



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

IEEM2022

KUALA LUMPUR, MALAYSIA

07 - 10 December 2022

www.ieem.org

Organizers



IEEE TEMS Hong Kong Chapter
IEEE TEMS Malaysia Chapter
IEEE TEMS Singapore Chapter

Partner



IEEM Secretariat



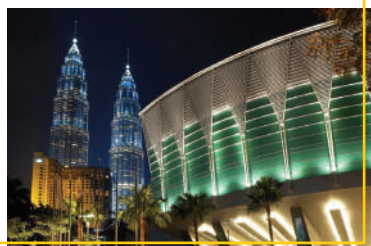
Supporting Organizations



Contents

- p. 2 Chair's Welcome
- p. 3 Organizers & Committees
- p. 7 Key Functions
- p. 8 Presentations – Oral
- p. 57 Presentations – Poster
- p. 64 Presenter Guidelines

Kuala Lumpur Convention Center



*Jalan Pinang, Kuala Lumpur,
50450 Kuala Lumpur, Wilayah Persekutuan
Kuala Lumpur, Malaysia*

Level 4 Location Plan



Key Timings

Wednesday 07 December 2022

- 1pm to 6pm Technical Visit To Steelcase Malaysia
- 4pm to 6pm
Level 3 Conference Hall 3
Registration Check-in
Welcome Reception

Thursday 08 December 2022

- From 8am
Level 4
Registration Check-in
- 9am to 10:30am
Level 3 Plenary Theatre
Auditorium
Opening & Keynote Presentation
- 11am to 5:30pm
Level 4 Meeting Rooms
Oral Presentations

Friday 09 December 2022

- 8:30am to 3:30pm
Level 4 Meeting Rooms
Oral Presentations
- 4pm to 5:30pm
Outside Level 4 Meeting Rooms
Poster Presentations
- 6pm to 9pm
Level 3 Conference Hall 3
Conference Dinner
Best Paper Awards
IEEM2023 Singapore

Organizing Chairs



Kah Hin CHAI
*National University
of Singapore*



Seung Ki MOON
*Nanyang Technological
University*



Pei-Lee TEH
*Monash University
Malaysia*

Program Chairs



Roger JIAO
*Georgia Institute of
Technology*



Min XIE
*City University of
Hong Kong*

Dear participants,

A very warm welcome to the 2022 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM2022). We are pleased to see many of you face-to-face, after two years of meeting online.

Since its 2007 inaugural meeting in Singapore, the IEEM conference has greatly evolved. It has become a leading international conference in the fields of industrial engineering and engineering management. IEEM2022 received nearly seven hundred submissions from forty countries and regions, worldwide. Like past IEEM conferences, up to five reviewers are assigned to each submission and the acceptance decisions were based on at least two consistent recommendations, ensuring the conference's consistent demand for high quality standards. These accepted submissions, organized around twenty topics, will be presented in the oral and poster sessions.

We greatly appreciate the time that Dr Abdul Azim has taken to prepare and deliver his keynote address and for accommodating the technical visit to Product Engineering Asia Pacific Steelcase. We are also grateful to Professor Matthew Nicholson our wonderful host representative from the Monash University Malaysia for making time to join us.

The organizing committee would like to thank all authors and participants for their interests, contributions and continued support to IEEM. Lastly, we are also grateful to the technical program committee members and reviewers for their help in the review process.

We wish all a fruitful conference, and hope that you will enjoy the cultural experiences of Malaysia.

Organizers



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Supporting Organizations



Organizing Chairs

Kah Hin CHAI,
National University of Singapore

Seung Ki MOON,
Nanyang Technological University

Pei-Lee TEH,
Monash University Malaysia

Program Chairs

Roger JIAO,
Georgia Institute of Technology

Min XIE,
City University of Hong Kong

Members

Nan CHEN,
National University of Singapore

Songlin CHEN,
Nanyang Technological University

Edwin CHEUNG,
*Hong Kong Institute of
Vocational Education (Tuen Mun)*

Walter FUNG,
City University of Hong Kong

Andrei O. J. KWOK,
Monash University Malaysia

Carman Ka Man LEE,
The Hong Kong Polytechnic University

Ewilly Jie Ying LIEW,
Monash University Malaysia

Szu Hui NG,
National University of Singapore

Annapoornima M. SUBRAMANIAN,
National University of Singapore

Program Committee

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University of Toulouse

Luciana ALENCAR,
Universidade Federal de Pernambuco

Meshach Ileanwa ALFA,
University of Jos

Philipp BAUMANN,
University of Bern

Zhiqiang CAI,
Northwestern Polytechnical University

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Federation University

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Chaoyang University of Technology

Mu-Chen CHEN,
National Yang Ming Chiao Tung University

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Universiti Tunku Abdul Rahman

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Université de Lorraine

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Sultan Qaboos University

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Lebanese American University

Jakub GAJEWSKI,
Lublin University of Technology

Siana HALIM,
Petra Christian University

Janne HARKONEN,
University of Oulu

Markus HARTONO,
University of Surabaya

Adnan HASSAN,
Universiti Teknologi Malaysia (Adjunct)



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National Taipei University

Qingpei HU,
Chinese Academy of Sciences

Jiage HUO,
Hong Kong Science Park

Supachart IAMRATANAKUL,
King Mongkut's Univ of Technology Thonburi

Tatsuya INABA,
Kanagawa Institute of Technology

Ville ISOHERRANEN,
Oulu University of Applied Sciences

Shino IWAMI,
NEC Corporation

Raja JAYARAMAN,
Khalifa University

Rathimala KANNAN,
Multimedia University

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University of Regina

Hadi KHORSHIDI,
The University of Melbourne

Gitae KIM,
Hanbat National University

Vikas KUMAR,
University of the West of England

Yong-Hong KUO,
The University of Hong Kong

Ming Foong LEE,
Universiti Tun Hussein Onn Malaysia

Gwo-Liang LIAO,
National Taitung University

S.C. Johnson LIM,
Universiti Tun Hussein Onn Malaysia

Shieu-Hong LIN,
Biola University

Tyrone T. LIN,
National Dong Hwa University

Weidong LIN,
Singapore Institute of Technology

Hongrui LIU,
San Jose State University

Bin LIU,
University of Strathclyde

Jing Hong LOW,
Multimedia University

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University of Science & Technology Beijing

Ippei MACHIDA,
MEIJI University

Harekrishna MISRA,
Institute of Rural Management Anand

Indrajit MUKHERJEE,
IIT Bombay

Saravanan MUTHAIYAH,
Multimedia University

Nabil NAHAS,
Université de Moncton

Kam K.H. NG,
The Hong Kong Polytechnic University

Dinh Son NGUYEN,
The University of Danang

Edoghogho OGBEIFUN,
University of Johannesburg

Sanjay Kumar PALEI,
Indian Institute of Technology (BHU)

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University of Westminster



Fernando ROMERO,
University of Minho

Mojahid SAEED OSMAN,
American University of Sharjah

Premaratne SAMARANAYAKE,
Western Sydney University

Karthik SANKARANARAYANAN,
Ontario Tech University

Kiyoshi SAWADA,
*University of Marketing and
Distribution Sciences*

Ronnachai SIROVETNUKUL,
Mahidol University

Rawinkhan SRINON,
Mahidol University

Aries SUSANTY,
University of Diponegoro

Quang Minh TA,
Nanyang Technological University

Yoshinobu TAMURA,
Yamaguchi University

Monika TANWAR,
IIT Jodhpur

Ai Chin THOO,
Universiti Teknologi Malaysia

Anders THORSTENSON,
Aarhus University

Norbert TRAUTMANN,
University of Bern

David VALIS,
University of Defence in Brno

Iwan VANANY,
Institut Teknologi Sepuluh Nopember

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ISAE SUPAERO

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South Tehran Branch*

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*Huazhong University of Science
and Technology*

Yue WANG,
*The Hang Seng University of
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The Hong Kong Polytechnic University

Haiyan XU,
*Institute of High Performance
Computing*

Om Prakash YADAV,
North Carolina A&T State University

Keng-Chieh YANG,
*National Kaohsiung University of Science and
Technology*

Michael YOUNG,
Mapua University

Anies Faziehan ZAKARIA,
Universiti Kebangsaan Malaysia

Linda ZHANG,
*IESEG School of Management
(LEM-CNRS 9221)*

Yaoming ZHOU,
Shanghai Jiao Tong University

Opening & Keynote Presentation

Thursday 08 December 2022, 9am to 10:30am, Level 3 Plenary Theatre Auditorium

Program (Actual May Vary)

9AM
TO
9:45AM

Opening Addresses



Andy CHEN, VP Conferences
IEEE Systems Council
President 2020-2021, IEEE TEMS



IEEM2022 Organizing Chairs
Seung Ki MOON, Nanyang Technological University
Pei-Lee TEH, Monash University Malaysia



Host Welcome Speech
Matthew NICHOLSON, Interim Pro Vice-Chancellor
and Interim Chief Executive Officer, Monash
University Malaysia

9:45AM
TO
10:30AM

Keynote Presentation



Abdul AZIM, Director, Product Engineering Asia Pacific
Steelcase, Adjunct Professor, Universiti Putra Malaysia
(UPM)

Conference Dinner & Best Paper Awards (Actual May Vary)

Friday 09 December 2022, 6pm to 9:00pm, Level 3 Conference Hall 3

6:00PM TO
6:25PM

Guest Arrival

6:25PM TO
6:30PM

Dinner Speech by Program Chair
Min XIE, City University of Hong Kong

6:30PM TO
8:00PM

Dinner Served

8:00PM TO
8:30PM

IEEM2022 Best Papers
Award Presentation

8:30PM TO
9:00PM

Next Meeting Presentation
IEEM2023 at Marina Bay Sands, Singapore

Oral Presentations

Human Factors 1

2022-12-08 11:00 AM-01:00 PM Room 401

Session Chair(s): Markus HARTONO, *University of Surabaya*
Chien-Sing LEE, *Sunway University*

IEEM22-F-0028/Towards Self-adaptive/Reflective Co-managed Open Generativity to Augment Absorptive-multiplicative-relational Capabilities/Capacities

Chien-Sing LEE^{1#}, K. Daniel WONG²

¹*Sunway University, Malaysia*

²*Daniel Wireless Software Pte Ltd, Singapore*

IEEM22-F-0078/Human Resources Strategies in High-tech Startups during the Seed Phase: The Relationship between Recruitment, Career, and Tolerance of Uncertainty

Yushi Nakaya^{#1}, Shuichi Ishida¹

¹*Tohoku University, Japan*

IEEM22-F-0150/Integration of Text Mining, Railqual, Kano Model, and Kansei Engineering for Train Service Excellence

Markus Hartono^{#1}, Dina Natalia Prayogo¹, Gusti Anandia Saylendra¹

¹*University of Surabaya, Indonesia*

IEEM22-F-0198/Searching for the Gaps in Mental Workload Assessment of Assistive Technologies

Andreas Dörner^{#1}, Marek Bures⁺², Gerald Pirk¹

¹*University of Applied Sciences Amberg-Weiden, Germany*

²*University of West Bohemia, Czech Republic*

IEEM22-F-0397/Investigating the User Experience and Identifying User Needs for Kitchen Appliances Using Thematic Analysis

Woochul Jung¹, May Jorella Lazaro¹, Joong Hee Lee¹, Gyungbhin Kim¹,

EunJeong Yang¹, Myung Hwan Yun^{#+1}

¹*Seoul National University, Korea, South*

IEEM22-F-0011/ The Mediating Role of Organizational Culture in Managing the Relationship Between Quality and Innovation: A Conceptual Model Proposal

Raíssa HERINGER¹, Andre M. CARVALHO²⁺, Paulo SAMPAIO¹

¹*University of Minho, Portugal*

²*Polytechnic Institute of Cávado and Ave, Portugal*

Engineering Economy and Cost Analysis

2022-12-08 11:00 AM-01:00 PM Room 402

Session Chair(s): Pei-Lee TEH, *Monash University*
S.C. Johnson LIM, *Universiti Tun Hussein Onn Malaysia*

IEEM22-F-0155/Operational Energy Optimizing in Office Buildings: A Simulation-Based Green Design Approach

Chandana Hemantha Thebuwena^{#1}, R.M. Chandima Ratnayake²

¹Galle Face Properties Limited, Sri Lanka

²University of Stavanger, Norway

IEEM22-F-0122/Energy Storage Potential Model for Residential Photovoltaic Systems

Vicente Rios^{#1}, Yupeng Wei¹, Hongrui Liu^{#1}

¹San Jose State University, United States

IEEM22-F-0285/Technical and Economic Analysis of Solar Energy Powered Lighting System in a Smart Building at Tropical Region

Ming Foong Lee¹, S.C. Johnson Lim^{#1}, Peng Wah Siew², Boon Tuan Tee³

¹Universiti Tun Hussein Onn Malaysia, Malaysia

²Seikou Systec Sdn. Bhd., Malaysia

³Universiti Teknikal Malaysia Melaka, Malaysia

IEEM22-F-0165/Portfolio Selection Using Mean-variance Model for Financial Technology Sector in the Australian Market Before and During COVID-19

Rogel Angelo Rebualos^{#1}, Michael Young^{#1}, Yogi Tri Prasetyo¹, Reny Nadlifatin²

¹Mapúa University, Philippines

²Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-F-0262/The Impact of Product Variety on Cost of Quality in Production

Mads Lunde Andersson^{#1}, Lars Hvam¹

¹Technical University of Denmark, Denmark

IEEM22-F-0424/On the Necessity for Improving Effectiveness of Qualification Process for Spare Parts Additive Manufacturing in a Circular Economy Supply Chain

R.M. Chandima Ratnayake^{#1}

¹University of Stavanger, Norway

Operations Research 1

2022-12-08 11:00 AM-01:00 PM Room 403

Session Chair(s): **Tonguc UNLUYURT**, *Sabanci University*
Philipp BAUMANN, *University of Bern*

IEEM22-F-0038/Cabinet Location Optimization for E-bike Battery Swapping Systems

Ziqi Li^{*1}, Gangyan Xu², Yaoming Zhou^{*1}

¹*Shanghai Jiao Tong University, China*

²*The Hong Kong Polytechnic University, Hong Kong SAR*

IEEM22-F-0222/A Vehicle Routing Problem in Plastic Waste Management Considering the Collection Point Location Decisions

Madeline Tee^{*1}, Dennis Cruz¹

¹*De La Salle University, Philippines*

IEEM22-F-0253/Railway Rolling Stock Assignment for Passenger Trains

Alyaa M. Younes^{*1}, Islam Ali¹, Amr B. Eltawil¹

¹*Egypt-Japan University of Science and Technology, Egypt*

IEEM22-F-0301/A Heuristic Approach for the Robust Traveling Salesman Problem

Kazuki Hasegawa^{*1}, Wei Wu¹

¹*Shizuoka University, Japan*

IEEM22-F-0303/Optimization Models for Routing and Frequency Assignment in Wireless Mesh Networks

Gulten Busra Karkili¹, Tonguc Unluyurt^{*2}

¹*University of Massachusetts Amherst, United States*

²*Sabanci University, Turkey*

IEEM22-F-0138/Pickup and Multi-delivery Problem with Time Windows

Pham Tuan Anh¹, Aldy Gunawan^{*2}, Vincent F. Yu¹, Chau Tuan Cuong¹

¹*National Taiwan University of Science and Technology, Taiwan*

²*Singapore Management University, Singapore*

Production Planning and Control 1

2022-12-08 11:00 AM-01:00 PM Room 404

Session Chair(s): Emrah ARICA, *SINTEF Manufacturing*
Tahir MAHMOOD, *King Fahd University of Petroleum and Minerals*

