## **IEEM24-A-0019/Interpretable and Domain-agnostic Health Monitoring of Rolling Bearings: A Real-time Unsupervised Approach**

Guillaume Prevost<sup>2\*1</sup>, Esteban Cabanillas<sup>1</sup>, Jérôme Boutet<sup>1</sup>, Cornél Ioana<sup>2</sup>

<sup>1</sup>French Alternative Energies and Atomic Energy Commission, France

<sup>2</sup>GIPSA Lab, France

## **IEEM24-A-0033/Designing and Evaluating Sustainable Aviation Fuel Supply Chains Across European Borders**

Evrin Ursavas<sup>2\*1</sup>, Stuart Zhu<sup>2</sup>

<sup>1</sup>University of Groningen, Netherlands

<sup>2</sup>University of Groningen, Netherlands

## **IEEM24-A-0069/Implementing Generative Artificial Intelligence in Taiwanese Business Enterprises**

Nien-Chi Liu<sup>2\*1</sup>, Chia-hung Tsai<sup>2</sup>, Ming-Jhe Jeng<sup>1</sup>, YaTing Liu<sup>2</sup>

<sup>1</sup>National Taiwan University, Taiwan

<sup>2</sup>National Chengchi University, Taiwan

## **IEEM24-A-0095/Exploring the Impact of Technological Innovation on Occupational Safety and Health in Manufacturing Industries**

Gaia Vitrano<sup>2\*1</sup>, Guido J.L. Micheli<sup>1</sup>, Huan Xu<sup>1</sup>, Xiranai Dai<sup>1</sup>, Stefano Signorini<sup>2</sup>, Angelo Castaldo<sup>3</sup>, Alessia Marrocco<sup>3</sup>

<sup>1</sup>Politecnico di Milano, Italy

<sup>2</sup>National Institute for the Insurance of Work Related Injuries (INAIL), Italy

<sup>3</sup>Sapienza University of Rome, Italy

## **IEEM24-A-0096/Real-time Monitoring and Adaptive Control System for Quality Control in Laser Cladding**

Dae-Geun Hong<sup>2\*1</sup>, Dong-Won Lee<sup>1</sup>, Chang-Hee Yim<sup>1</sup>, Nam-Kyu Park<sup>2</sup>, Tae-Gyu Lee<sup>2</sup>, Deok-Su Yun<sup>2</sup>, Rae-Hyung Chung<sup>2</sup>

<sup>1</sup>Pohang University of Science and Technology, Korea, South

<sup>2</sup>SungWook Co., Ltd., Korea, South

## **IEEM24-A-0101/Dynamic Risk Collection and Operational Control Algorithm**

Manal Naji<sup>2\*1</sup>, Jérôme Lacaille<sup>2</sup>, Samuel Bassetto<sup>1</sup>

<sup>1</sup>Ecole Polytechnique de Montreal, Canada

<sup>2</sup>Safran Aircraft Engines, France

## **IEEM24-A-0117/Reinforcement Learning-based Dynamic Pallet Routing in the Hanbat Smart Factory Test-bed**

Ran Kim<sup>1</sup>, Jongho Baek<sup>1</sup>, Siwon Hong<sup>1</sup>, Sujeong Baek<sup>1</sup>, Moonsoo Shin<sup>2\*1</sup>

<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0119/Reinforcement Learning-based Dynamic Dispatching Agent in the Hanbat Smart Factory Test-bed**

Minjung Kim<sup>1</sup>, Moonsoo Shin<sup>1</sup>

<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0120/An Agent-based Manufacturing Execution System for the Hanbat Smart Factory Test-bed**

Jimin Park<sup>1</sup>, Moonsoo Shin<sup>1</sup>

<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0128/Identification and Application of Process Element Technologies for Customized Smart Wear Production**

Jimmyeong Lee<sup>1</sup>, Hye Jin Lee<sup>1</sup>, Dae Young Lim<sup>1</sup>, Chanhee Won<sup>1</sup>

<sup>1</sup>Korea Institute of Industrial Technology, Korea, South

## **IEEM24-A-0129/Deep Learning Based Fault Prediction of Bearing-shaft System Using Multivariate Sensor Signals**

Minhee Lee<sup>1</sup>, Sujeong Baek<sup>1</sup>

<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0150/Organic vs. Traditional Oil Production Under Crop Yield Uncertainty**

Imen Nouira<sup>1</sup>, Ramzi Hammami<sup>1</sup>

<sup>1</sup>Rennes School of Business, France

## **IEEM24-A-0156/Optimal Distribution Network Considering Lead Times and Transportation Costs**

Dongyeon Noh<sup>1</sup>, Gitae Kim<sup>1</sup>, Chaehyun Kim<sup>1</sup>

<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0163/A Study on Decision Support for the Development of Cosmetics Containing White Biotechnology-based Ingredients Using Knowledge Graphs**

Gi Hyun Lee<sup>1</sup>, Taehoon Kim<sup>1</sup>, Jungmin Yun<sup>1</sup>

<sup>1</sup>Korea Institute of Industrial Technology, Korea, South

## **IEEM24-A-0167/Heuristic Programming Model for the Truck Loading Problem : A Case From the Frozen Food Industry**

Jeongsu Lee<sup>1</sup>, Minjun Koo<sup>1</sup>, Byeong-Su Kim<sup>1</sup>, Sungmin Bae<sup>1</sup>

<sup>1</sup>Hanbat National University, Korea, South

## **IEEM24-A-0168/A Study on the Eye Fatigue Assessment System for Estimating Optimal Usage Time of XR Devices**

Taehoon Kim<sup>1</sup>, Gi Hyun Lee<sup>1</sup>, Jungmin Yun<sup>1</sup>, Jungsik Koo<sup>2</sup>, Hyeong Woo Bae<sup>2</sup>, Chang Kee Lee<sup>1</sup>

<sup>1</sup>Korea Institute of Industrial Technology, Korea, South

<sup>2</sup>Gumi Electronics and Information Technology Research Institute, Korea, South