IEEM22-F-0214/Implementing Distribution Requirement Planning and Scheduling System for Lens Manufacturing Company

Wei Qing Lee^{#1}, Tay Jin Chua¹, Ravi Kumar Katru¹, Tian Xiang Cai¹

¹*Singapore Institute of Manufacturing Technology, Singapore*

IEEM22-F-0302/Batch Scheduling and Robust Batch Scheduling to Minimize Maximum Lateness

Keigo Miyagawa^{#1}, Kazuki Hasegawa¹, Liang Tang², Wei Wu¹

¹*Shizuoka University, Japan*

²*Dalian Maritime University, China*

IEEM22-A-0102/A Fast Metaheuristic Optimizer for Large-scale Batch Fulfillment Planning

Choonoh Lee^{#1}, Seyeon Park¹, Dongyun Kang¹, Jaehyeong Choi¹, Soojee Kim¹, Younggeun Kim¹

¹*Kurly Corporation, Korea, South*

IEEM22-F-0173/Effect of Lean Manufacturing Implementation: A South African Printing Industry Perspective

Kem Ramdass¹, Kgabo Mokgohloa¹, Nita Sukdeo^{#2}

¹*University of South Africa, South Africa*

²*University of Johannesburg, South Africa*

IEEM22-F-0439/Systemising Data-driven Methods for Predicting Throughput Time within Production Planning & Control

Tobias Hiller^{#1}, Lukas Deipenwisch¹, Peter Nyhuis¹

¹*Leibniz University Hannover, Germany*

Supply Chain Management 1

2022-12-08 11:00 AM-01:00 PM Room 405

Session Chair(s): Linda ZHANG, *University of Lille*
David VALIS, *University of Defence, Brno*

IEEM22-F-0003/Optimizing Joint Sustainable Supply Chain Decision-making under Emission Tax: A Stackelberg Game Model

Linda Zhang^{#1}, Shuang Ma², Sara Shafiee³, Xiaotian Cai⁴

¹*University of Lille, France*

²*University of Science and Technology Beijing, China*

³*Technical University of Denmark, Denmark*

⁴*Chinese Academy of Science and Technology for Development, China*

IEEM22-F-0046/Pricing Strategies of AI-enabled and Regular Products

Yinmeng Li¹, Zhaojun Yang^{#1}, Jun Sun², Xu Hu¹

¹Xidian University, China

²University of Texas Rio Grande Valley, United States



IEEM22-F-0111/How Big Data Analytics Mitigates Supply Chain Vulnerability? An Interpretive Structural Modeling

Xiaoting Guo¹, Zhaojun Yang^{#1}, Jun Sun²

¹Xidian University, China

²University of Texas Rio Grande Valley, United States

IEEM22-F-0114/Data-driven Procurement Optimization in Fresh Food Distribution Market under Demand Uncertainty: A Two-stage Stochastic Programming Approach

Lu Xu¹, Xinglu Liu¹, Li Xiao¹, Qiruyi Zuo¹, Jianfeng Liu², Wai Kin (Victor) Chan^{#1}

¹Tsinghua University, China

²Shenzhen YUEHOU Technology Co., Ltd, China

IEEM22-A-0097/The Development of Refrigerated-container Loading Problem Model for Shipment of Fruits and Vegetables using Ventilated Cargo

Ahmad Rusdiansyah^{#1}, Ratna Sari Dewi¹, Fadila Isnaini⁺¹, Irza Rachmadiar Adetio¹

¹Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-F-0030/Modelling Causal Loop Diagram for Measuring Performance of Indonesian Halal Prepared Food and Beverage Industry

Aries Susanty^{#+1}, Nia Budi Puspitasari¹, Zainal Fanani Rosyada¹, Habib Ashari¹, Sumunar Jati²

¹Diponegoro University, Indonesia

²Lembaga Pengkajian Pangan, Obat-obatan, dan Kosmetika Majelis Ulama Indonesia, Indonesia



Safety, Security and Risk Management 1

2022-12-08 11:00 AM-01:00 PM Room 406

Session Chair(s): *Yi Liu LIU, Norwegian University of Science and Technology*
Ziaul Haque MUNIM, University of South-Eastern Norway

IEEM22-F-0162/A Methodological Setting to Explore National Occupational Safety and Health Systems

Gaia Vitranò^{#1}, Guido J.L. Micheli¹, Armando Guglielmi², Diego De Merich², Mauro Pellicci²

¹Politecnico di Milano, Italy

²National Institute for Insurance against Accidents at Work (INAIL), Italy

IEEM22-F-0447/Public Perception on Safety of Autonomous Ferry in the Norwegian Context

Ziaul Haque Munim^{#1}, Marius Imset¹, Olivier Faury², Maire Sukke¹, Hyungju Kim¹

¹University of South-Eastern Norway, Norway

²EM Normandie Business School, France

IEEM22-A-0033/A Zoom Permutation Entropy based Method for Health Condition Assessment of Machine

Chenyang Ma^{#1}, Zhiqiang Cai^{#1}

¹Northwestern Polytechnical University, China

IEEM22-F-0204/A Conceptual Analysis of Green Shipping Practices, Rational Culture and Sustainability for a Safer and Sustainable Ocean

Choon Hee Ong^{#1}, Hui Ying Yeo^{#1}, Hooi Siang Kang¹, Yi Liu Liu², Owee Kowang Tan¹

¹Universiti Teknologi Malaysia, Malaysia

²Norwegian University of Science and Technology, Norway

IEEM22-F-0208/Risk Analysis of Dynamic Positioning Systems based on Incident Data

Imran Naseem¹, Yi Liu Liu^{#2}

¹Aibel AS, Norway

²Norwegian University of Science and Technology, Norway

IEEM22-F-0261/A Data-driven Framework of Resilience Evaluation for Power Systems under Typhoon Disasters

Zhen Yu¹, Mingce Wang^{#2}, Yinguo Yang¹, Shuangxi Wu¹, Qiuyu Lu¹, Yu Zhu¹, Yang Liu¹, Wei Wang^{#2}, Chao Fang²

¹Electric Power Dispatching Control Center of Guangdong Power Grid Co., Ltd., China

²Xi'an Jiaotong University, China

IEEM22-F-0413/Standards, Ethics, Legal Implications & Challenges of Artificial Intelligence

Sanjana Chauhan¹, Arvind Keprate^{#2}

¹University of Oslo, Norway

²Oslo Metropolitan University, Norway

Decision Analysis and Methods 1

2022-12-08 11:00 AM-01:00 PM Room 407

Session Chair(s): Xiaowen SUN, *Guangdong University of Education*
Yves DE SMET, *Université Libre de Bruxelles*

IEEM22-F-0230/Experimental Design to Increase Productivity in Medium Sized Garment Industry with Three-way ANOVA Analysis Approach

Lina Gozali¹, Thomson Richard^{*2}, Louis Valentino^{#2}, Teuku Yuri M. Zagloel³, Habibah Norehan Haron⁴, Ariawan Gunadi¹

¹Tarumanagara University, Indonesia

²Universitas Tarumanagara, Indonesia

³Universitas Indonesia, Indonesia

⁴Universiti Teknologi Malaysia, Malaysia

IEEM22-F-0396/A Reinforcement Learning Approach for Integrated Scheduling in Automated Container Terminals

Zhanluo Zhang^{*1}, Zilong Zhuang¹, Wei Qin^{*1}, Huaijin Fang², Shulin Lan³, Chen Yang⁴, Yu Tian²

¹Shanghai Jiao Tong University, China

²Shanghai International Port (Group) Co., Ltd., China

³University of Chinese Academy of Sciences, China

⁴Beijing Institute of Technology, China

IEEM22-F-0105/A Comparative Evaluation Model for Assessing Solar Energy Capacity Development of Multiple Geographical Alternatives

Pratik Rai^{*+1}, Sasadhar Bera¹

¹Indian Institute of Management Ranchi, India

IEEM22-F-0429/The Application of Ambidextrous Organizational Design on the Founding of an Autonomous Vehicle Development Research Team – A Case Study

Marek Miltner^{*+1}

¹Czech Technical University, Czech Republic

IEEM22-F-0334/The Disruption Funnel: A Model for Fleet Asset Management During Sustainable Disruption

Hossam Elhamy⁺¹, Mohamed Gheith¹, Amr B. Eltawil^{#1}

¹Egypt-Japan University of Science and Technology, Egypt

Technology and Knowledge Management 1

2022-12-08 11:00 AM-01:00 PM Room 408

Session Chair(s): Masayuki KONDO, *Kaishi Professional University*
Ewilly Jie Ying LIEW, *Monash University*

IEEM22-F-0007/Global Innovation Networks of Japanese Companies, German Companies and US Companies

Masayuki Kondo^{#1}

¹*Kaishi Professional University, Japan*

IEEM22-F-0073/A Consensus Clustering-based Label Propagation Method for Classification of Science & Technology Resources

Yuqi Tang⁺¹, Wenyan Song^{#1}, Caibo Zhou¹, Yue Zhu¹, Jianing Zheng¹, Wan Rong¹

¹*Beihang University, China*

IEEM22-F-0342/Are Consumers Ready for Flying Taxis? A Choice-based Conjoint Analysis of eVTOLs in Germany

Robert Zaps¹, Stanislav Chankov^{#+1}

¹*Jacobs University Bremen, Germany*

IEEM22-A-0096/The Coevolution of Intellectual Property Capabilities and Technology Capabilities in Large Complex Technological Organizations

Punyapat Saksupapchon^{#+1}, Kelvin W. Willoughby¹

¹*HHL Leipzig Graduate School of Management, Germany*

Manufacturing Systems 1

2022-12-08 11:00 AM-01:00 PM Room 409

Session Chair(s): P.V.M. RAO, *Indian Institute of Technology Delhi*
Sven HINRICHSSEN, *Ostwestfalen-Lippe University of Applied Sciences and Arts*

IEEM22-F-0270/In-situ Melt Pool Monitoring of Laser Aided Additive Manufacturing using Infrared Thermal Imaging

Lequn Chen⁺¹, Xiling Yao², Nicholas Poh Huat Ng¹, Seung Ki Moon^{#1}

¹*Nanyang Technological University, Singapore*

²*Agency for Science, Technology and Research (A*STAR), Singapore*

IEEM22-F-0284/Agile and Continuous Cost Analysis and Forecasting in the HIP3D

Günther Schuh¹, Andreas Gützlaff¹, Seth Schmitz¹, Shari Wlecke^{#+1}

¹*RWTH Aachen University, Germany*

IEEM22-F-0288/A Reference Data Model for Material Flow Analysis in the Context of Material Handling System Design and Reconfiguration

Zakarya Soufi^{#1}, Pierre David¹, Zakaria Yahouni¹

¹University of Grenoble Alpes, France

IEEM22-F-0372/Metric-based Identification of Target Conflicts in the Development of Industrial Automation Software Libraries

Eva-Maria Neumann^{#1}, Birgit Vogel-Heuser¹, Michael Gnadlinger¹, Juliane Fischer¹, Laura Reimoser¹, Sebastian Diehm², Tobias Englert², Michael Schwarz²

¹Technical University of Munich, Germany

²Schneider Electric Automation GmbH, Germany

IEEM22-F-0386/Reliability Modeling and Rework Strategy Evaluation of Manufacturing System based on Stochastic-flow Network

Qinglin Zheng⁺¹, Weiwei Duan¹, Wei Dai^{#1}, Yu Zhao¹

¹Beihang University, China

IEEM22-A-0052/Research on Robust Operator Assignments in the Cellular Manufacturing Industry

Harumi Haraguchi^{#+1}, Yujiro Yoshida¹

¹Ibaraki University, Japan

Human Factors 2

2022-12-08 02:00 PM-03:30 PM Room 401

Session Chair(s): Marek BURES, *University of West Bohemia*
Christine GROßE, *Mid Sweden University*

IEEM22-F-0211/Effects of Different Interface Color Modes and Textbox Design on Users' Reading Efficiency and Accuracy

Xiaozhou Fang⁺¹, Danni Chang^{#1}, Zhen Zhang¹

¹Shanghai Jiao Tong University, China

IEEM22-F-0249/User-perception-oriented Website Design Optimization for University Portals: Using Kansei Engineering and Neural Networks

Jia-He Zhou⁺¹, Yuming Zhu^{#1}, Hao-Jing Song¹

¹Northwestern Polytechnical University, China

IEEM22-F-0289/Voice of the Workforce: Integrating the Workforce's Perspective on Operator Assistance Systems into Human-centric Production

Jessica Horn^{#+1}, Mirco Moencks¹, Elisa Roth¹, Thomas Bohné¹

¹University of Cambridge, United Kingdom

IEEM22-F-0304/Factors in Credit Decision-making and Related Research Gaps in Indonesia: A Literature Review

Dewi Sari Pinandita^{#1}, Hilya Arini^{#1}, Budi Hartono¹, Budhi Wibowo¹

¹*Universitas Gadjah Mada, Indonesia*



IEEM22-F-0400/Sociotechnical System Digital Twin as an Organizational-enhancer Applied to Helicopter Engines Maintenance

Quentin Lorente^{#1}, Eric Villeneuve², Christophe Merlo², Guy André Boy³, François Thermy¹

¹*Safran Helicopter Engines, France*

²*University of Bordeaux, France*

³*Université Paris-Saclay, France*

Reliability and Maintenance Engineering 1

2022-12-08 02:00 PM-03:30 PM Room 402

Session Chair(s): Yoshinobu TAMURA, *Yamaguchi University*
David VALIS, *University of Defence, Brno*

IEEM22-F-0029/Risk-Based Inspection and Maintenance Analysis of Distribution Transformers: Development of a Risk Matrix and Fuzzy Logic Based Analysis Approach

A. M. Sakura R. H. Attanayake^{#1}, R.M. Chandima Ratnayake^{#1}

¹*University of Stavanger, Norway*

IEEM22-F-0088/Cyclic Jump Diffusion Process Modeling Based on Different Effort Consumption Scenarios for OSS Multi Up - gradation

Yoshinobu Tamura^{#+1}, Adarsh Anand², Pramod Kumar Kapur³, Shigeru Yamada⁴

¹*Yamaguchi University, Japan*

²*University of Delhi, India*

³*Amity University, India*

⁴*Tottori University, Japan*

IEEM22-F-0210/On the Necessity of Using Supervised Machine Learning for Risk-based Screening of Distribution Transformers: An Industrial Case Study

A. M. Sakura R. H. Attanayake^{#1}, R.M. Chandima Ratnayake^{#1}

¹*University of Stavanger, Norway*

IEEM22-A-0026/Optimal Policy on Periodic Proof-testing Intervals for E/E/PE Safety-related System

Shinji Inoue^{#+1}, Shigeru Yamada²

¹*Kansai University, Japan*

²*Tottori University, Japan*



IEEM22-F-0337/Maintenance in Process Industries with Digital Twins and Mixed Reality: Potentials, Scenarios and Requirements

Linda Rudolph^{*1}, Dorothea Pantförder¹, Fabrizio Palmas², Manfred Fischer³, Peter Niermann⁴, Gudrun Klinker¹, Birgit Vogel-Heuser¹

¹Technical University of Munich, Germany

²University of Applied Management, Germany

³Wacker Chemie AG, Germany

⁴straightlabs GmbH & Co. KG, Germany

IEEM22-F-0354/Residual Based Control Charts for Zero-inflated Poisson Processes

Abdulla Mosa Al-Sayed^{*1}, Tahir Mahmood^{*1}, Haitham H. Saleh¹

¹King Fahd University of Petroleum and Minerals, Saudi Arabia

IEEM22-F-0047/Degradation Assessment of Drilling Head based on Stochastic Growth Models and Continuous Time Diffusion Processes

David Valis^{*1}, Jakub Gajewski², Marie Forbelská³, Jozef Jonak²

¹University of Defence, Brno, Czech Republic

²Lublin University of Technology, Poland

³Mendel University in Brno, Czech Republic

Operations Research 2

2022-12-08 02:00 PM-03:30 PM Room 403

Session Chair(s): Mohamed HAOUARI, *Qatar University*
Hilya ARINI, *Universitas Gadjah Mada*

IEEM22-F-0353/A Deep Reinforcement Learning Approach for Crowdshipping Vehicle Routing Problem

Hong Huang^{*1}, Yu-Sheng Lin¹, Jia-Rong Kang², Chun-Cheng Lin^{*1}

¹National Yang Ming Chiao Tung University, Taiwan

²Tatung University, Taiwan

IEEM22-F-0355/Solving a Bus Routing Problem Arising in Doha

Anas Tammam Aljundi¹, Maryam Al-Khatib¹, Mohamed Kharbeche^{*1}, Mohamed Haouari^{*1}

¹Qatar University, Qatar

IEEM22-F-0377/Insight and Transfer of Learning Measurement on Discrete Event Simulation (DES) User Using Usability Method and Eye-Tracking

Siti Aghnia Salsabilla Purnama^{*1}, Hilya Arini^{*1}, Titis Wijayanto¹

¹Universitas Gadjah Mada, Indonesia

IEEM22-F-0467/Economic Production Quantity Model with Energy Consideration

Hong Nguyen Nguyen^{*1}, Matthieu Godichaud¹, Lionel Amodeo¹

¹University of Technology of Troyes, France

IEEM22-F-0453/Comparative Study of Multi-hole Drill Path Optimization using Evolutionary Algorithms

Vijay Rathod¹, Om Prakash Yadav^{#2}, Ajay Pal Singh Rathore³

¹Government Polytechnic, India

²North Dakota State University, United States

³Malaviya National Institute of Technology, India

IEEM22-F-0320/Exploring Quantitatively Corporate Financial Performance and Social Performance Relationship with Net Impact Method

Jorma Turunen^{#1}, Saku Mäkinen¹, Deborah Kuperstein-Blasco²

¹University of Turku, Finland

²Tampere University, Finland

Production Planning and Control 2

2022-12-08 02:00 PM-03:30 PM Room 404

Session Chair(s): Ahmed EL-BOURI, Sultan Qaboos University

IEEM22-F-0164/Towards a Framework to Assess the Impact of Industry 4.0 Technologies & Services on Production Resources

A. S. M. Monjurul Hasan^{#1}, Andrea Trianni^{#1}

¹University of Technology Sydney, Australia

IEEM22-F-0450/Impact of Customer Order Change Dimensions on Order Management

Christian Fries^{#1}, Ádám Szaller², Thomas Bauernhansl¹, Günther Schuh³

¹Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany

²Institute for Computer Science and Control, Hungary

³RWTH Aachen University, Germany

IEEM22-F-0021/Exploring the Basic Features and Challenges of Traditional Product Lifecycle Management Systems

Mubashir Hayat^{#1}, Herwig Winkler¹

¹Brandenburg University of Technology, Germany

IEEM22-F-0195/Dispatching Rules in a Job Shop: The Case of Dynamic Scheduling under Time-of-use Electricity Costs

Ahmed El-Bouri^{#1}, Amar Oukil¹

¹Sultan Qaboos University, Oman

IEEM22-F-0232/Framework for the Selection of Sustainable Suppliers using Integrated Compensatory Fuzzy AHP-TOPSIS Multi-criteria Approach

Amit Kumar Gupta^{#1}

¹Management Development Institute Gurgaon, India



Supply Chain Management 2

2022-12-08 02:00 PM-03:30 PM Room 405

Session Chair(s): Nur Aini MASRUROH, *Universitas Gadjah Mada*
Fazleena BADURDEEN, *University of Kentucky*

IEEM22-F-0252/The Three-dimensional Bin Packing Problem for Deformable Items

Qiruyi Zuo⁺¹, Xinglu Liu¹, Lu Xu¹, Li Xiao¹, Chengyin Xu¹, Jianfeng Liu², Wai Kin (Victor) Chan^{#1}

¹*Tsinghua University, China*

²*Shenzhen YUEHOU Technology Co., Ltd, China*

IEEM22-F-0263/Development of a Supply Chain Disruption Optimization Model

Alfina Budi Khoirani¹, Nur Aini Masrurroh^{#1}, Vincent F. Yu²

¹*Universitas Gadjah Mada, Indonesia*

²*National Taiwan University of Science and Technology, Taiwan*

IEEM22-F-0267/E-procurement Performance Model for Construction Tendering: A Multiple Linear Regression Approach

Ferial Hendrata^{#1}, Iwan Vanany¹, Patdono Suwignyo¹, Nurhadi Siswanto¹

¹*Institut Teknologi Sepuluh Nopember, Indonesia*

IEEM22-F-0279/Digital IT Innovation to Improve Supply Chain Resilience: A Systematic Literature Review

Rui Meng⁺¹, Zhaojun Yang^{#1}, Jun Sun²

¹*Xidian University, China*

²*University of Texas Rio Grande Valley, United States*

IEEM22-F-0407/Approach to Determining and Comparing the Truck Parking Problem with Sustainability Factors

Simon Riedle^{#+1}, Jan Burkhardt¹, John-Dean Kasher¹, Felix Hackbarth¹, Navid

Julian Sardarabady¹

¹*Duale Hochschule Baden-Württemberg Ravensburg, Germany*

IEEM22-F-0378/Are Two Heads Always Better Than One? Human-AI Complementarity in Multi-criteria Order Planning

Chin Sheng Tan^{#+1}, Abhishek Gupta¹, Chi Xu¹

¹*Agency for Science, Technology and Research (A*STAR), Singapore*

Safety, Security and Risk Management 2

2022-12-08 02:00 PM-03:30 PM Room 406

Session Chair(s): **Ardiyansyah YATIM**, *Universitas Indonesia*
Harpreet KAUR, *Indian Institute of Management Amritsar*

IEEM22-F-0343/Risk Assessment of Flammable Natural Refrigerant Application in Air Conditioning Systems

Ardiyansyah Yatim^{#+1}, Elang Wijaya², Ridho Irwansyah¹, Ahmad Syihan Auzani¹, Yi Liu Liu³

¹*Universitas Indonesia, Indonesia*

²*Artech Teknik Indonesia, Indonesia*

³*Norwegian University of Science and Technology, Norway*

IEEM22-F-0360/A Conceptual Framework for Assessing Risks for Data Protection Impact Assessment Process in Maritime Industries

Sutthipong Yungratog^{#+1}, Floris Goerlandt², Wonsiri Punurai¹, Sotarathammaboosadee¹

¹*Mahidol University, Thailand*

²*Dalhousie University, Canada*

IEEM22-F-0379/Exploration of Risky Riding Behavior on Last Mile Food Delivery using Motorcycle Rider Behavior Questionnaire: Evidence From Chiang Rai

Tosporn Arreeras^{#+1}, Krit Sittivangkul¹, Sunida Tiwong¹, Pattaramon Vuttipittayamongkol¹

¹*Mae Fah Luang University, Thailand*

IEEM22-F-0393/Assessment of Ship Emission Inventory in Strait of Malacca and Singapore based on Automatic Identification System Data

Ki Hong Ten⁺¹, Hooi Siang Kang^{#1}, Kuan Yew Wong¹, Chee-Loon Siow¹, Choon Hee Ong¹, Yi Liu Liu²

¹*Universiti Teknologi Malaysia, Malaysia*

²*Norwegian University of Science and Technology, Norway*

IEEM22-A-0079/Dynamic Cyber Risk Mitigation for Social Robots in Public Space

Yonas Zewdu Ayele^{#+1}

¹*Østfold University College, Norway*

IEEM22-A-0030/Examining the Impact of Cyber Physical Infrastructure and Shared Capabilities on Supply Chain Cyber Resilience

Harpreet Kaur^{#+1}

¹*Indian Institute of Management Amritsar, India*

Decision Analysis and Methods 2

2022-12-08 02:00 PM-03:30 PM Room 407

Session Chair(s): **Pattaramon VUTTIPIITTAYAMONGKOL**, *Mae Fah Luang University*
ChihHsuan WANG, *National Yang Ming Chiao Tung University*

IEEM22-F-0384/Data-driven Industrial Machine Failure Detection in Imbalanced Environments

Pattaramon Vuttipittayamongkol^{#1}, Tosporn Arreeras¹
¹*Mae Fah Luang University, Thailand*

IEEM22-F-0417/Supporting Implementation of Virtual Reality in Engineering Design by Structured Reflection

Hans-Patrick Balzerkiewitz^{#1}, Theresa Ammersdörfer², Carsten Stechert¹, David Inkermann²
¹*Ostfalia University, Germany*
²*Technische Universität Clausthal, Germany*

IEEM22-F-0441/Stakeholder Value on the Concept of Sustainability Balanced Scorecard: Case Study of State-owned Plantation Enterprise (SOPE) in Indonesia

Erlin Trisyulianti^{#1}, Budhi Prihartono¹, Made Andriani¹, Kadarsah Suryadi¹
¹*Bandung Institute of Technology, Indonesia*

IEEM22-A-0088/Sales Forecasting and Market-share Estimation for Memory Manufacturers Considering Supply-chain Analytics

ChihHsuan Wang^{#1}
¹*National Yang Ming Chiao Tung University, Taiwan*

IEEM22-A-0048/Practical Research of Early Internationalization Decisions in High-tech Startups

Saki Otomo^{#1}, Shuichi Ishida¹, Mariko Yang-Yoshihara²
¹*Tohoku University, Japan*
²*Stanford University, Stanford Program on International and Cross-Cultural Education, United States*

IEEM22-F-0233/Prioritizing Barriers for Reverse Logistics of Lubricating Oils using Fuzzy AHP

Amit Kumar Gupta^{#1}
¹*Management Development Institute Gurgaon, India*

Technology and Knowledge Management 2

2022-12-08 02:00 PM-03:30 PM Room 408

Session Chair(s): **Mait RUNGI**, *Estonian Entrepreneurship University of Applied Sciences*
Annapoornima SUBRAMANIAN, *National University of Singapore*

IEEM22-F-0041/Smart-city Development Model: The Case of Ülemiste City

Mait Rungi^{#1}

¹*Estonian Entrepreneurship University of Applied Sciences, Estonia*

IEEM22-F-0062/Corporate Venturing as Catalyst for Transformation? Towards a Research Agenda

Günther Schuh¹, Leonie Angela Budweiser^{#2}, Frederic Lademann²

¹*RWTH Aachen University, Germany*

²*Fraunhofer Institute for Production Technology IPT, Aachen, Germany*

IEEM22-A-0090/Spend it Wisely: Market and Non-market Strategies in the Development of New Drugs

Vareska Van de Vrande¹, Annapoornima Subramanian^{#2}, Patricia Klopff¹

¹*Erasmus University, Netherlands*

²*National University of Singapore, Singapore*

IEEM22-F-0382/Testing a Benefit Analysis Model to Evaluate the Benefits of IT Projects

Annika Hasselblad^{#1}

¹*Mid Sweden University, Sweden*

IEEM22-F-0292/Performance-based Decision Support for Business Process Analysis and Design

Günther Schuh¹, Andreas Gützlaff¹, Seth Schmitz¹, Marco Schopen^{#1},

Alexander Obladen¹

¹*RWTH Aachen University, Germany*

IEEM22-F-0112/Dimension and Indicators for Assessing the SMEs Digital Readiness: A Systematic Literature Review

Aries Susanty^{#1}, Odilia Sefi Anindyanari¹

¹*Diponegoro University, Indonesia*



Manufacturing Systems 2

2022-12-08 02:00 PM-03:30 PM Room 409

Session Chair(s): **R.M. Chandima RATNAYAKE**, *University of Stavanger*
Sarina Abdul HALIM-LIM, *Universiti Putra Malaysia*

IEEM22-F-0411/Determination and Prioritization of Flexibility Types in the Context of Industry 4.0: A Use Case in Automotive Industry

Anthony Chehami^{*1}, Armand Baboli^{#1}, Behnam Einabadi¹, Mojtaba Ebrahimi², Eva Rother²

¹National Institute of Applied Sciences of Lyon, France

²Fiat Powertrain Technologies, Bourbon-Lancy, France

IEEM22-F-0433/Detecting Multiclass Defects of Printed Circuit Boards in the Molded-interconnect-device Manufacturing Process Using Deep Object Detection Networks

Chun-Hsiang Chang^{*1}, Hao-Wei Chen¹, Chun-Cheng Lin^{#1}

¹National Yang Ming Chiao Tung University, Taiwan

IEEM22-F-0240/Optimal Motion Planning and Layout Design in Robotic Cellular Manufacturing Systems

Tomoya Kawabe^{*1}, Ziang Liu¹, Tatsushi Nishi¹, Md Moktadir Alam¹, Tomofumi Fujiwara¹

¹Okayama University, Japan

IEEM22-F-0287/Integration of DFMEA and PFMEA for Enhanced Co-development of Product and Production

Camilla Fasolo^{*+1}, Fredrik Elgh¹

¹Jönköping University, Sweden

IEEM22-F-0452/Lean Service-inventory Management Integrated Model to Improve the Service Level in a Metalworking Company

Favio Alfaro^{*1}, Diana Jacinto¹, Alberto Flores¹, Jose C. Alvarez^{*1}, Andrea Trianni²

¹Universidad Peruana de Ciencias Aplicadas, Peru

²University of Technology Sydney, Australia

IEEM22-F-0286/Multi-UAV Route Planning for Data Collection from Heterogeneous IoT Devices

Shukang Wang^{*1}, Yuying Long¹, Yaoming Zhou², Gangyan Xu^{#1}

¹The Hong Kong Polytechnic University, Hong Kong SAR

²Shanghai Jiao Tong University, China

Human Factors 3

2022-12-08 04:00 PM-05:30 PM Room 401

Session Chair(s): **Daryl POWELL**, *Norwegian University of Science and Technology*
Christine GROßE, *Mid Sweden University*

IEEM22-F-0004/How Being Healthy Helps to Get More: Evidence of Large-scale Start-ups

Arowofela Gbemisola^{#1}, Mait Rungi¹

¹*Estonian Entrepreneurship University of Applied Sciences, Estonia*

IEEM22-F-0012/The Virtual Sensei: Using Assisted Reality to Digitalize Gemba Walks

Daryl Powell^{#1}

¹*Norwegian University of Science and Technology, Norway*

IEEM22-F-0168/Work Demand and Prevalence of Work-related Musculoskeletal Disorders: A Case Study of Pakistan Aviation Maintenance Workers