## **IEEM24-A-0170/Aligning LLM-assisted Evaluation with Human Judgment in Marketing Strategies**

Kouya Kitagawa<sup>1</sup>, Takuya Kodama<sup>1</sup>, Hiroyuki Matsuyama<sup>1</sup>, Hiroshi Maruyama<sup>1</sup>, Hajime Sasaki<sup>2</sup>

<sup>1</sup>Dentsu Group Inc., Japan

<sup>2</sup>The University of Tokyo, Japan

# POSTER PRESENTATIONS

## **IEEM24-A-0171/A Study on the Correlation Between Usability and Content Immersion in HMD-Based XR Devices**

Taehoon Kim<sup>1</sup>, Gi Hyun Lee<sup>1</sup>, Jungmin Yun<sup>1</sup>, Chang Kee Lee<sup>1</sup>, Jungsik Koo<sup>2</sup>, Hyeong Woo Bae<sup>2</sup>

<sup>1</sup>Korea Institute of Industrial Technology, Korea, South

<sup>2</sup>Gumi Electronics and Information Technology Research Institute, Korea, South

## **IEEM24-A-0178/Enhancing Mechanical Properties of reclaimed Carbon Fiber Reinforced Plastic Fabricated Material Extrusion via Cold Isostatic Pressing**

Sangjun Jeon<sup>1</sup>, Seung Ki Moon<sup>2</sup>, Daejong Yang<sup>1</sup>

<sup>1</sup>Kongju National University, Korea, South

<sup>2</sup>Nanyang Technological University, Singapore

## **IEEM24-A-0179/A Data-driven Surrogate Model of Sintering Deformation Prediction in Binder Jetting Process**

Seungyon Cho<sup>1</sup>, Seong Je Park<sup>1</sup>, Seung Ki Moon<sup>1</sup>

<sup>1</sup>Nanyang Technological University, Singapore

## **IEEM24-A-0185/Using a Business Accounting Matrix for Risk Management of a Tourist Facility**

Roberta Pellegrino<sup>1</sup>, Casiano Manrique-de-Lara-Peñate<sup>2</sup>

<sup>1</sup>Politecnico di Bari, Italy

<sup>2</sup>Department of Applied Economics, University of Las Palmas de Gran Canaria, Spain, Spain

## **IEEM24-A-0192/A Data-driven and Knowledge Graph Enhanced Intelligent Framework for Modeling Cognitive Digital Twins**

Jiehan Zhou<sup>1</sup>, Quanbo Lu<sup>1,2</sup>

<sup>1</sup>Shandong University of Science and Technology, China

<sup>2</sup>China University of Geosciences (Beijing), China

## **IEEM24-F-0024/How the Intention to Participate Ensures the Success of Effective Organizational Learning from Failure**

Sanetake Nagayoshi<sup>1</sup>, Jun Nakamura<sup>2</sup>

<sup>1</sup>Shizuoka University, Japan

<sup>2</sup>Chuo University, Japan

## **IEEM24-F-0065/Image Reconstruction Error-based Industrial Image Data Drift Detection**

Weifeng Li<sup>1</sup>, Zhenrong Wang<sup>1</sup>, Bin Li<sup>1</sup>

<sup>1</sup>Huazhong University of Science and Technology, China

## **IEEM24-F-0066/An Automatic Design Method for Dynamic Detection Networks of Industrial Surface Defects**

Zhenrong Wang<sup>1</sup>, Weifeng Li<sup>1</sup>, Jinghao Xie<sup>2</sup>, Bin Li<sup>1</sup>

<sup>1</sup>Huazhong University of Science and Technology, China

<sup>2</sup>Powerchina Hubei Electric Engineering Co. LTD, China

## **IEEM24-F-0077/Incoming Container Schedule-Aware Container Rearrangement Planning based on Reinforcement Learning in Container Terminal**

Junghyun Lee<sup>1</sup>, Jun Kyun Choi<sup>1</sup>, Gokhan Koc<sup>2</sup>, Gozde Sayin<sup>2</sup>, Hyeonseok Seo<sup>1</sup>

<sup>1</sup>Korea Advanced Institute of Science and Technology, Korea, South

<sup>2</sup>TAV Technologies, Turkey

## **IEEM24-F-0095/A Unified Framework to Classify Business Activities into International Standard Industrial Classification through Large Language Models for Circular Economy**

Xiang Li<sup>1</sup>, Lan Zhao<sup>1</sup>, Junhao Ren<sup>1</sup>, Yajuan Sun<sup>2</sup>, Chuan Fu Tan<sup>2</sup>, Zhiqian Ye<sup>2</sup>, Gaoxi Xiao<sup>1</sup>

<sup>1</sup>Nanyang Technological University, Singapore

<sup>2</sup>Singapore Institute of Manufacturing Technology (SIMTech), Agency for Science, Technology and Research (A\*Star), Singapore

## **IEEM24-F-0137/Using LightGBM + SHAP to Analyze the Impact of Factors on Stock Market Investment**

Chun Ming Shih<sup>1</sup>, Keng-Chieh Yang<sup>2,1</sup>

<sup>1</sup>National Kaohsiung University of Science and Technology, Taiwan

## **IEEM24-F-0138/An Intelligent Decision Support Model for Sustainable Automated E-fulfillment Centers Through Fuzzy Association Rules Mining**

George T.S. Ho<sup>2,1</sup>, Valerie Tang<sup>1</sup>

<sup>1</sup>The Hong Kong University of Hong Kong, Hong Kong SAR

## **IEEM24-F-0143/Metaverse-enabled Responsive Data Analytics Model for Enhancing Customers' Online Experience in Luxury Retail**

Hoi Yan Lam<sup>2,1</sup>, Lap Wong<sup>1</sup>

<sup>1</sup>The Hong Kong University of Hong Kong, Hong Kong SAR

## **IEEM24-F-0144/Ontology Modelling of Smart Product-service System Components towards Mass Personalization**

Lucheng Chen<sup>1</sup>, Guojun Sheng<sup>1</sup>, Chenggang Qin<sup>1</sup>, Chao Wang<sup>1</sup>, Alexander T.Y Wu<sup>2</sup>, Ayala Nuertai<sup>2</sup>,

Tongtong Zhou<sup>3</sup>, Xinguo Ming<sup>2,3</sup>

<sup>1</sup>Haier Group Corporation, China

<sup>2</sup>Shanghai Jiaotong University, China

<sup>3</sup>Shanghai Jiao Tong University, China

## **IEEM24-F-0187/Scheduling Problem of Empty Container Trucks Considering the Uncertainty of Bulk Cargo Weight at the Terminal**

Yufei Li<sup>1</sup>, Wei Qin<sup>2</sup>, Peixiang Wang<sup>1</sup>, Runzhi Tan<sup>1</sup>, Zhanluo Zhang<sup>1</sup>, Qihang Xu<sup>1</sup>, Heng Huang<sup>2</sup>, Ying Zou<sup>3</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

<sup>2</sup>NeZha Smart Port&Shipping Technology (Shanghai) CO., LTD, China

<sup>3</sup>Shanghai International Port (Group) Co., Ltd, China

## **IEEM24-F-0220/Global and Local Contrastive Learning for Classification and Segmentation of Mixed-type Wafer Bin Map Defect Patterns**

Shantong Yin<sup>1</sup>, Rui Wang<sup>2,1</sup>, Peng Li<sup>1</sup>

<sup>1</sup>Harbin Institute of Technology, China

## **IEEM24-F-0225/Heuristic Approach for Generative Layout Planning of Scalable Production Systems**

Michael Riesener<sup>1</sup>, Esben Schukat<sup>1</sup>, Siyuan Wang<sup>1</sup>, Alexander Obladen<sup>2,1</sup>, Christopher Kapella<sup>1</sup>

<sup>1</sup>RWTH Aachen University, Germany

## **IEEM24-F-0236/Innovation Efficiency and Influencing Factors of High-tech Industries: An Analysis from the Intellectual Property Perspective**

Boyang Wu<sup>2,1</sup>, Suli Zheng<sup>1</sup>, Mucheng Han<sup>1</sup>

<sup>1</sup>China Jiliang University, China

# POSTER PRESENTATIONS

## **IEEM24-F-0273/Research on the Impact of Government Carbon Quota and Subsidy Policies on Manufacturers' Production Decisions Based on Baseline Method**

Cui Wei<sup>\*†</sup>, Qiaolun Gu<sup>1</sup>

<sup>1</sup>Tianjin University of Technology and Education, China

## **IEEM24-F-0274/Research on Pricing Strategy of Low-carbon Label Products in Closed-loop Supply Chain**

Xinyu Wang<sup>\*†</sup>, Qiaolun Gu<sup>1</sup>

<sup>1</sup>Tianjin University of Technology and Education, China

## **IEEM24-F-0320/Supplier Segmentation in Large Enterprises: A Supervised Machine Learning Approach**

Bedoor Bahameish<sup>1</sup>, Mohammed Yaqot<sup>1</sup>, Brenno C. Menezes<sup>\*†</sup>

<sup>1</sup>Hamad Bin Khalifa University, Qatar

## **IEEM24-F-0326/Utilizing Industrial Waste for Sustainable Concrete: A Critical Analysis of Ground Granulated Blast Furnace Slag in Cement Production**

Busola Dorcas Akintayo<sup>\*†</sup>, Oludolapo Olanrewaju<sup>1</sup>

<sup>1</sup>Durban University of Technology, South Africa

## **IEEM24-F-0353/Analyzing Influence Factors of Blockchain Technology in Prognostics and Health Management Based on Spherical Fuzzy DEMATEL Method and Technology Adoption Theory**

Zhengwei Hai<sup>†</sup>, Xiangxiu Meng<sup>1</sup>, Hui Guo<sup>1</sup>, XiaoPing Lu<sup>1</sup>, Tongtong Zhou<sup>†</sup>, Xinguo Ming<sup>1</sup>

<sup>1</sup>Shanghai Jiao Tong University, China

## **IEEM24-F-0408/Bayesian Network for Risk Assessment of Circular Economy in the Furniture Industry**

Roberta Pellegrino<sup>\*†</sup>

<sup>1</sup>Politecnico di Bari, Italy

## **IEEM24-F-0414/Challenges of Applying Virtual Technology to Transport Systems Research**

Agnieszka Tubis<sup>\*†</sup>, Anna Jodejko-Pietruczuk<sup>1</sup>, Franciszek Restel<sup>1</sup>

<sup>1</sup>Wroclaw University of Science and Technology, Poland

## **IEEM24-F-0433/Investigating the Role of Quality and Continuous Improvement in Shaping Agile Service Organisations**

Thabiso Mokoena<sup>\*†</sup>

<sup>1</sup>University of Johannesburg, South Africa

## **IEEM24-F-0447/Capacity Planning and Inventory Management: An Automotive Manufacturer's Case Study in South Africa**

Eric Mikobi Bakama<sup>\*†</sup>, Khathutshelo Mushavhanamadi<sup>1</sup>, Bongani Penelope Shuma<sup>1</sup>

<sup>1</sup>University of Johannesburg, South Africa



## **IEEM24-F-0490/Extraction of Research Objectives, Machine Learning Model Names, and Dataset Names from Academic Papers and Analysis of Their Interrelationships Using LLM and Network Analysis**

Sayaka Nishio<sup>\*1</sup>, Hirofumi Nonaka<sup>1</sup>, Nanami Tsuchiya<sup>1</sup>, Aderu Migita<sup>1</sup>, Yuya Banno<sup>1</sup>, Teruaki Hayashi<sup>2</sup>, Hiroki Sakaji<sup>3</sup>, Takeshi Sakumoto<sup>4</sup>, Kohei Watabe<sup>5</sup>