Muzamil Mahmood^{#1}, Afshan Naseem², Yasir Ahmad², Muhammad Zeeshan Mirza²

¹*Riphah International University, Pakistan*

²*National University of Sciences & Technology, Pakistan*

IEEM22-F-0220/Municipal Accessibility: A Multi-linear Regression Model with a Principal Component Analysis Approach

Andreas Norin¹, Christine Große^{#1}, Leif Olsson¹

¹*Mid Sweden University, Sweden*

IEEM22-F-0401/Artificial Neural Network (ANN) for Performance Assessment in Virtual Reality (VR) Simulators: From Surgical to Maritime Training

Hasan Mahbub Tusher^{#1}, Salman Nazir¹, Steven Mallam¹, Ziaul Haque Munim¹

¹*University of South-Eastern Norway, Norway*

IEEM22-F-0120/Augmented Workforce: A Case Study on integrating Operator Assistance Systems for Repair Jobs into Human-centric Production

Mirco Moencks^{#1}, Elisa Roth¹, Gunter Beitingner², Arne Freigang², Thomas Böhne¹

¹*University of Cambridge, United Kingdom*

²*Siemens AG, Germany*

Reliability and Maintenance Engineering 2

2022-12-08 04:00 PM-05:30 PM Room 402

Session Chair(s): David VALIS, *University of Defence, Brno*
Wangi Pandan SARI, *Universitas Gadjah Mada*

IEEM22-F-0394/Prediction of Gear Bending Fatigue Life Based on Grey GM (1,1) Prediction

Yinze Yan¹, Zhengjie Tian¹, Shengwen Hou², Zhiqiang Cai¹

¹Northwestern Polytechnical University, China

²Shaanxi Fast Auto Drive Group Co., Ltd., China

IEEM22-A-0064/Remaining Useful Life Prediction of Experimental Bearings with Optimized Random Forest Model

Muhammad Gibran Alfarizi¹, Bahareh Tajiani¹, Jorn Vatn¹, Shen Yin¹

¹Norwegian University of Science and Technology, Norway

IEEM22-F-0399/Specific Fuel Consumption Prediction Model for Diesel Engines: A Preliminary Study

Hamdan Hartono Alif¹, Wangi Pandan Sari^{1,2}, Bertha Maya Sopha², Almas Aprilana¹, Yun Prihantina Mulyani², Tina Winayu Dwi Hapsari¹

¹Pusat Penelitian dan Pengembangan Ketenagalistrikan PLN, Indonesia

²Universitas Gadjah Mada, Indonesia

IEEM22-A-0061/Performance Assessment of Degrading Final Element of Safety Instrumented Systems Subject to Multiple Failure Modes

Emefon Dan¹, Yi Liu Liu¹

¹Norwegian University of Science and Technology, Norway

IEEM22-A-0037/Challenges in the Detection and Monitoring of HTHA Damage on Piping in High Temperature Hydrogen Service

Mohd Aswadi Ton Alias¹, Tan Su Anne¹, Nurul Asni Mohamed¹, Mohd Shahrizal Bin PKM Seeni Mohd², Abdul Qudduus Muhamad Yunus², Mohd Aizuddin Abdul Nasir¹

¹PETRONAS, Malaysia

²Pengerang Refining Company Sdn. Bhd. (PRefChem), Malaysia

Operations Research 3

2022-12-08 04:00 PM-05:30 PM Room 403

Session Chair(s): Yoshiki KURATA, *University of Santo Tomas*

IEEM22-F-0001/Customer Load Profile Clustering Using K-means Algorithm: A Case Study in an Electric Distribution Company in the Philippines Amidst the COVID-19 Pandemic

Maricar Navarro¹, Michael Young², Yogi Tri Prasetyo², Reny Nadlifatin³

¹Technological Institute of the Philippines, Philippines

²Mapúa University, Philippines

³Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-F-0104/Exact Algorithms for Two-Machine Job-Shop Scheduling Problem with One Joint Job Considering Machine Repetition and Transportation Times

Hiroki Numaguchi^{#1}, Wei Wu², Yannan Hu¹

¹Tokyo University of Science, Japan

²Shizuoka University, Japan



IEEM22-F-0167/A New Deep Reinforcement Learning Algorithm for the Online Stochastic Profitable Tour Problem

Nicklas Klein^{#1}, Jonas Prünke²

¹University of Bern, Switzerland

²INFORM Institute for Operations Research and Management GmbH, Germany

IEEM22-F-0406/An Optimization Model for Priority-Based On-Demand Meal Delivery System

Siddhartha Paul^{#1}, Goda Doreswamy¹

¹Swiggy, Bundl Technologies, India

IEEM22-A-0051/Designing Retail Network in the Era of Energy Transition

Mahima Gupta^{#1}

¹Indian Institute of Management Amritsar, India

IEEM22-F-0185/Analysis of Hotel Attributes and Service Opportunities in Indonesia on Covid-19 Pandemic Era through Online Reviews

Vira Laksita Dewi¹, Yun Prihantina Mulyani^{#1}

¹Universitas Gadjah Mada, Indonesia

Systems Modeling and Simulation 1

2022-12-08 04:00 PM-05:30 PM Room 404

Session Chair(s): Naragain PHUMCHUSRI, Chulalongkorn University
Charlle SY, De La Salle University

IEEM22-F-0039/Agent-based Simulation for Convenient Store's Promotion Strategy Selection

Naragain Phumchusri^{#1}, Warot Kosawanitchakarn¹, Sirawish Srimook¹,

Sirawich Chawanaprane¹

¹Chulalongkorn University, Thailand

IEEM22-F-0066/Adopting Pre- and Post-processing Weight Mechanisms to Improve Deep Learning-based Fault Localization

Cih-Chiang Fang¹, Chin-Yu Huang^{#1}

¹National Tsing Hua University, Taiwan



IEEM22-F-0090/A System Dynamics Model of False News on Social Networking Sites

Aleena Marie Concepcion¹, Charlle Sy^{#1}

¹*De La Salle University, Philippines*

IEEM22-A-0044/The Modeling and Simulation of a Pharmaceutical Packaging Line: Balancing the Production Capabilities and Optimizing the Number of Operators

Breno Renato Strussmann^{#1}, Lars Hvam¹

¹*Technical University of Denmark, Denmark*

IEEM22-A-0110/Substitution Decisions in Blood Supply Chain

Zahra HosseiniFard^{#1}, Babak Abbasi², Mostafa Khatami³

¹*The University of Melbourne, Australia*

²*RMIT University, Australia*

³*University of Technology Sydney, Australia*

Supply Chain Management 3

2022-12-08 04:00 PM-05:30 PM Room 405

Session Chair(s): Gitae KIM, *Hanbat National University*
Anna Maria Sri ASIH, *Universitas Gadjah Mada*

IEEM22-F-0410/Sustainability Investigations based on Digitalization Technologies in the Field of Transportation Logistics: A Systematic Literature Review Protocol

Simon Riedle^{#1}, Navid Julian Sardarabady¹, John-Dean Kasher¹

¹*Duale Hochschule Baden-Württemberg Ravensburg, Germany*

IEEM22-F-0412/Multi-objective Multi-compartment Split Delivery Location Routing Problem with Time Windows

Rachmat Parayoga¹, Anna Maria Sri Asih^{#1}

¹*Universitas Gadjah Mada, Indonesia*

IEEM22-A-0053/Optimal Location Routing Problem for Electric Vehicles with Parcel Lockers

Gitae Kim^{#1}

¹*Hanbat National University, Korea, South*

IEEM22-F-0470/Prioritisation of Supply Chain Resilience Enabling Factors using the Fuzzy DEMATEL Approach: Integration Perspective

Premaratne Samaranayake^{#1}, W.M. Samantha Kamari Weerabahu¹, Nisakorn Somsuk², Tritos Laosirihongthong³, Dotun Adebajo⁴

¹*Western Sydney University, Australia*

²*Rajamangala University of Technology Thanyaburi, Thailand*

³*Thammasat University, Thailand*

⁴*University of Greenwich, United Kingdom*

IEEM22-F-0457/Towards a Scalable Permissioned Blockchain Framework for Supply Chain Management

Aaliya Sarfaraz^{#1}, Ripon K. Chakraborty¹, Daryl L. Essam¹

¹University of New South Wales, Australia

IEEM22-F-0381/Measuring the Performance Impact of a Decentralized Waterborne Container Transportation Service on Inland Waterway Hubs in Western Germany

Cyril Alias^{#1}, Jonas zum Felde¹, Sven Severin², Frank Eduardo Alarcón Olalla³

¹Development Center for Ship Technology and Transport Systems, Germany

²RIF Institut für Forschung und Transfer, Germany

³Pontificia Universidad Católica de Chile, Chile

Project Management 1

2022-12-08 04:00 PM-05:30 PM Room 406

Session Chair(s): Indra GUNAWAN, *The University of Adelaide*
Michel ALDANONDO, *University of Toulouse*

IEEM22-F-0023/Complex Systems of Disaster Response: The Case of COVID-19

Yuan Chai^{#1}, Indra Gunawan¹, Nam Nguyen¹, Jian Zuo¹

¹The University of Adelaide, Australia

IEEM22-F-0136/Investigating Efficiency in Public Project Management: A Preliminary Analysis with the Use of Fuzzy Cognitive Maps

Sara Carbonari^{#1}, Giovanni Mazzuto¹, Maurizio Bevilacqua¹, Filippo Emanuele Ciarapica¹

¹Università Politecnica delle Marche, Italy

IEEM22-F-0191/SWOT Analysis for Implementation of Lean-Agile Mindset: A Case Study from an ETO Organisation

Daria Larsson^{#1}, R.M. Chandima Ratnayake⁺¹

¹University of Stavanger, Norway

IEEM22-F-0254/Construction of a Quality Evaluation Index System for Construction Land Reduction Projects based on DEMATEL and Entropy Power Method

Caihong Liu⁺¹, Yuming Zhu^{#1}, Jia-He Zhou¹, Jiangtao Xia¹

¹Northwestern Polytechnical University, China

IEEM22-F-0392/Solving the Resource Renting Problem with an Adapted Fix-and-optimize Heuristic

Max Reinke^{#+1}, Juergen Zimmermann¹

¹Clausthal University of Technology, Germany



IEEM22-A-0093/To Settle or Otherwise in Project Dispute Negotiation: A Matter of Intention

Sen Lin^{#1}, Sai On Cheung¹

¹City University of Hong Kong, Hong Kong SAR

Decision Analysis and Methods 3

2022-12-08 04:00 PM-05:30 PM Room 407

Session Chair(s): Chien-Sing LEE, *Sunway University*
Ahmed EL-BOURI, *Sultan Qaboos University*

IEEM22-F-0368/Novel Kansei Design Method Based on Rough Set Theory

Kotoru Sato^{#1}, Takashi Ito¹, Syohei Ishizu¹

¹Aoyama Gakuin University, Japan

IEEM22-F-0231/Method for the Semantic Modelling of the Product Context Using Text Mining for the Derivation of Innovation Potentials

Michael Riesener¹, Maximilian Kuhn¹, Hendrik Lauf^{#1}, Günther Schuh¹

¹RWTH Aachen University, Germany

IEEM22-F-0160/Determining and Validating the Spare Parts Selection Criteria for Additive Manufacturing Using Delphi Technique

Sagar Ghuge^{#1}, Milind Akarte¹, Alankrit Pandey²

¹National Institute of Industrial Engineering, India

²Symbiosis Institute of Operations Management, India

IEEM22-F-0186/Evaluation of the Learning Effect of VR on Engineering Education – Case Study in Machine Elements

Hans-Patrick Balzerkiewitz^{#1}, Nick Schade¹, Carsten Stechert¹

¹Ostfalia University, Germany

IEEM22-F-0294/Model Development for the Prediction of Marbling Score of Brangus Beef Fattening Using Logistic Regression

Watchara Ninphet¹, Noppadol Amdee^{#1}, Adisak Sangsongfa¹, Choat Inthawongse¹

¹Muban Chom Bueng Rajabhat University, Thailand

IEEM22-F-0107/Fuzzy Logic Prioritization in Halal Risk Assessment (A Case Study of Halal Chicken Supply Chain in Indonesia)

Harwati^{#1}, Anna Maria Sri Asih¹, Bertha Maya Sopha¹

¹Universitas Gadjah Mada, Indonesia

Technology and Knowledge Management 3

2022-12-08 04:00 PM-05:30 PM Room 408

Session Chair(s): Marc PATZWALD, *Fraunhofer Institute for Production Technology IPT*
Annapoornima SUBRAMANIAN, *National University of Singapore*

IEEM22-F-0068/Organizational Capabilities as the Critical Determinants for a Successful Adoption and Implementation of Fourth Industrial Revolution Technologies in Manufacturing Industries

Steven Zulu^{#1}, Marthinus Pretorius¹, Elma Van der Lingen¹
¹University of Pretoria, South Africa

IEEM22-F-0091/Methodology for a Startup Lifecycle-dependent Approach of Financing for Investors and Deep Tech Startups

Günther Schuh¹, Carolin Hamm^{#2}
¹RWTH Aachen University, Germany
²Fraunhofer Institut for Production Technology, Germany

IEEM22-F-0113/Turbulence-induced Initiation of Technology Strategy Development in a Volatile Business Environment

Günther Schuh¹, Marc Patzwald^{#2}, Tim Warzawa²
¹RWTH Aachen University, Germany
²Fraunhofer Institute for Production Technology IPT, Germany

IEEM22-F-0132/Explaining Willingness to Pay for Solar Panels in Finland

Deborah Kuperstein-Blasco^{#1}, Saku Mäkinen²
¹Tampere University, Finland
²University of Turku, Finland

IEEM22-F-0395/Assessment for CO2-reduced Production by using Additively Manufactured Lightweight Robot Grippers

Günther Schuh¹, Georg Bergweiler¹, Falko Fiedler¹, Christian Hölting^{#1}
¹RWTH Aachen University, Germany

IEEM22-A-0107/From Gantt Charts to Dependency Structure Matrix to Directed Acyclic Graphs: Quantitative Technology Roadmapping for Challenge-led Innovation

Martin Ho^{#1}, Henry C W Price², Tim S Evans², Eoin O'Sullivan¹
¹University of Cambridge, United Kingdom
²Imperial College London, United Kingdom

Manufacturing Systems 3

2022-12-08 04:00 PM-05:30 PM Room 409

Session Chair(s): Jimmy Chi Ho LI, *Hong Kong Metropolitan University*
Yogi Tri PRASETYO, *Mapúa University*

IEEM22-F-0184/Development of Wasted Non-woven Fabric Mask (NFM) Disposal Machine

Siu Kei Lam¹, Tsz Ting Lee¹, Fanny Tang¹, Shu Lun Mak¹, Wai Hang Chiu¹, Chi Chung Lee¹, Jimmy Chi Ho Li^{*1}

¹Hong Kong Metropolitan University, Hong Kong SAR

IEEM22-F-0260/A Modeling Method for Transient and Steady-state Analysis of Serial Production Systems with Exponential Machines Considering Periodic Preventive Maintenance

WenDa Wang^{*1}, YuKan Hou^{*1}, Shubin Si¹

¹Northwestern Polytechnical University, China

IEEM22-F-0283/Leanness Assessment of New Product Development in the Context of Smart Manufacturing Systems