<sup>1</sup>*Aichi Institute of Technology, Japan*

<sup>2</sup>*The University of Tokyo, Japan*

<sup>3</sup>*Hokkaido University, Japan*

<sup>4</sup>*Nagaoka University of Technology, Japan*

<sup>5</sup>*Saitama University, Japan*

## **IEEM24-F-0497/Lean Production in an Aerospace Parts Manufacturing Factory: A Case Study**

Fei-Pai Liu<sup>1</sup>, Jun-Der Leu<sup>\*1</sup>, Andre Krischke<sup>2</sup>

<sup>1</sup>*National Central University, Taiwan*

<sup>2</sup>*Munich University of Applied Sciences, Germany*

## **IEEM24-F-0509/Product Photography as a Tool Supporting Attribute Agreement Analysis**

Magdalena HRYB<sup>\*1</sup>

<sup>1</sup>*Poznan University of Technology, Poland*

## **IEEM24-F-0551/Frequency-amplitude Enhanced Dynamic Time Warping for Parkinson's Disease Gait Analysis**

Zhilong Chen<sup>\*1</sup>, Rui Wang<sup>\*1</sup>, Xin Shi<sup>2</sup>, Xin Wang<sup>1</sup>

<sup>1</sup>*Harbin Institute of Technology, China*

<sup>2</sup>*Shenzhen Hospital of Southern Medical University, China*

## **IEEM24-F-0623/Effects of Private-private and Public-private Collaborations on Alzheimer's Drug Development**

Haizhen Jin<sup>\*1</sup>, Annapoornima Subramanian<sup>\*2</sup>

<sup>1</sup>*NUS ISEM, Singapore*

<sup>2</sup>*National University of Singapore, Singapore*

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- b. Your presentation file should only be in PowerPoint format (.ppt/.pptx), and it should not exceed 3.5GB in size. Here is a link to a PowerPoint template for download
- c. Bring a thumb drive with backup copies of your presentation.
- d. You must arrive in the presentation room at least 15 minutes prior to the session's start time. For information on the precise presentation schedules, please consult the final program.

- e. Each presentation room has a laptop, a laser pointer, an LCD projector, and a screen. Microsoft Office 2021 Suites and Windows 10 will be installed on the computer. Word, Excel, Powerpoint, USB and HDMI interfaces.
- f Show consideration and keep to the 15 minutes allotted for your presentation. At the conclusion of the meeting, all presentation files will be deleted.

## 4. Poster Presentation

### 4.1. How to Upload a Presentation

- a. Log in to the IEEM site using your email address and password
- b. Click "Upload Presentation" in the left menu panel (this function is automatically enabled for registered presenters).
- c. A0 dimension, 1189mm (Height) x 841mm (Width), vertical/portrait orientation should be used for posters. The recommended image size is 16 Megapixels, or 4680 x 3310 pixels at 100 dpi.

### 4.2. How to Prepare Your Poster

- a. Poster display area is 2.4m (Height) x 1m (Width). Finished Size of the Poster Should Measure: A0 in Portrait Format, 1189mm Height x 841mm Width.  
Here is a link to a Poster template for download
- b. To make it simple for readers to recognize your abstract, prominently display your Abstract ID, Abstract Title, and Author Name(s) at the top of the poster.  
The presenter's name must be highlighted and written in capital letters.
- c. The author's name, email address, and mailing address must be included in case viewers want to get in touch with you for further information.

## 4.3. Tuesday 17 December 2024 is Poster Presentation Day

### a. Key Timings

**From 12pm: Author Presenters Put Up Posters. Must be completed by 2pm.**

- Poster boards are pre-assigned and marked with your Abstract ID
- Adhesive tapes and scissors are available at the Poster Help Desk, nearby the poster boards. If you have special needs for your poster presentation, please bring those supplies with you to the meeting.

**From 3:30pm to 5:30pm: Presenter Presence to Take Questions from Viewers**

**Posters must be removed by 5:45pm.**

- ### b. Collect your pre-printed poster from the Help Desk (If Eligible) You will need to bring along your Paper/Abstract ID.

ROW	BDA				
1A	IEEM24-F-0065	IEEM24-F-0220	IEEM24-F-0551	IEEM24-F-0490	IEEM24-A-0009
1B	IEEM24-A-0117	IEEM24-A-0119	IEEM24-A-0120	IEEM24-F-0447	
	PPC				

ROW	RME			IS		SMS
2A	IEEM24-A-0010	IEEM24-A-0019	IEEM24-A-0101	IEEM24-F-0077	IEEM24-F-0095	IEEM24-A-0192
2B	IEEM24-F-0137	IEEM24-F-0138	IEEM24-F-0143	IEEM24-A-0095	IEEM24-A-0185	IEEM24-F-0408
	BC			SSRM		OR

ROW	TKM				DAM	
3A	IEEM24-F-0024	IEEM24-F-0236	IEEM24-F-0623	IEEM24-A-0069	IEEM24-A-0163	IEEM24-F-0353
3B	IEEM24-F-0066	IEEM24-A-0129	IEEM24-F-0509	IEEM24-A-0096	IEEM24-F-0433	IEEM24-A-0171
	QCM				HF	

ROW	SCM					
4A	IEEM24-F-0273	IEEM24-F-0274	IEEM24-A-0156	IEEM24-A-0167	IEEM24-A-0150	IEEM24-A-0033
4B	IEEM24-A-0128	IEEM24-F-0497	IEEM24-F-0225	IEEM24-F-0326	IEEM24-A-0178	IEEM24-F-0144
	MS				IPE	EET

## Legend

<b>BDA</b>	Big Data & Analytics
<b>DAM</b>	Decision Analysis & Methods
<b>BC</b>	E-Business & E-Commerce
<b>EET</b>	Engineering Education & Training
<b>HF</b>	Human Factors
<b>IPE</b>	Information Processing & Engineering
<b>IS</b>	Intelligent Systems
<b>MS</b>	Manufacturing Systems

<b>OR</b>	Operations Research
<b>PPC</b>	Production Planning Control
<b>QCM</b>	Quality Control & Management
<b>RME</b>	Reliability & Maintenance Engineering
<b>SSRM</b>	Safety, Security & Risk Management
<b>SCM</b>	Supply Chain Management
<b>SMS</b>	Systems Modeling & Simulation
<b>TKM</b>	Technology & Knowledge Management

# PROGRAM OVERVIEW

## IEEM2024 Final Program (Last Updated: 19 Nov 2024)

Sunday, 15 December 2024 <span style="float: right;">Program uses Thailand standard time and is 7 hours ahead of GMT (GMT+7)</span>								
15:00 - 17:00	Workshop: Publishing in the Journal of Operations Management by Dr Tyson R. Browning (Ticket Holders Only) - Level 4, Nana							
17:00 - 18:30	Registration & Name Badge Pick Up - Level 4, Foyer							
17:00 - 18:30	Welcome Reception - Level 6, Siam							
Monday, 16 December 2024 <span style="float: right;">Program uses Thailand standard time and is 7 hours ahead of GMT (GMT+7)</span> <span style="float: right;">Registration Opens 7:30am - Level 4, Foyer</span>								
08:30 - 10:30	IEEM2024 Opening & Keynote Presentations - Level 6, Phayathai Ballroom							
Keynote: "Industry and Manufacturing Strategies and Technologies in the era of AI - Bridging Digital Horizons" <i>Michael W. McLean, Managing Director of McLean Management Consultants Pty Ltd (Australia) (Establish 1988)</i> Keynote: "Designing Products for Adaptability" <i>Dr Tyson R. Browning, Operations Management, Neesley School of Business at Texas Christian University</i>								
10:30 - 11:00	AM Coffee/Tea Break - Outside Presentation Rooms							
11:00 - 13:00	AM2 Scheduled Presentations							
L4 Phloen Chit	L4 Nana	L4 Asok	L4 Phrom Phong	L4 Thong Lo	L6 Phayathai 1	L6 Phayathai 2	L6 Phayathai 3	
Supply Chain Management 1	Reliability & Maintenance Engineering 1	Operations Research 1	Technology & Knowledge Management 1	Service Innovation & Management 1	Decision Analysis & Methods 1	Safety, Security & Risk Management 1	Manufacturing Systems 1	
Dr Y.P. Tsang	Dr Yaqiong Lv	Dr Vinay Singh	Prof Mariza Tsakalero	Prof Sven Seidenstricker	Dr S.C. Johnson Lim	Prof Ziaul Haque Munim	Dr Carman Lee	
Prof Aries Susanty		Dr Fen XU	Prof Ville Ojanen	Prof Augustina Ash Rumentari	Dr Younes Benslimane	Dr Yan-Ling Cai	Dr Harumi Haraguchi	
IEEM24-F-0021	IEEM24-F-0104	IEEM24-F-0223	IEEM24-F-0032	IEEM24-F-0037	IEEM24-F-0053	IEEM24-A-0159	IEEM24-F-0111	
IEEM24-F-0025	IEEM24-F-0105	IEEM24-F-0058	IEEM24-F-0157	IEEM24-F-0047	IEEM24-F-0054	IEEM24-F-0132	IEEM24-F-0146	
IEEM24-F-0040	IEEM24-F-0206	IEEM24-F-0118	IEEM24-A-0131	IEEM24-F-0221	IEEM24-F-0167	IEEM24-F-0241	IEEM24-F-0150	
IEEM24-F-0050	IEEM24-F-0435	IEEM24-F-0134	IEEM24-F-0213	IEEM24-F-0252	IEEM24-F-0452	IEEM24-F-0257	IEEM24-F-0228	
IEEM24-F-0068	IEEM24-F-0439	IEEM24-F-0135	IEEM24-F-0356	IEEM24-F-0300	IEEM24-F-0262	IEEM24-F-0375	IEEM24-F-0235	
IEEM24-F-0076	IEEM24-A-0031	IEEM24-F-0004	IEEM24-F-0570	IEEM24-F-0366	IEEM24-F-0319	IEEM24-F-0410	IEEM24-F-0256	
IEEM24-F-0097	IEEM24-F-0583	IEEM24-F-0297	IEEM24-F-0031	IEEM24-F-0457	IEEM24-F-0359	IEEM24-F-0605	IEEM24-F-0412	
IEEM24-F-0166	IEEM24-A-0032	IEEM24-F-0238		IEEM24-F-0145	IEEM24-F-0454		IEEM24-F-0321	
13:00 - 14:00	Lunch Buffet - Level 5, The Market (Name Badge Required for Admission)							
14:00 - 16:00	PM1 Scheduled Presentations							
L4 Phloen Chit	L4 Nana	L4 Asok	L4 Phrom Phong	L4 Thong Lo	L6 Phayathai 1	L6 Phayathai 2	L6 Phayathai 3	
Supply Chain Management 2	Supply Chain Management 3	Operations Research 2	Healthcare Systems & Management 1	Big Data & Analytics 1	Information Processing and Engineering 1	Quality Control & Management 1	Intelligent Systems 1	
Dr Zahra HosseiniFard	Dr Y.P. Tsang	Dr Fen XU	Prof Yang Wang	Dr Pulkrit Tiwari	Dr Janne Harkonen	Prof Amrita Mukherjee	Dr Hendri Sutrisno	
Dr Amirhossein Mostofi	Dr Fadwa Dababneh		Prof Kae-Kuen Hu	Prof Chihhsuan Wang	Prof Aries Susanty		Dr Tzu Yang Loh	
IEEM24-F-0102	IEEM24-F-0201	IEEM24-A-0130	IEEM24-F-0030	IEEM24-F-0559	IEEM24-F-0057	IEEM24-F-0002	IEEM24-F-0009	
IEEM24-F-0108	IEEM24-F-0204	IEEM24-F-0175	IEEM24-F-0189	IEEM24-F-0611	IEEM24-F-0061	IEEM24-F-0127	IEEM24-F-0090	
IEEM24-F-0117	IEEM24-F-0240	IEEM24-F-0259	IEEM24-F-0200	IEEM24-A-0058	IEEM24-F-0063	IEEM24-F-0154	IEEM24-F-0125	
IEEM24-F-0119	IEEM24-F-0254	IEEM24-F-0275	IEEM24-A-0116	IEEM24-A-0063	IEEM24-F-0160	IEEM24-F-0203	IEEM24-F-0177	
IEEM24-F-0120	IEEM24-F-0317	IEEM24-F-0354	IEEM24-F-0266	IEEM24-A-0140	IEEM24-F-0261	IEEM24-F-0209	IEEM24-F-0243	
IEEM24-F-0149	IEEM24-F-0324	IEEM24-F-0022	IEEM24-F-0269	IEEM24-A-0141	IEEM24-F-0416	IEEM24-F-0445	IEEM24-F-0350	
IEEM24-F-0171	IEEM24-F-0331	IEEM24-A-0118	IEEM24-F-0309	IEEM24-A-0183	IEEM24-F-0082	IEEM24-F-0572	IEEM24-F-0405	
IEEM24-F-0202	IEEM24-F-0164	IEEM24-F-0432	IEEM24-F-0557	IEEM24-F-0173	IEEM24-F-0116	IEEM24-F-0390	IEEM24-F-0620	
16:00 - 16:30	PM Coffee/Tea Break - Outside Presentation Rooms							
16:30 - 18:00	PM2 Scheduled Presentations							
L4 Phloen Chit	L4 Nana	L4 Asok	L4 Phrom Phong	L4 Thong Lo	L6 Phayathai 1	L6 Phayathai 2	L6 Phayathai 3	
Supply Chain Management 4	Human Factors 1	Operations Research 3	Technology & Knowledge Management 2	E-Business & E-Commerce 1	Systems Modeling & Simulation 1	Production Planning Control	Engineering Economy & Cost Analysis	
Prof Aries Susanty	Dr Shahed Obeidat	Dr Leif Olsson	Prof Foo Say Wei	Prof Lin Liu	Dr Panrweer Rungskunroch	Dr Jianxin (Roger) Jiao	Prof R.M. Chandima Ratnayake	
Prof Bertha Maya Sophia			Prof Mariza Tsakalero	Prof Asle Fagerstrom				
IEEM24-F-0487	IEEM24-F-0023	IEEM24-F-0504	IEEM24-F-0508	IEEM24-A-0036	IEEM24-F-0455	IEEM24-F-0217	IEEM24-F-0568	
IEEM24-F-0515	IEEM24-F-0159	IEEM24-F-0532	IEEM24-F-0226	IEEM24-F-0464	IEEM24-F-0526	IEEM24-F-0267	IEEM24-A-0184	
IEEM24-F-0522	IEEM24-F-0180	IEEM24-F-0533	IEEM24-F-0158	IEEM24-A-0520	IEEM24-A-0087	IEEM24-F-0361	IEEM24-F-0294	
IEEM24-F-0535	IEEM24-F-0183	IEEM24-F-0538	IEEM24-A-0143	IEEM24-F-0552	IEEM24-A-0169	IEEM24-F-0580	IEEM24-F-0576	
IEEM24-F-0537	IEEM24-F-0198	IEEM24-F-0549	IEEM24-A-0162	IEEM24-A-0164	IEEM24-F-0174	IEEM24-A-0133	IEEM24-F-0348	
IEEM24-F-0547	IEEM24-F-0247	IEEM24-F-0081	IEEM24-A-0043	IEEM24-F-0462	IEEM24-F-0391	IEEM24-A-0065	IEEM24-F-0442	