B.A. Patil¹, Makarand Kulkarni², P.V.M. Rao^{*1}

¹Indian Institute of Technology Delhi, India

²Indian Institute of Technology Bombay, India

IEEM22-F-0018/Hybrid Production Management System in the Context of Industry 4.0

Stefan Schmid^{*1}, Herwig Winkler¹

¹Brandenburg University of Technology, Germany

IEEM22-F-0331/Intelligent Manufacturing Cell for Implants

Berend Denkena¹, Heinrich Klemme¹, Sebastian Kaiser^{*1}, Maruan Shanib²

¹Leibniz Universität Hannover, Germany

²DMG MORI Digital GmbH, Germany

IEEM22-F-0200/Proposition of Applying Markov Transfer State in Reliability Analysis of Manufacturing System with Different Configuration Orders

Tian Zhang^{*1}, Lazhar Homri¹, Jean-Yves Dantan¹, Ali Siadat¹

¹Arts et Métiers Institute of Technology, France

Human Factors 4

2022-12-09 08:30 AM-10:30 AM Room 401

Session Chair(s): **Andrei O. J. KWOK**, *Monash University*
Yonas Zewdu AYELE, *Øtsfold Univeristy College*

IEEM22-F-0421/Analysis of Non-fatal Occupational Accidents in a Ready-mixed Concrete Company

Yogi Tri Prasetyo^{#1}, Maria Cristina Sario¹, Thanatorn Chuenyindee², Reny Nadlifatin³, Satria Fadi Persada⁴, Thaninrat Sittiwatethanasiri²

¹*Mapúa University, Philippines*

²*Navaminda Kasatriyadhiraj Royal Air Force Academy, Thailand*

³*Institut Teknologi Sepuluh Nopember, Indonesia*

⁴*Bina Nusantara University, Indonesia*

IEEM22-F-0443/Color Preferences Captured by Children in Space through Virtual Reality Simulation. An Analysis in the Pediatric Chemotherapy Room

Anggra Ayu Rucitra^{#1}, Purwanita Setijanti¹, Asri Dinapradiptra¹

¹*Institut Teknologi Sepuluh Nopember, Indonesia*

IEEM22-F-0459/Cultural Transformation of Industries Through Creation of New Collaboration Concepts Driven by Employee Engagement

Mario Münnich¹, Jens Schlüter¹, Milan Marinkovic^{#1}

¹*CARIAD SE, Germany*

IEEM22-F-0015/Laboratory Errors and Their Effects on Quality Management

Mudimeli Farisani¹, Sambil Charles Mukwakungu^{#1}, Alice Kabamba

Lumbwe¹, Nita Sukdeo¹

¹*University of Johannesburg, South Africa*

Reliability and Maintenance Engineering 3

2022-12-09 08:30 AM-10:30 AM Room 402

Session Chair(s): **Bupe MWANZA**, *University of Johannesburg*
Tahir MAHMOOD, *King Fahd University of Petroleum and Minerals*

IEEM22-F-0187/Scalable and Data-driven Decision Support in the Maintenance, Repair, and Overhaul Process

Houkun Zhu^{#1}, Helena Ebel¹, Dominik Scheinert¹, Florian Schmidt¹, Jens Altenkirch², Odej Kao¹

¹*Technische Universität Berlin, Germany*

²*Siemens Energy Global GmbH & Co. KG, Germany*

IEEM22-F-0159/Performance Evaluation of Overhead Track Equipment and Prediction of Future Performance

Bheki Makhanya^{#1}, Khimane Motupa¹, Jan Harm Pretorius¹, Hannelie Nel¹

¹University of Johannesburg, South Africa

IEEM22-F-0177/Maintenance 4.0 for Water Pumping Infrastructures

Sipho Tlaba¹, Arnesh Telukdarie¹, Bupe Mwanza^{#1}

¹University of Johannesburg, South Africa

IEEM22-F-0178/Selection of Maintenance Strategies using DMG

Arehone Nedzanani¹, Arnesh Telukdarie¹, Bupe Mwanza^{#1}

¹University of Johannesburg, South Africa

IEEM22-F-0213/Development of Integrated Stormwater Asset Management Framework

Tlou Dinyake¹, Arnesh Telukdarie¹, Bupe Mwanza^{#1}

¹University of Johannesburg, South Africa

IEEM22-F-0025/On the Enhanced Surveillance Methods for High-quality Processes

Tahir Mahmood^{#1}

¹King Fahd University of Petroleum and Minerals, Saudi Arabia

IEEM22-F-0418/Prognostics for Small Bore Piping Undergoing Fatigue Degradation

Arvind Keprate^{#1}, Nikhil Bagalkot¹

¹Oslo Metropolitan University, Norway

Operations Research 4

2022-12-09 08:30 AM-10:30 AM Room 403

Session Chair(s): Philipp BAUMANN, *University of Bern*
Norbert TRAUTMANN, *University of Bern*

IEEM22-F-0179/FT-KMEANS: A Fast Algorithm For Fault-Tolerant Facility Location

Philipp BAUMANN^{#1}

¹University of Bern, Switzerland

IEEM22-F-0192/Academic Timetabling for Online Executive Programs with Existing Schedules, Faculty Preferences and Partial Precedence

Nageswara Reddy KONDREDDY^{1#}, Anand Jacob ABRAHAM²⁺

¹Indian Institute of Management Jammu, India

²Indian Institute of Technology Kharagpur, India



IEEM22-A-0029/Mathematical Modelling for Multi-objective Optimization of Express Freight Train for Freight Operators

Gaurav KUMAR^{1**}, Oqais TANVIR¹, Akhilesh KUMAR²

¹Indian Institute of Technology Kharagpur, India

²Indian Institute of Management Raipur, India

IEEM22-F-0398/An Efficient Route Evaluation Method for the Vehicle Routing Problem with Linear Constraints

Hideki Hashimoto^{**1}, Yannan Hu², Yuta Okamoto¹

¹Tokyo University of Marine Science and Technology, Japan

²Tokyo University of Science, Japan

IEEM22-A-0023/Multi-site Project Scheduling Under Resource Constraints

Tamara BIGLER, Mario GNAEGI¹, Norbert TRAUTMANN^{**1}

¹University of Bern, Switzerland

IEEM22-F-0402/Operators Health and Safety Consideration in Sustainable Multi-objective Process and Production Planning for Reconfigurable Manufacturing System (RMS)

Bakélé Assou¹, Imen Khettabi^{**2}, Lyes Benyoucef¹

¹Aix-Marseille University, France

²USTHB University, Algeria

Systems Modeling and Simulation 2

2022-12-09 08:30 AM-10:30 AM Room 404

Session Chair(s): Zahra HOSSEINIFARD, *The University of Melbourne*

Charlle SY, *De La Salle University*

IEEM22-F-0438/The Role of Collaboration for a Circular Business Model in Indonesian Household Waste Management

Noorhan Firdaus Pambudi^{**1}, Togar Mangihut Simatupang¹, Samindi

Samarakoon², Nur Budi Mulyono¹

¹Bandung Institute of Technology, Indonesia

²University of Stavanger, Norway

IEEM22-F-0031/A Shortest Path Graph Attention Network and Non-traditional Multi-deep Layouts in Robotic Mobile Fulfillment System

Kin Lok Keung^{**1}, Liqiao Xia¹, Carman Ka Man Lee¹, C. Y. Leung¹

¹The Hong Kong Polytechnic University, Hong Kong SAR

IEEM22-F-0277/Ontology-based Synchronization of Automated Production Systems and Their Simulation Models

Kilian Vernickel^{**1}, Mayank Singh¹, Marco Konersmann², Jan Jürjens²

¹Fraunhofer IGC, Germany

²University of Koblenz-Landau, Germany



IEEM22-F-0310/Stackelberg Game-theoretic Approach for Lead Time Hedging in Inland Transport

Xuhan Zhao^{*1}, Xuan Qiu^{*1}

¹The Hong Kong University of Science and Technology, China

IEEM22-F-0349/Combined Wind and Wave Energy System: A Review of Current Technology and State-of-the-art Simulation Tools

Chern Fong Lee^{*1}, Muk Chen Ong¹

¹University of Stavanger, Norway

IEEM22-F-0388/Processing Cost Reduction of Lemon Products in Community Enterprises using Flexsim Simulation

Darunee Watanakornbuncha^{*1}, Alongkorn Muangwai², Wachira Wichitphongsa², Noppadol Amdee², Choat Inthawongse^{*1}

¹Muban Chom Bueang Rajabhat University, Thailand

²Pibulsongkram Rajabhat University, Thailand

IEEM22-F-0472/Development of a Business Process Modelling Framework for Continuous Improvements in Organisations

Tshegofatjo Tsiri^{*1}, Ilesanmi Daniyan^{*1}, Khumbulani Mpofu¹

¹Tshwane University of Technology, South Africa

Supply Chain Management 4

2022-12-09 08:30 AM-10:30 AM Room 405

Session Chair(s): Tosporn ARREERAS, Mae Fah Luang University
Jun-Der LEU, National Central University

IEEM22-F-0100/An Iterated Local Search Algorithm for Commuting Bus Routing Problem with Latest Arrival Time Constraint

Hideki Hashimoto¹, Yannan Hu^{*2}, Tomoki Sugiura³, Yosuke Takada³, Mutsunori Yagiura³

¹Tokyo University of Marine Science and Technology, Japan

²Tokyo University of Science, Japan

³Nagoya University, Japan

IEEM22-F-0169/Block Layout Design Problem for Marine Container Terminals

Yilong Su^{*1}, Etsuko Nishimura^{*1}

¹Kobe University, Japan

IEEM22-F-0246/A Conceptual Framework for Blockchain-based Cannabis Traceability in Supply Chain Management in an Emerging Country

Piwat Nowvaratkoolchai^{*1}, Natcha Thawesaengskulthai¹, Wattana Viriyasitavat¹

¹Chulalongkorn University, Thailand



IEEM22-F-0275/Enablers and Barriers of Omnichannel in Traditional Grocery Retailers

Atik Febriani^{#1}, Bertha Maya Sopha², Muhammad Arif Wibisono¹

¹Institut Teknologi Telkom Purwokerto, Indonesia

²Universitas Gadjah Mada, Indonesia



IEEM22-F-0299/Designing Battery Swapping Stations for Electric Scooters with a Streamlined Supply Chain

Meenakshi Ambabhavani Shanbog⁺¹, Hongrui Liu^{#1}

¹San Jose State University, United States

Project Management 2

2022-12-09 08:30 AM-10:30 AM Room 406

Session Chair(s): Younes BENSLIMANE, *York University*
Michael RIESENER, *RWTH Aachen University*

IEEM22-F-0149/Feasibility Study of a BERT-based Question Answering Chatbot for Information Retrieval from Construction Specifications

Jungyeon Kim⁺¹, Sehwan Chung¹, Seonghyeon Moon¹, Seokho Chi^{#1}

¹Seoul National University, Korea, South

IEEM22-F-0152/Examining Recommended Practices for Information System Development Projects and the Effect of Standardization Frameworks: An Empirical Study

Younes Benslimane^{#+1}, Zijiang Yang¹

¹York University, Canada

IEEM22-F-0278/Comparative Study of Bridge Inspection Practices in Indonesia and Foreign Countries

Nadia Avelina⁺¹, Taeyeon Chang¹, Seokho Chi^{#1}

¹Seoul National University, Korea, South

IEEM22-F-0314/Exploring the Themes of Focus for Change Management Applied to Multinational Corporations: A Scoping Review

Chiara Oosthuizen⁺¹, Sara Grobbelaar^{#1}

¹Stellenbosch University, South Africa

IEEM22-F-0369/Incumbent Actions in Adopting Preventive Innovations: Cases in the Finnish Construction Sector

Deborah Kuperstein-Blasco^{#+1}

¹Tampere University, Finland

IEEM22-F-0228/Measuring China's Energy Efficiency with Different DEA Models

Xu Wang^{#+1}, Takashi Hasuike¹

¹Waseda University, Japan



Quality Control and Management

2022-12-09 08:30 AM-10:30 AM Room 407

Session Chair(s): Sergio SOUSA, *University of Minho*

IEEM22-F-0341/A System Approach for Integration of Human-centered Smart Problem-solving Process in Digital Shop Floor Management

Turgut Refik Caglar^{#1}, Roland Jochem¹

¹Technical University of Berlin, Germany

IEEM22-F-0365/Optimization Model for Halal Gelatin Supply Chain with Carbon Emissions

Iwan Vanany^{#1}, Ivan Darma Wangsa⁺¹, Rizki Revianto Putera¹, Niken Anggraini Savitri¹, Berto Mulia Wibawa¹

¹Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-F-0376/The Virtual Sensei: Using Assisted Reality to Digitalize Gemba Walks

Daryl Powell¹

¹SINTEF Manufacturing, Norway

IEEM22-A-0068/The Impact of Quality Management Practices Towards Digital Transformation Readiness in the Food Industry

Sarina Abdul Halim-Lim^{#+1}, W.M. Samanthi Kamari Weerabahu², Harsimran Sodhi³, Nur Afiqah Zahra Mohd Asni¹, Muhammad Iqbal Muhammad Hussain⁴

¹Universiti Putra Malaysia, Malaysia

²Western Sydney University, Australia

³Chandigarh University, India

⁴Universiti Malaysia Perlis, Malaysia

IEEM22-F-0352/Dynamic Sampling Plans using a Metrology Situation Indicator (MSI)

Allwell Dilosi^{#+1}, Alaa Hassan², Aymen Mili³, Ali Siadat¹

¹Arts et Métiers Institute of Technology, France

²Université de Lorraine, France

³STMicroelectronics, France

IEEM22-F-0347/Quality Cost of 100% Inspection on Manufacturing Processes: Advantages of using a Simulation Approach

Luis Dias¹, Eusebio Nunes¹, Sergio Sousa^{#+1}

¹University of Minho, Portugal

Technology and Knowledge Management 4

2022-12-09 08:30 AM-10:30 AM Room 408

Session Chair(s): **Bheki MAKHANYA**, *University of Johannesburg*
Ewilly Jie Ying LIEW, *Monash University*

IEEM22-F-0181/Capturing Citizens Experienced Value from Municipal Services: Developing an Evaluation Model in a Swedish Municipal Project

Annika Hasselblad^{#1}, Ingela Bäckström², Pernilla Ingelsson², Leif Olsson¹

¹Mid Sweden University, Sweden

²Department of Quality Management and Mechanical Engineering (KMT), Sweden

IEEM22-F-0189/Individual Characteristics and Technology Adoption in Asset Management

Bheki Makhanya^{#1}, Hannelie Nel¹, Jan Harm Pretorius¹

¹University of Johannesburg, South Africa

IEEM22-F-0217/Methodology for Automated Master Data Management using Artificial Intelligence

Michael Riesener¹, Maximilian Kuhn¹, Benjamin Lender^{#1}, Günther Schuh¹

¹RWTH Aachen University, Germany

IEEM22-F-0218/Concept for Databased Identification of Heuristics for Development Management using FAMD

Michael Riesener¹, Maximilian Kuhn¹, Benjamin Lender^{#1}, Günther Schuh¹

¹RWTH Aachen University, Germany

IEEM22-F-0238/Influence of Goal Orientation on the Innovative Behavior of Basic Research Project Members

Qun Sha^{#1}, Yali Zhang^{#1}, Liaoliao Li¹

¹Northwestern Polytechnical University, China

IEEM22-F-0244/Concept for the Design of an Implementation Process for Continuous Innovation in Manufacturing Companies

Michael Riesener¹, Maximilian Kuhn¹, Stefan Perau^{#1}, Günther Schuh¹

¹RWTH Aachen University, Germany

Manufacturing Systems 4

2022-12-09 08:30 AM-10:30 AM Room 409

Session Chair(s): **Jimmy Chi Ho LI**, *Hong Kong Metropolitan University*
Weidong LIN, *Singapore Institute of Technology*

IEEM22-F-0117/Industry 5.0: From Manufacturing Industry to Sustainable Society

Misbah Iqbal^{#1}, Carman Ka Man Lee^{#1}, J.Z. Ren¹

¹The Hong Kong Polytechnic University, Hong Kong SAR

IEEM22-F-0096/Integrated Scheduling of Production and Material Delivery in a Make-to-order Flow Shop

Tianning Liang^{#1}, Liping Zhou^{#1}, Zhibin Jiang¹

¹Shanghai Jiao Tong University, China

IEEM22-F-0385/Application of Machine Learning for Sustainability in Manufacturing Supply Chain Industry 4.0 Perspective: A Bibliometric Based Review for Future Research

Alok Yadav¹, Rajiv Kumar Garg^{#+1}, Anish Kumar Sachdeva¹

¹Dr. B. R. Ambedkar National Institute of Technology Jalandhar, India

IEEM22-F-0129/The Application of Business Process Re-engineering at a Fashion Retailer: A Case Study

Kem Ramdass¹, Nita Sukdeo^{#+2}

¹University of South Africa, South Africa

²University of Johannesburg, South Africa

IEEM22-F-0140/Barriers to Additive Manufacturing Implementation in Plastic Waste Management – A Case Study from a Developing Economy

Banusha Aruchunarasa¹, W. Madushan Fernando⁺¹, H. Niles Perera^{#1}, Amila Thibbotuwawa¹, R.M. Chandima Ratnayake²

¹University of Moratuwa, Sri Lanka

²University of Stavanger, Norway

IEEM22-F-0324/Industry 4.0 and Indian SMEs: A Study of Espousal Challenges using AHP Technique

Anish Kumar Sachdeva^{#+1}, Vinay Kumar Sharma², Lakhwinderpal Singh²

¹Dr. B. R. Ambedkar National Institute of Technology Jalandhar, India

²Dr. B.R. Ambedkar National Institute of Technology, India

Engineering Education and Training

2022-12-09 11:00 AM-01:00 PM Room 401

Session Chair(s): Yves DE SMET, *Université Libre de Bruxelles*
Bheki MAKHANYA, *University of Johannesburg*

IEEM22-F-0070/Board Game as Financial Literacy Education Media for Indonesian High School Students

Rabendra Yudistira Alamin^{#+1}, Ellya Zulaikha¹, I Ketut Gunarta¹

¹Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-F-0316/Malaysian Working Women's Mental Health in the SME Sector

Nor Farhanis Zaidi⁺¹, Ming Foong Lee^{#1}

¹Universiti Tun Hussein Onn Malaysia, Malaysia

IEEM22-F-0081/Evaluation of Student Learning Success When Using Augmented Reality Experiences in Engineering Education

Carsten Stechert^{#+1}, Mohamed Habib Yengui¹

¹Ostfalia University, Germany

IEEM22-F-0131/Microlearning in Human-centric Production Systems

Elisa Roth^{*+1}, Mirco Moencks¹, Gunter Beitingger², Arne Freigang², Thomas Bohné¹

¹University of Cambridge, United Kingdom

²Siemens AG, Germany

IEEM22-F-0390/Preference Forecasting Proposal for Career Development Service Design From Engineering Educators' Perspective

Anies Faziehan Zakaria^{*+1}, Mohamad Fariz Mohamed Nasir², Mohd Syafiq Syazwan Mustafa³, Ummu Sakinah Subri⁴

¹Universiti Kebangsaan Malaysia, Malaysia

²Universiti Teknologi Malaysia Kuala Lumpur, Malaysia

³Universiti Tun Hussein Onn Malaysia, Malaysia

⁴Universiti Sains Malaysia, Malaysia

IEEM22-F-0247/Improvement of Inspection Training Tools and Validation of the Accuracy of Machine Learning Discriminant Models Using the Results

Shingo Kubota^{*1}, Masatsuki Sugitani¹, Riku Akaishi¹, Harumi Haraguchi^{*1}

¹Ibaraki University, Japan

Big Data and Analytics 1

2022-12-09 11:00 AM-01:00 PM Room 402

Session Chair(s): Yi-Hui LIANG, *I-Shou University*
Yonas Zewdu AYELE, *Østfold Univeristy College*

IEEM22-F-0426/Relating the Use of Different Type of HR Analytics in Different Strategic Firms with the Use of Social Media within the Organization

Sonal Gupta^{*+1}, R.R.K. Sharma^{*1}

¹Indian Institute of Technology Kanpur, India

IEEM22-A-0075/Exploring Customer Value for Healthcare Industry in Taiwan Using Fuzzy C-means and Decision Tree Methods

Yi-Hui Liang^{*+1}

¹I-Shou University, Taiwan

IEEM22-A-0114/A Deep Learning Approach to Cross-cultural TV Series Analysis: Measuring the Impact of Gender and Emotion Display on Shot Scale Distribution

Landry Digeon^{*+1}, Anjal Amin²

¹University of Maryland, Baltimore County, United States

²The Mobius Trip, United States

IEEM22-F-0118/A Systematic Assessment of Genetic Algorithm (GA) in Optimizing Machine Learning Model: A Case Study from Building Science

Abdulrahim Ali^{*+1}, Raja Jayaraman¹, Elie Azar², Andrei Sleptchenko¹

¹Khalifa University, United Arab Emirates

²Carleton University, Canada

IEEM22-F-0466/Improving a Recommendation Engine for Traditional Trade Between Wholesalers and Retailers Using Association Rules

Krisda Chugh^{*+1}, Nantachai Kantanantha¹

¹Chulalongkorn University, Thailand

IEEM22-A-0065/Enhancing Awareness Using Serious Game

Brendan Chan^{*1}, Linda William^{*1}

¹Temasek Polytechnic, Singapore

Operations Research 5

2022-12-09 11:00 AM-01:00 PM Room 403

Session Chair(s): **Anand Jacob ABRAHAM**, *Indian Institute of Technology Kharagpur*
Siddhartha PAUL, *Swiggy, Bundl Technologies*

IEEM22-A-0042/Optimized Drone Deployment Plan For Last-mile Delivery

Oqais Tanvir^{*+1}, Gaurav Kumar¹, Akhilesh Kumar², Sri Krishna Kumar¹

¹Indian Institute of Technology Kharagpur, India

²Indian Institute of Management Raipur, India

IEEM22-F-0464/Mean-variance and Safety-first Portfolio Selection Utilizing Historical Returns of Forbes Asia's Fab50 Companies

Gerlyn Altes^{*1}, Michael Young^{*1}, Yogi Tri Prasetyo¹, Reny Nadlifatin²

¹Mapúa University, Philippines

²Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-F-0108/Extension of the PROMETHEE Method to the Multicriteria Dual Clustering Problem

Yves De Smet^{*+1}

¹Université Libre de Bruxelles, Belgium

IEEM22-F-0272/Decision Support System for Selecting Robot Systems for Pick-and-place Operation of Robot Manipulator

Yushi Oyama^{*+1}, Tatsushi Nishi¹, Ziang Liu¹, Md Moktadir Alam¹, Tomofumi Fujiwara¹

¹Okayama University, Japan



IEEM22-F-0350/Barriers to The Transition from Supply Chain 4.0 (SC4.0) To Supply Chain 5.0 (SC5.0)

Arshil Ahmad^{#1}, Hisham Fazal Syed¹, Jay Jayantkumar Joshi¹, Sharfuddin Khan^{#1}

¹University of Regina, Canada

IEEM22-F-0460/Analysis of Mean – Variance Theory and Safety-first Model for Portfolio Selection on Non-fungible Tokens (NFTs) and Collectibles

Justine Kyle Chan^{#1}, Michael Young^{#1}, Yogi Tri Prasetyo¹, Reny Nadlifatin²

¹Mapúa University, Philippines

²Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-A-0043/A Flow-based Formulation for Parallel Machine Scheduling Using Decision Diagrams

Roel Leus^{#1}, Daniel Kowalczyk¹, Christopher Hojny², Stefan Ropke³

¹KU Leuven, Belgium

²Eindhoven University of Technology, Netherlands

³Technical University of Denmark, Denmark

Systems Modeling and Simulation 3

2022-12-09 11:00 AM-01:00 PM Room 404

Session Chair(s): Abdul-Wahid SAIF, *King Fahd University of Petroleum and Minerals*

IEEM22-A-0120/Economic Cost of Integrating Statistical Process Control and Automatic Process Control: A Review and Future Work

Abdul-Wahid Saif^{#1}

¹King Fahd University of Petroleum and Minerals, Saudi Arabia

IEEM22-F-0229/Simulation for Modeling and Analysis of Burn Center

Akshay Vilas Upasany^{#1}, Anurendra Singh², Gurkirat Wadhwa¹, Jayendran Venkateswaran¹, Gopika Vinod²

¹Indian Institute of Technology Bombay, India

²Homi Bhabha National Institute, India

IEEM22-F-0268/Epidemiological Model of COVID-19 based on Evolutionary Game Theory: Considering the Viral Mutations

Yu Nishihata^{#1}, Ziang Liu¹, Tatsushi Nishi¹

¹Okayama University, Japan

IEEM22-F-0420/Stability Analysis of Emission-based Production and Inventory Control Systems (EPICS)

Rishav Deval^{#1}, Jayendran Venkateswaran¹

¹Indian Institute of Technology Bombay, India

IEEM22-A-0105/Minimizing the Motion Risk of Floating Wind Turbines: A Case Study Based on Mooring Assessment in Vietnam

Hien Hau Pham^{#1}, Dang Thi Thanh Huyen⁺¹, Yi Liu Liu²

¹Hanoi University of Civil Engineering, Viet Nam

²Norwegian University of Science and Technology, Norway

IEEM22-F-0082/Energy Losses Analysis for Electrical Grid Systems

Indra Gunawan^{#+1}, Ashraf Zaghwan¹

¹The University of Adelaide, Australia

Supply Chain Management 5

2022-12-09 11:00 AM-01:00 PM Room 405

Session Chair(s): **Fazleena BADURDEEN**, *University of Kentucky*
Lina GOZALI, *Tarumanagara University*

IEEM22-F-0311/Decision Analysis Considering Government Double Subsidy and CSR under Green Technology R&D Uncertainty

Nan Chen⁺¹, Jianfeng Cai¹, Lei Gao^{#1}

¹Northwestern Polytechnical University, China

IEEM22-F-0319/Analyzing Barriers Towards Implementing Circular Economy in Healthcare Supply Chains

Kartika Alfina^{#+1}, R.M. Chandima Ratnayake², Dermawan Wibisono¹, Mursyid

Hasan Basri¹, Nur Budi Mulyono¹

¹Bandung Institute of Technology, Indonesia

²University of Stavanger, Norway

IEEM22-F-0345/Capacity Planning of the Semiconductors Manufacturing Supply Chain: A Decision Method and Application

Jun-Der Leu^{#1}, Fei-Pai Liu⁺¹

¹National Central University, Taiwan

IEEM22-F-0351/Challenges in the Transition from Supply Chain 4.0 to Supply Chain 5.0

Tanveer Chowdhury^{#+1}, Kabita Bhowmik¹, Akshith S. Naidu¹, Sharfuddin Khan¹

¹University of Regina, Canada

IEEM22-F-0361/A Joint Economic Lot Size Model for a Single-manufacturer, Multiple Retailers, and Multi-product with Electric Trucks and Drone

Ivan Darma Wangsa⁺¹, Iwan Vanany^{#1}, Nurhadi Siswanto¹

¹Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-A-0113/Developing Resilient and Sustainable Supply Chains: Key Requirements and Future Directions

Fazleena Badurdeen^{#+1}, Gisele Guedes¹, Angela Reamber¹

¹University of Kentucky, United States

IEEM22-F-0075/Incentive Strategy Considering Observation Period to Manage Supply Disruption under Uncertain Demand

Lingzi Li^{*1}, Shuangshuang Dong¹, Meimei Zheng^{*1}, Wei Weng²

¹Shanghai Jiao Tong University, China

²Kanazawa University, Japan



Crisis Management

2022-12-09 11:00 AM-01:00 PM Room 406

Session Chair(s): **Yogi Tri PRASETYO**, *Mapúa University*
Ardiyansyah YATIM, *Universitas Indonesia*

IEEM22-F-0133/Developing Organizational Resilience Model to Sustain Business Performance

Jonny ^{*1}, Dave Mangindaan¹

¹Bina Nusantara University, Indonesia

IEEM22-F-0474/The Impact of COVID-19 Pandemic on Airport: An Empirical Study of Service Quality, Customer Satisfaction, and Travel Intention for Sustainable Airport Operations

Yogi Tri Prasetyo^{*1}, Darlene Gayle D. Dela Fuente¹, Thanatorn Chuenyindee²,
Reny Nadlifatin³, Satria Fadil Persada⁴

¹Mapúa University, Philippines

²Navaminda Kasatriyadhiraj Royal Air Force Academy, Thailand

³Institut Teknologi Sepuluh Nopember, Indonesia

⁴Bina Nusantara University, Indonesia

IEEM22-F-0209/Supply Chain Disruptions during the COVID-19 Pandemic in General Trading Companies

Anton Sukoco^{*1}, Iwan Vanany^{*1}, Jerry Dwi Trijojo Purnomo¹

¹Institut Teknologi Sepuluh Nopember, Indonesia

IEEM22-A-0099/Is Voluntary Construction Dispute Mediation Necessary?