# PROGRAM OVERVIEW

Tuesday, 17 December 2024		Program uses Thailand standard time and is 7 hours ahead of GMT (GMT+7)					Registration Opens 8am - Level 4, Foyer	
<b>08:30 - 10:30</b>		<b>AM1 Scheduled Presentations</b>						
L4 Phloen Chit	L4 Nana	L4 Asok	L4 Phrom Phong	L4 Thong Lo	L6 Phayathai 1	L6 Phayathai 2	L6 Phayathai 3	
Supply Chain Management 5	Project Management	Operations Research 4	Technology & Knowledge Management 3	E-Business & E-Commerce 2	Decision Analysis & Methods 2	Safety, Security & Risk Management 2	Manufacturing Systems 2	
Dr Zahra HousseiniFard	Dr Yuan Chai	Dr Hieu Nguyen	Prof Ville Ojanen	Prof Haykeon Lee	Prof Thomas Weber	Dr Yan-Ling Cai	Dr Harumi Haraguchi	
Dr Y.P. Tang		Prof Roel Leus		Prof Ahn Kwangwon				
IEEM24-F-0376	IEEM24-F-0610	IEEM24-F-0556	IEEM24-F-0218	IEEM24-F-0067	IEEM24-F-0244	IEEM24-F-0473	IEEM24-F-0314	
IEEM24-F-0444	IEEM24-F-0195	IEEM24-A-0066	IEEM24-F-0378	IEEM24-F-0123	IEEM24-F-0461	IEEM24-F-0499	IEEM24-F-0301	
IEEM24-F-0470	IEEM24-F-0216	IEEM24-A-0092	IEEM24-F-0407	IEEM24-F-0139	IEEM24-F-0511	IEEM24-F-0544	IEEM24-F-0521	
IEEM24-F-0476	IEEM24-F-0371	IEEM24-A-0112	IEEM24-F-0480	IEEM24-F-0169	IEEM24-A-0113	IEEM24-F-0595	IEEM24-F-0545	
IEEM24-A-0037	IEEM24-F-0575	IEEM24-F-0588	IEEM24-F-0484	IEEM24-F-0360	IEEM24-F-0249	IEEM24-A-0073	IEEM24-F-0607	
IEEM24-F-0192	IEEM24-F-0089	IEEM24-F-0448	IEEM24-A-0083	IEEM24-F-0418	IEEM24-A-0056	IEEM24-A-0081	IEEM24-A-0125	
IEEM24-F-0553	IEEM24-A-0161	IEEM24-A-0151	IEEM24-F-0122	IEEM24-F-0434	IEEM24-F-0344	IEEM24-A-0180	IEEM24-F-0197	
IEEM24-F-0251	IEEM24-A-0174	IEEM24-F-0491	IEEM24-F-0205	IEEM24-F-0482		IEEM24-F-0075	IEEM24-F-0291	
<b>10:30 - 11:00</b>		<b>AM Coffee/Tea Break - Outside Presentation Rooms</b>						
<b>11:00 - 13:00</b>		<b>AM2 Scheduled Presentations</b>						
L4 Phloen Chit	L4 Nana	L4 Asok	L4 Phrom Phong	L4 Thong Lo	L6 Phayathai 1	L6 Phayathai 2	L6 Phayathai 3	
Supply Chain Management 6	Human Factors 2	Systems Modeling & Simulation 2	Healthcare Systems & Management 2	Big Data & Analytics 2	Information Processing & Engineering 2	Quality Control & Management 2	Engineering Education & Training	
Prof Anders Thorntenson	Dr Jiansin (Roger) Jiao	Prof Tatsushi Nishi	Dr Supapat Phuangkaew	Dr Shino Iwami	Prof Nita Sakdoe	Prof Amvata Mukherjee	Dr S.C. Johnson Lim	
	Dr Mahima Gupta	Prof Augustina Ash Rumanti	Dr Li Huang		Prof Aries Susanty		Dr Anies Faezhan Zakaria	
IEEM24-F-0625	IEEM24-F-0246	IEEM24-F-0038	IEEM24-F-0380	IEEM24-F-0098	IEEM24-F-0518	IEEM24-F-0501	IEEM24-F-0074	
IEEM24-A-0062	IEEM24-F-0250	IEEM24-F-0214	IEEM24-F-0421	IEEM24-F-0242	IEEM24-F-0564	IEEM24-F-0478	IEEM24-F-0258	
IEEM24-A-0099	IEEM24-F-0316	IEEM24-F-0298	IEEM24-F-0468	IEEM24-F-0328	IEEM24-A-0157	IEEM24-F-0558	IEEM24-F-0271	
IEEM24-A-0234	IEEM24-F-0374	IEEM24-F-0318	IEEM24-F-0230	IEEM24-F-0336	IEEM24-F-0503	IEEM24-A-0100	IEEM24-F-0303	
IEEM24-A-0158	IEEM24-F-0207	IEEM24-F-0382	IEEM24-A-0126	IEEM24-F-0496	IEEM24-F-0440	IEEM24-F-0072	IEEM24-F-0370	
IEEM24-F-0554	IEEM24-F-0613	IEEM24-F-0438	IEEM24-F-0186	IEEM24-F-0463	IEEM24-F-0044	IEEM24-F-0147	IEEM24-F-0505	