Nan Cao^{*1}, Sai On Cheung¹

¹City University of Hong Kong, Hong Kong SAR

IEEM22-F-0033/Concept for the Identification of Governmental Needs for Actions within the Technology Transfer of Deep Tech

Günther Schuh¹, Tim Latz^{*2}

¹RWTH Aachen University, Germany

²Fraunhofer Institute for Production Technology IPT, Germany

Service Innovation and Management 1

2022-12-09 11:00 AM-01:00 PM Room 407

Session Chair(s): **Venkateswarlu NALLURI**, *Chaoyang University of Technology*
Ewilly Jie Ying LIEW, *Monash University*



IEEM22-F-0005/Exploring the Relationship Among Experience Marketing, Customer Loyalty on Purchase Intention- A Case Study of Banking Sector

Venkateswarlu Nalluri^{*1}, Long-Sheng Chen^{*1}

¹*Chaoyang University of Technology, Taiwan*

IEEM22-F-0071/The Strategic Role of Design of Identity Management and Reputation in Indonesia Higher Education Institutions

Putri Dwitasari^{*1}, Ellya Zulaikha¹, Syarif Hanoum¹

¹*Institut Teknologi Sepuluh Nopember, Indonesia*

IEEM22-F-0137/Older Adults' Evaluations of Mobile Apps: Insights from a Mobility App-based Solution

Clarice Sze Wee Chua¹, Weng Marc Lim¹, Pei-Lee Teh^{*2}, Sonja Pedell³

¹*Swinburne University of Technology, Malaysia*

²*Monash University, Malaysia*

³*Swinburne University of Technology, Australia*

IEEM22-F-0225/Four Initiatives to Standardize Warehouses to Increase Digitalization and Automation

Tine Meidahl Münsberg^{*1}, Lars Hvam¹, Sofie Amalie Lundsteen¹, Mads Støjfer-Hønberg¹, Maximilian Csik¹, Lydia Tsintzou¹

¹*Technical University of Denmark, Denmark*

IEEM22-F-0339/Adoption of Industry 4.0 in the TIC Industry: Systematic Review

Norton H. Y. Yuen^{*1}, Fanny Tang¹, Chi Ho Li²

¹*Hong Kong Metropolitan University, Hong Kong SAR*

²*The Open University of Hong Kong, Hong Kong SAR*

Technology and Knowledge Management 5

2022-12-09 11:00 AM-01:00 PM Room 408

Session Chair(s): Pei-Lee TEH, *Monash University*
Iori NAKAOKA, *Seijoh University*

IEEM22-F-0280/Exploring the Relationships Between Artificial Intelligence Transparency, Sources of Bias, and Types of Rationality

Laura Valtanen^{*1}, Saku Mäkinen²

¹*Tampere University, Finland*

²*University of Turku, Finland*

IEEM22-F-0282/Public Acceptance of Electric Vehicles in Indonesia

Karsi Widiawati^{*1}, Bertha Maya Sopha^{*1}, Fakhri Wardana¹

¹*Universitas Gadjah Mada, Indonesia*

IEEM22-F-0312/Organizational Structure for Improving R&D Exploration Degree of ICT Companies

Iori Nakaoka^{*1}, Yunju Chen², Yousin Park³, Hirochika Akaoka⁴, Seigo Matsuno⁵

¹Seijoh University, Japan

²Shiga University, Japan

³Prefectural University of Hiroshima, Japan

⁴Kyoto Sangyo University, Japan

⁵National Institute of Technology, Ube College, Japan

IEEM22-F-0151/Technology Adoption in Teaching and Learning Within Online Environment

Irshaad Mahomed^{*1}, Wilson Maladzi¹

¹University of South Africa, South Africa

IEEM22-F-0313/A Review of Innovation Alliances from Game Theory Perspective

Lei Gao^{*1}, Jianfeng Cai¹, Zhengfeng Li^{*1}

¹Northwestern Polytechnical University, China

IEEM22-F-0332/The Adoption Speed of Scientific Knowledge: The Moderating Role of Path Dependency on Scientific Knowledge

Chia-I Kuo^{*1}

¹Providence University, Taiwan

IEEM22-A-0056/Development of a Fencing Patent Strategy Methodology through the Creation of a Patent Map based on Generative Topographic Mapping (GTM)

Jae Hoon Jung^{*1}, Byungun Yoon^{*1}

¹Dongguk University, Korea, South

Manufacturing Systems 5

2022-12-09 11:00 AM-01:00 PM Room 409

Session Chair(s): R.M. Chandima RATNAYAKE, *University of Stavanger*

Carman Ka Man LEE, *The Hong Kong Polytechnic University*

IEEM22-F-0087/Experimental Investigation of Magnetic Force-assisted Powder-mixed EDM for Aluminium Based Metal Matrix Composite

Ram Sajeewan^{*1}, Avaniash Kumar Dubey^{*2}

¹Maha Maya Polytechnic of Information Technology, India

²Motilal Nehru National Institute of Technology, India

IEEM22-F-0448/The Impact of the COVID-19 Pandemic on the Organizational Commitment in Semiconductor Industry: The Mediator Effect of the Job Satisfaction

Yogi Tri Prasetyo^{*1}, Ardvin Kester S. Ong¹, Alaissa Marie A. Cagubcob¹,
Thanatorn Chuenyindee², Reny Nadlifatin³, Satria Fadil Persada⁴

¹Mapúa University, Philippines

²Navaminda Kasatriyadhiraj Royal Air Force Academy, Thailand

³Institut Teknologi Sepuluh Nopember, Indonesia

⁴Bina Nusantara University, Indonesia

IEEM22-F-0014/Factors Affecting Six Sigma Green Belt Deployment – Case of Company A

Vela Mazula¹, Alice Kabamba Lumbwe¹, Sambil Charles Mukwakungu^{*1},
Nita Sukdeo¹

¹University of Johannesburg, South Africa

IEEM22-F-0017/An Empirical Approach to the Implementation of Lean Manufacturing as a Strategy to Mitigate Industrial Waste in South Africa

Tshepiso Thobakgale¹, Eric Mikobi Bakama^{*1}, Sambil Charles Mukwakungu^{*1},
Nita Sukdeo¹

¹University of Johannesburg, South Africa

IEEM22-F-0166/Social Media Product Data Integration with Product Lifecycle Management; Insights for Application of Artificial Intelligence and Machine Learning

Noushin Mohammadian^{*1}, Nadhir Mechai¹, Omid Fatahi Valilai^{#1}

¹Jacobs University Bremen, Germany

IEEM22-F-0416/The Importance of Reliability Indicators in Preventative Maintenance

Magano Molefe^{*1}, Anup Pradhan¹

¹University of Johannesburg, South Africa

Information Processing and Engineering

2022-12-09 02:00 PM-03:30 PM Room 401

Session Chair(s): Michel ALDANONDO, Toulouse University / IMT-Mines Albi

IEEM22-F-0391/Building a Natural Language Processing Model to Extract Order Information from Customer Orders for Interpretative Order Management

Mingyan Simon Lin^{*1}, Clara Ga Yi Tang¹, Xing Jing Kom¹, Jia Yi Eyu¹, Chi Xu²

¹Singapore Institute of Manufacturing Technology, Singapore

²Agency for Science, Technology and Research (A*STAR), Singapore

IEEM22-F-0318/Development of a New Type of Carousel-based Compacted Work System for Mixed-model Assembly in Mechanical Engineering

Sven Hinrichsen^{*1}, Alexander Nikolenko¹, Nils Beckmann¹, Frederic Meyer¹

¹Ostwestfalen-Lippe University of Applied Sciences and Arts, Germany

IEEM22-A-0035/Building Facade Energetic Renovation: Towards a Façade Model to Feed Insulation Design Software

Michel Aldanondo^{#1}, Andrea Christophe¹, Julien Lesbegueries¹, Elise Vareilles¹

¹University of Toulouse, France

IEEM22-F-0020/Application of Identity Resolution System under Industrial Internet: Taking Cold Chain Traceability as an Example

Ruirui Wang^{#1}, Ziding Meng¹, Yuguang Bao¹, Xinguo Ming^{#1}

¹Shanghai Jiao Tong University, China

IEEM22-F-0226/Adaptive Genetic Algorithm Based S-box Design for Artificial Neural Network

Runtao Ren^{#1}, Ban Yang², Raymond Y. K. Lau^{#1}

¹City University of Hong Kong, Hong Kong SAR

²Xi'an University of Posts and Telecommunications, China

IEEM22-F-0338/Part Recognition in Additive Production Systems using a Computer-vision Approach

Günther Schuh¹, Gerret Lukas¹, Steffen Hohenstein¹, Jan Marvin Schäfer^{#+1}, Lukas Drescher¹

¹RWTH Aachen University, Germany

Big Data and Analytics 2

2022-12-09 02:00 PM-03:30 PM Room 402

Session Chair(s): Landry DIGEON, University of Maryland, Baltimore County

Yun Prihantina MULYANI, Universitas Gadjah Mada

IEEM22-F-0174/Sentiment Analysis Model for KlikIndomaret Android App During Pandemic Using Vader and Transformers NLTK Library

Akhmad Ghiffary Budianto^{#1}, Budisantoso Wirjodirdjo^{#2}, Iffan Maflahah², Diva Kurnianingtyas³

¹Universitas Lambung Mangkurat, Indonesia

²Institut Teknologi Sepuluh Nopember, Indonesia

³Universitas Brawijaya, Indonesia

IEEM22-F-0203/Using Distance Measures and Cluster Algorithms for Production Logistics-oriented Evaluation of Products and Product Portfolios

Tim Kämpfer^{#+1}, Sven A. Kläßen¹, Peter Nyhuis¹

¹Leibniz University Hannover, Germany

IEEM22-F-0293/Data-based Approach for Reducing Process Complexity in Parts Manufacturing

Günther Schuh¹, Andreas Güzlaff¹, Jan Maetschke¹, Marius Krug^{#+1}, Julius Breitung¹

¹RWTH Aachen University, Germany

IEEM22-F-0356/Semantic Analysis Using GloVe for Onomatopoeia in Cosmetics Review

Misaki Murata^{*1}, Takashi Ito¹, Syohei Ishizu¹

¹Aoyama Gakuin University, Japan

IEEM22-F-0060/Process Model for the Data-driven Identification of Machine Function Usage for the Reduction of Machine Variants

Steffen Wagenmann^{*1}, Artur Krause², Simon Rapp¹, Sebastian Huenemeyer³, Albert Albers¹, Nikola Bursac⁴

¹Karlsruher Institute of Technology, Germany

²TRUMPF Machine Tools SE + Co.KG, Germany

³Porsche AG, Germany

⁴Technical University of Hamburg, Germany

IEEM22-F-0032/Side-view Dimensional Profiling of Drive-through Vehicle and Features Extraction by Using LiDAR and Camera

Shek-Ping Li^{*1}, Y. Y. Chan¹, Yongshi Liang¹, Yuk Ting Hester Chow¹, H. Y. Ng¹, Kin Lok Keung^{*1}

¹The Hong Kong Polytechnic University, Hong Kong SAR

Operations Research 6

2022-12-09 02:00 PM-03:30 PM Room 403

Session Chair(s): Siddhartha PAUL, Swiggy, Bundl Technologies
Norbert TRAUTMANN, University of Bern

IEEM22-F-0236/Edge Encoded Attention Mechanism to Solve Capacitated Vehicle Routing Problem with Reinforcement Learning

Gefu Fellek^{*1}, Goytom Gebreyesus¹, Ahmed Farid¹, Shigeru Fujimura¹, Osamu Yoshie¹

¹Waseda University, Japan

IEEM22-F-0061/On Defining Industrial Agility as a Strategic Capability for Competitive Performance of Engineering Assets: An Industrial Eco-systems Perspective

Lucas Peter Hoej Brasen^{*1}, Jayantha P. Liyanage²

¹Aarhus University, Denmark

²University of Stavanger, Norway

IEEM22-F-0141/Applying a Capacitated Heterogeneous Fleet Vehicle Routing Problem with Multiple Depots Model to Optimize a Retail Chain Distribution Network

W. Madushan Fernando^{*1}, Amila Thibbotuwawa^{*1}, H. Niles Perera¹, R.M. Chandima Ratnayake²

¹University of Moratuwa, Sri Lanka

²University of Stavanger, Norway

IEEM22-A-0087/Inventory Model Under Trade Credit Policy and Uniformly Distributed Lead Time

Mohammed Darwish^{*1}

¹Kuwait University, Kuwait

IEEM22-F-0380/Layout Redesign of a Shipbuilding and Repair Plant

Jing Shun Leow^{#1}, Jing Shuo Leow¹, Kuan Yew Wong¹, Hooi Siang Kang¹
¹*Universiti Teknologi Malaysia, Malaysia*

Healthcare Systems and Management

2022-12-09 02:00 PM-03:30 PM Room 404

Session Chair(s): Yogi Tri PRASETYO, *Mapúa University*
Lina GOZALI, *Tarumanagara University*

IEEM22-F-0036/Smart Wristwatch and Apps for Healthy People with Congenital Diseases and a Healthy Lifestyle

Lina Gozali^{#1}, Geraldo Rafael¹, Caroline De Candra¹, Maslin Masrom²,
Ariawan Gunadi¹, Teuku Yuri M. Zagloel³

¹*Tarumanagara University, Indonesia*

²*Universiti Teknologi Malaysia, Malaysia*

³*Universitas Indonesia, Indonesia*

IEEM22-F-0205/Healthcare Facility Location Selection: A Bibliometric Analysis and Scoping Review

Rentia Fourie^{#1}, Sara Grobbelaar¹

¹*Stellenbosch University, South Africa*

IEEM22-F-0297/A Rolling-based Multipeak Learning Model for COVID-19 Pandemic Predicting

Dian Chen^{#1}, Liping Zhou^{#1}

¹*Shanghai Jiao Tong University, China*

IEEM22-F-0321/Criteria Determination of Lean and Green Practices Towards Sustainability for Secondary Hospitals in Thailand

Jaruda Ngamwittitwong^{#1}, Ronnachai Sirovetnukul^{#1}

¹*Mahidol University, Thailand*

IEEM22-F-0281/A Scoping Review and Critical Analysis of the Literature Surrounding a Systems-thinking Approach to Realist Evaluation, in the Context of Monitoring and Evaluation

Olivia Hitchcock^{#1}, Sara Grobbelaar¹, Euodia Vermeulen¹

¹*Stellenbosch University, South Africa*

IEEM22-F-0317/Optimization of Healthcare Problem using Swarm Intelligence: A Review

Agus Wahyu Widodo¹, Diva Kurnianingtyas^{#1}, Wayan Firdaus Mahmudy¹

¹*Universitas Brawijaya, Indonesia*

Supply Chain Management 6

2022-12-09 02:00 PM-03:30 PM Room 405

Session Chair(s): **Ziaul Haque MUNIM**, *University of South-Eastern Norway*
Carman Ka Man LEE, *The Hong Kong Polytechnic University*

IEEM22-F-0405/Evaluation Approaches for Measuring Economic Efficiency of Digitization Technologies in Transport Logistics: A Systematic Literature Review Protocol

Navid Julian Sardarabady^{#1}, John-Dean Kasher¹, Simon Riedle¹
¹*Duale Hochschule Baden-Württemberg Ravensburg, Germany*

IEEM22-F-0408/Model for the Determining Number and Location of Food Loss Processing Facilities on the Food Supply Chain

Ika Deefi Anna⁺¹, Iwan Vanany^{#1}, Nurhadi Siswanto¹
¹*Institut Teknologi Sepuluh Nopember, Indonesia*

IEEM22-F-0415/Systematic Selection of Digitization Technologies in Transport Logistics Processes based on a Multi-criteria Decision Analysis

John-Dean Kasher^{#1}, Navid Julian Sardarabady¹, Simon Riedle¹, Markus E. Schatz¹
¹*Duale Hochschule Baden-Württemberg Ravensburg, Germany*

IEEM22-A-0045/Solving an Integrated Production and Distribution Problem

Rachida Benfedel^{#+1}, Fayçal Belkaid¹, Nadjib Brahimi²
¹*Manufacturing Engineering Laboratory of Tlemcen, Algeria*
²*Rennes School of Business, France*

IEEM22-F-0458/Influence of the Degree of Centralization on the Decision Quality in Production Management

Günther Schuh¹, Andreas Gützlaff¹, Tino Xäver Schlosser^{#+1}
¹*RWTH Aachen University, Germany*

IEEM22-F-0237/Goal Programming Approach of a Multi-vehicle Routing Problem on Waste Collection Considering Economic, Environmental, Time, and Health Objectives

Madeline Tee^{#+1}, Kent Louie Wong¹, Dennis Cruz¹
¹*De La Salle University, Philippines*