IEEM24-F-0165	IEEM24-A-0132	IEEM24-F-0365	IEEM24-F-0424	IEEM24-F-0096		IEEM24-F-0498		
IEEM24-A-0123	IEEM24-F-0352	IEEM24-A-0054	IEEM24-F-0514	IEEM24-F-0313		IEEM24-F-0034		
<b>13:00 - 14:00</b>		<b>Lunch Buffet - Level 5, The Market (Name Badge Required for Admission)</b>				<b>Authors Put Up Posters - Level 6, Phayathai Ballroom Must Be Completed by 14:00</b>		
<b>14:00 - 15:30</b>		<b>PM1 Scheduled Presentations</b>						
L4 Phloen Chit	L4 Nana	L4 Asok	L4 Phrom Phong	L4 Thong Lo				
Supply Chain Management 7	Intelligent Systems 2	Reliability & Maintenance Engineering 2	Crisis Management	Service Innovation & Management 2				
Prof Anders Thorntenson	Dr Hendri Sutrisno	Dr Bheshi Makhanya	Dr Michael Dzandu	Dr Hao Yu				
Prof Sang Jin Kweon	Prof Hendro Wicaksono	Prof David Valis						
IEEM24-A-0110	IEEM24-F-0466	IEEM24-F-0039	IEEM24-F-0227	IEEM24-F-0542				
IEEM24-A-0122	IEEM24-F-0488	IEEM24-F-0592	IEEM24-F-0345	IEEM24-F-0543				
IEEM24-A-0152	IEEM24-F-0492	IEEM24-A-0059	IEEM24-F-0565	IEEM24-F-0600				
IEEM24-A-0102	IEEM24-F-0626	IEEM24-A-0181	IEEM24-F-0586	IEEM24-A-0055				
IEEM24-F-0191	IEEM24-F-0088	IEEM24-A-0166	IEEM24-F-0155	IEEM24-F-0574				
IEEM24-F-0064	IEEM24-F-0523	IEEM24-F-0033		IEEM24-F-0043				
<b>15:30 - 17:30</b>		<b>Coffee/Tea Break &amp; Poster Presentations - Level 6, Phayathai 4</b>					<b>Registration Closes 4pm - Level 4, Foyer Authors Remove Posters - Latest by 5:45pm</b>	
Supply Chain Management	Manufacturing Systems	Technology & Knowledge Management	Quality Control & Management	Big Data & Analytics	Production Planning Control	Reliability & Maintenance Engineering	E-Business & E-Commerce	
IEEM24-F-0273	IEEM24-A-0128	IEEM24-F-0024	IEEM24-F-0066	IEEM24-F-0065	IEEM24-A-0117	IEEM24-A-0010	IEEM24-F-0137	
IEEM24-F-0274	IEEM24-F-0497	IEEM24-F-0236	IEEM24-A-0129	IEEM24-F-0220	IEEM24-A-0119	IEEM24-A-0019	IEEM24-F-0138	
IEEM24-A-0156	IEEM24-F-0225	IEEM24-F-0623	IEEM24-F-0509	IEEM24-F-0551	IEEM24-A-0120	IEEM24-A-0101	IEEM24-F-0143	
IEEM24-A-0167	IEEM24-F-0326	IEEM24-A-0069	IEEM24-A-0096	IEEM24-F-0490	IEEM24-F-0447			
IEEM24-A-0150	IEEM24-A-0178	IEEM24-A-0163	IEEM24-F-0433	IEEM24-A-0009				
IEEM24-A-0033								
IEEM24-F-0320								
Intelligent Systems	Safety, Security & Risk Management	Human Factors	Decision Analysis & Methods	Operations Research	Systems Modeling & Simulation	Information Processing & Engineering	Engineering Education & Training	
IEEM24-F-0077	IEEM24-A-0095	IEEM24-A-0168	IEEM24-F-0353	IEEM24-F-0187	IEEM24-A-0179	IEEM24-F-0144	IEEM24-F-0414	
IEEM24-F-0095	IEEM24-A-0185	IEEM24-A-0171	IEEM24-A-0170					
IEEM24-A-0192	IEEM24-F-0408							
<b>18:00 - 21:00</b>		<b>Closing, Award Presentation and Conference Dinner - Level 6, Phayathai Ballroom (Conference Ends 21:00)</b>						
<b>Wednesday, 18 December 2024</b>		<b>Program uses Thailand standard time and is 7 hours ahead of GMT (GMT+7)</b>						
<b>08:30 - 16:30</b>		<b>Historical Tour (Ticket Holders Only) - Please gather at Eastin Hotel Lobby by 08:15. Tour Departs 08:30 Sharp</b>						

# NOTES





# NOTES





## Master of Science in Engineering Management (MSEM)

## 理學碩士(工程管理學)

Full-time (1 Year)/Part-time (2 Years)

Programme Code: P56

### From Engineers to Engineering Managers

This programme aims to develop students' managerial skills, innovation and entrepreneurial spirit, and leadership capabilities in the context of engineering management and entrepreneurship.



# Master of Science in Engineering Management (MSEM)

The Department of Systems Engineering (SYE) aims to help Hong Kong meet the technological and managerial challenges of the 21st century by engaging in industrially relevant research and development activities and by committing to foster closer research collaborations and more executive development and consultancy activities with Hong Kong and China's industrial sectors.

## PROGRAMME OBJECTIVES

This programme aims to equip students with the analytical, managerial and behavioural skills and knowledge that they need to excel in contemporary engineering management. Students should be able to undertake engineering management projects/research and to turn innovative ideas into practical applications. The programme meets the educational needs of engineers who are making the transition to engineering managers or technological entrepreneurs.

## PROGRAMME STRUCTURE

4 core courses + 6 elective courses

4 core courses + 3 elective courses + dissertation

You can obtain an MSc degree by completing coursework only or by combining coursework with a dissertation project.

### Core courses:

Engineering Management Principles and Concepts	Operations Management	Project Management	Technological Innovation and Entrepreneurship
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### Selected elective courses:

Asset and Maintenance Management	Business Process Improvement and Innovation	Financial Engineering for Engineering Managers
Industrial Marketing Management for Engineers	Managerial Decision-making Systems with Artificial Intelligence	Managing Strategic Quality
Quality and Reliability Engineering	Risk and Decision Analysis	Supply Chain Management

For a full list of elective courses, please visit [www.cityu.edu.hk/sye/msem/](http://www.cityu.edu.hk/sye/msem/)

## CONTINUING EDUCATION FUND (CEF) (FOR LOCAL STUDENTS)

Some elective courses, such as ADSE6015 - Supply Chain Management and ADSE6037 - Managing Strategic Quality, have been specified by the Office of the Government's Continuing Education Fund as 'reimbursable courses'.

Full details are available at [www.wfsfaa.gov.hk/cef/en/](http://www.wfsfaa.gov.hk/cef/en/)

## SCHOLARSHIP

A maximum of two MSEM- Entrance Scholarships will be awarded in each academic year. The value of each award shall not exceed HK\$25,000.

Information on other scholarships and financial assistance schemes is available on the website of the University's Student Development Services ([www.cityu.edu.hk/sds/](http://www.cityu.edu.hk/sds/)).


## ENTRANCE REQUIREMENTS


Applicants must hold a Bachelor degree in engineering or science, or the equivalent, or be a graduate member or qualified for graduate membership of a professional engineering institution.


## ENGLISH PROFICIENCY REQUIREMENTS


Non-local candidates from an institution where the medium of instruction is not English should fulfil one of the following English proficiency requirements:

TOEFL and IELTS scores are considered valid for two years from the test date and must be valid at the time of submission of application.

 a TOEFL score of 550 (paper-based test) or 79 (Internet-based test);

 an overall band score of 6.5 in the International English Language Testing System (IELTS);

 a score of 450 in the new College English Test (CET6) of mainland China or a pass in the old CET-6 test; or

 other equivalent qualifications.

### Enquiries

Tel: 34429321

Email: [sye.office@cityu.edu.hk](mailto:sye.office@cityu.edu.hk)

Website: [www.cityu.edu.hk/sye/msem](http://www.cityu.edu.hk/sye/msem)





## RESEARCH STUDIES OF DEPT OF ISE

Precision Engineering (State Key  
Laboratory of Ultra-precision  
Machining Technology)

Advanced Materials  
Processing Technologies

Product Design and  
Miniaturization

Smart  
Manufacturing  
and Robotics

Operations and  
Supply Chain  
Management

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Aviation and  
Transportation Logistics

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