E-Business and E-Commerce

2022-12-09 02:00 PM-03:30 PM Room 406

Session Chair(s): **Irma MÄKÄRÄINEN-SUNI**, *Haaga-Helia University of Applied Sciences*
Andrei O. J. KWOK, *Monash University*

IEEM22-F-0127/Mapping the Digital, Innovative Start-up Venture Creation Process

Irma Mäkäraäinen-Suni⁺¹, Alan Pilkington^{#2}, Maria Granados², Sergio de Cesare²

¹*Haaga-Helia University of Applied Sciences, Finland*

²*University of Westminster, United Kingdom*

IEEM22-F-0139/Perceptions, Emotions and Motivations of Gig Workers: Insights from Malaysia

Borui Fang¹, Ewilly Jie Ying Liew¹, Andrei O. J. Kwok^{#+1}, Pei-Lee Teh¹

¹*Monash University, Malaysia*

IEEM22-F-0340/Customers' Usage and Brand Experience Toward Branded Mobile Payment Improve Continuous Usage Intention

Li-Ting Huang^{#+1}

¹*Chang Gung University, Taiwan*

IEEM22-F-0373/Exploring Factors That Customers' Concerns When Using the E-commerce Platform in Thailand

Jiramate Wadsuwan⁺¹, Pornwasin Sirisawat¹, Tipavinee Suwanwong Rodbundith^{#1}

¹*Mae Fah Luang University, Thailand*

IEEM22-F-0180/Assessing the Role of Minimum Viable Products in Digital Startups

Javaria Umbreen^{#+1}, Muhammad Zeeshan Mirza¹, Yasir Ahmad¹, Afshan Naseem¹

¹*National University of Sciences & Technology, Pakistan*

Service Innovation and Management 2

2022-12-09 02:00 PM-03:30 PM Room 407

Session Chair(s): **Pittawat UEASANGKOMSATE**, *Kasetsart University*
Ewilly Jie Ying LIEW, *Monash University*

IEEM22-F-0387/Understanding Challenges as Needs: Smartphone Usage Among Malaysian Older Women in Rural Areas

Ewilly Jie Ying Liew^{#+1}, Pei-Lee Teh¹, Sooyeong Ewe¹, Chooi Ling Chong¹

¹*Monash University, Malaysia*

IEEM22-F-0026/Evaluation of Subscription-based Sales of IoT-enabled Consumer Devices

Tatsuya Inaba^{#1}

¹Kanagawa Institute of Technology, Japan

IEEM22-F-0040/What Benefits Can SMEs in the Food Industry Gain from Innovative Products?

Pittawat Ueasangkomsate^{#1}

¹Kasetsart University, Thailand

IEEM22-F-0143/Local Governance of Future Regional Development in Remote Areas: Key Insights from a Co-creation Study in Sweden

Christine Große^{#1}

¹Mid Sweden University, Sweden

IEEM22-F-0227/A Scoping Review Investigating the Use of Outcome-based Models to Improve Healthcare Outcomes and Reduce Healthcare Spending

Grace Chidavaenzi^{#1}, Sára Grobbelaar¹, Faatiema Salie¹

¹Stellenbosch University, South Africa

Technology and Knowledge Management 6

2022-12-09 02:00 PM-03:30 PM Room 408

Session Chair(s): Günther SCHUH, *RWTH Aachen University*
Gitae KIM, *Hanbat National University*

IEEM22-A-0086/Business Models and Modularization as Enablers for the Circular Economy

Dag Raudberget^{#1}

¹Jönköping University, Sweden

IEEM22-F-0161/A Framework for Enhancement of Building Information Modeling using Internet of Things and Axiomatic Design Theory

Elham Zafarghandi^{#1}, Alireza Haji¹, Omid Fatahi Valilai^{#2}

¹Sharif University of Technology, Iran

²Jacobs University Bremen, Germany

IEEM22-F-0330/Human-Centered Machine Learning Implementation in Banking: Case Study in BRILink (BRI Branchless Banking) Agent Acquisition, Upgrade, and Activation

Faiq Iftirul Mahlidah^{#1}, Agung Kharisma Sukarno¹, Yoga Yustianwan¹, M.

Dendi Raditya Bakry¹

¹Bank Rakyat Indonesia, Indonesia

Intelligent Systems

2022-12-09 02:00 PM-03:30 PM Room 409

Session Chair(s): Dinh Son NGUYEN, *The University of Danang, University of Science and Technology*
Chien-Sing LEE, *Sunway University*

IEEM22-F-0002/Regression-based Business Decision Support: Application in Online Retail

Bhavesh Khatri¹, Mait Rungi^{#1}

¹*Estonian Entrepreneurship University of Applied Sciences, Estonia*

IEEM22-F-0442/Systematic Literature Review of Real-time Risk Analysis of Autonomous Ships

Deepen Prakash Falari^{#1}, Hyungju Kim², Choungho Choung³, Seong Na³

¹*University of South-Eastern Norway (USN), Norway*

²*University of South-Eastern Norway, Norway*

³*Korea Register (KR), Korea, South*

IEEM22-F-0432/COVCOUGH: An Artificial Intelligence Application to Detect COVID-19 Patients through Smartphone-recorded Coughs

Dinh Son Nguyen^{#1}, Khoa Tran Dang², Huyen Trang Ton Nu¹

¹*The University of Danang, University of Science and Technology, Viet Nam*

²*Pham Ngoc Thach University of Medicine, Viet Nam*

IEEM22-F-0193/On Restricted Computational Systems, Real-time Multi-tracking and Object Recognition Tasks are Possible

Hamam Mokayed^{#1}, Thomas Clark², Lama Alkhaled¹, Mohamad Ali

Marashli³, Hum Yan Chai⁴

¹*Lulea University of Technology, Sweden*

²*Asia Pacific University, Malaysia*

³*City University of Hong Kong, Hong Kong SAR*

⁴*Universiti Tunku Abdul Rahman, Malaysia*

Poster Presentations

Poster Presentations

2022-12-09 04:00 PM-05:30 PM

IEEM22-A-0001/Health Monitoring of Chain Driving Power System

Sang Kwon Lee^{#1}

¹Inha University, Korea, South

IEEM22-A-0041/A Surrogate Based Adaptive Annealing Genetic Algorithm to Support Production Planning and Scheduling in Smart Manufacturing

Ping Chong Chua^{#1}, Seung Ki Moon^{#1}, Yen Ting Ng², Huey Yuen Ng³

¹Nanyang Technological University, Singapore

²Agency for Science, Technology and Research, Singapore

³Singapore Institute of Manufacturing Technology, Singapore

IEEM22-A-0049/Gain Enhancement of Flexible Power Transfer Antenna using Frequency Compensation

JinHyoung Kim^{#1}, KwonHong Lee¹, Cheolung Cha¹

¹Korea Electronics Technology Institute, Korea, South

IEEM22-A-0050/A Digital Twin-based Approach to Identify Optimal Production Line Configuration in Smart Manufacturing

Jongsuk Lee^{#1}, Seung Ki Moon¹, Sumin Jeon²

¹Nanyang Technological University, Singapore

²Hyundai Motor Group Innovation Center, Singapore

IEEM22-A-0060/Application of GPT3 to Closed-domain Question Answering for Problem and Solution in Computer Science

Satoru Yamamoto^{#1}, Hajime Sasaki^{#2}

¹Data Artist Inc., Japan

²The University of Tokyo, Japan

IEEM22-A-0074/Optimal Domestic Industry Correlation Structure for Circular Economy - A Case of Food/energy/water Nexus

Hsiao-Fan Wang^{#1}

¹National Tsing Hua University, Taiwan

IEEM22-F-0077/Multistage Configuration Systems Used to Streamline the Construction Value Chain

Irene Campo-Gay^{#1}, Lars Hvam¹, Anders Haug²

¹Technical University of Denmark, Denmark

²University of Southern Denmark, Denmark

IEEM22-F-0083/Prediction of Returns of Taiwan 50 Index Constituents Using Random Forest Algorithm

Wen-Ping Chao^{#1}, Keng-Chieh Yang^{#2}, Yu-Min Hong², Chyan Yang³

¹Shu-Te University, Taiwan

²National Kaohsiung University of Science and Technology, Taiwan

³National Yang Ming Chiao Tung University, Taiwan

IEEM22-F-0085/Heuristic Decision for Static and Dynamic Service Facility Location in Agricultural Maintenance Service Network

Weibo Ren^{*1}, Yaoguang Hu^{*1}

¹Beijing Institute of Technology, China

IEEM22-F-0089/Identification of Factors Affecting the Adoption of Home Intelligent Robots

Danping Lin^{*1}, Shuang Wu^{*1}, Lingchao Zhu¹

¹Shanghai Maritime University, China

IEEM22-F-0092/Traceable and Privacy-preserving Blockchain System Architecture for Remanufacturing Reverse Supply Chain

Qiaolun Gu^{*+1}, Tiegang Gao²

¹Tianjin University of Technology and Education, China

²Nankai University, China

IEEM22-F-0095/Reform and Innovation of Undergraduate Graduation Project (Thesis) Based on AHP Fuzzy Grey Comprehensive Method

Meijuan Gao¹, Xiaoxiao Xie¹, Maosen Fu^{*+1}

¹Northwestern Polytechnical University, China

IEEM22-F-0101/Bitcoin Data Analysis Using Deep Learning and Statistical Modeling

Joel Liu^{*1}, Zijiang Yang¹, Younes Benslimane^{*1}

¹York University, Canada

IEEM22-F-0103/Application of the Multistage One-shot Decision-making Approach to a Museum Investment Decision

Mohammed Al-Shanfari^{*+1}

¹Yokohama National University, Japan

IEEM22-F-0109/Identification of Factors Affecting the Application of Additive Manufacturing Technology in Mass Customization Based on Structural Equation Model

Danping Lin^{*1}, Yuting Zhang^{*+1}, Ben Jiang¹

¹Shanghai Maritime University, China

IEEM22-F-0156/Research on the Product Design of Wood Identification based on Electronic Nose

Chenhao Li^{*1}, Jinchun Wu¹, Chengqi Xue^{*1}

¹Southeast University, China

IEEM22-F-0175/Applying Three Deep Learning Techniques to Predicting Stock Price

Chia Chun Kao^{*1}, Chieh-Yow ChiangLin¹, Keng-Chieh Yang^{*1}

¹National Kaohsiung University of Science and Technology, Taiwan

IEEM22-F-0188/Optimal Dual-objective Inventory Strategies for a Two-echelon Capacitated Supply Chain

Lang Xiong^{*1}, Tingting Xiao^{*1}

¹Harbin Institute of Technology, China



IEEM22-F-0197/Mapping the Literature on Ecosystem Coopetition: A Bibliometric Analysis from 1993-2021

Xiao Sun^{#+1}, Suli Zheng¹, Luqi Yang¹

¹China Jiliang University, China

IEEM22-F-0201/An ERP-based Icon Contour Similarity Perception Research

Yixuan Zhou⁺¹, Haiyan Wang^{#1}, Lulu Gan¹, Jinchun Wu¹, Chengqi Xue¹

¹Southeast University, China

IEEM22-F-0219/Applying Refined Kano Model to Classify and Rank Customer Requirements, Case Study: Automotive Industry in Portugal

Ahmad Hariri^{#+1}, Jose Pedro Teixeira Domingues¹, Paulo Sampaio¹

¹University of Minho, Portugal

IEEM22-F-0234/ Research on the Joint Strategy of Advance Selling and Resalable Return for Upgrading Products

Xiaowen Sun⁺¹, Qing Xia^{#1}

¹Guangdong University of Education, China

IEEM22-F-0239/Study on Simulation and Fatigue Assessment Method for Shipbuilding Manual Operation in Narrow Space

Junqi Cai⁺¹, Xiumin Fan^{#1}, Xu Yang¹, Qichang He¹

¹Shanghai Jiao Tong University, China

IEEM22-F-0242/Short-term Prediction of Outbound Container Arrival Quantity Based on KNN with Deep Learning in Container Terminals

Wuyin Wang⁺¹, Wei Qin^{#1}, Shitong Shen¹

¹Shanghai Jiao Tong University, China

IEEM22-F-0250/Research on Lean Logistics Performance Evaluation Index System of Tobacco Commercial Enterprises in the Context of National Unified Market

Yong Zhao¹, Jiangtao Xia^{#2}, Caihong Liu⁺²

¹Shaanxi Provincial Tobacco Company Xi'an Branch, China

²Northwestern Polytechnical University, China

IEEM22-F-0265/A Research Framework of the Influencing Factors of Overseas Patent Application

Xiaohan Zhang^{#+1}, Suli Zheng¹, Xiaoran Chang¹

¹China Jiliang University, China

IEEM22-F-0266/Prioritizing Customer Requirements for Science and Technology Service Platform Based on Improved TF-IDF and Sentiment Analysis

Yushan Xu⁺¹, Chu Zhang^{#1}, Wenyan Song¹

¹Beihang University, China



IEEM22-F-0276/Reinforcement Learning-based Job Shop Scheduling for Remanufacturing Production

Yue Bai⁺¹, Yaqiong Lv^{#1}

¹Wuhan University of Technology, China

IEEM22-F-0291/Supply Chain Quality Management and Industry 5.0 - A Literature Review and Analysis

Joana Lazzaris⁺¹, Andre M. Carvalho⁺², Maria do Sameiro Carvalho¹

¹University of Minho, Portugal

²Polytechnic Institute of Cávado and Ave, Portugal

IEEM22-F-0309/RF MEMS Resonance Sensor for Measuring Microplastics Concentration

JinHyoun Kim⁺¹, KwonHong Lee¹, Cheolung Cha¹, Yongtaek Hong²

¹Korea Electronics Technology Institute, Korea, South

²Seoul National University, Korea, South

IEEM22-F-0327/Sorting System for Ship Outfitting Pipes Based on Enhanced Object Detection

Kunbo Li⁺¹, Xu Yang¹, Xiumin Fan^{#1}

¹Shanghai Jiao Tong University, China

IEEM22-F-0333/Optimization of Fighter Head-up Display Layout Based on Fitness Function

Jiaxin He⁺¹, Yafeng Niu^{#1}, Xiaoyue Tian¹, Wenjun Yang²

¹Southeast University, China

²National Key Laboratory of Science and Technology on Aircraft Control, China

IEEM22-F-0335/A Multi-stage 6D Object Pose Estimation Method of Texture-less Objects Based on Sparse Line Features

Xu Yang⁺¹, Kunbo Li¹, Xiumin Fan^{#1}, Hongwei Zhang², Hengling Cao²

¹Shanghai Jiao Tong University, China

²Jiangnan Shipyard (Group) Co., Ltd., China

IEEM22-F-0348/Effective Analysis and Investigation in COVID-19 Prevention Policies Based on Population Dynamics Modeling and Simulation

Mulang Song⁺¹, Xuejian Gong¹, Yiyun (Cindy) Fei¹, Jianyuan Peng¹, Jianxin (Roger) Jiao^{#1}

¹Georgia Institute of Technology, United States

IEEM22-F-0366/Research on BOM Prediction for Cutterhead System of TBM based on Quality Function Deployment

Jian Shi⁺¹, Yongchao Zhu², Wuhong Wang¹, Yue Pan¹, Tao Zhou², Yaoguang Hu^{#1}

¹Beijing Institute of Technology, China

²China Railway Engineering Equipment Group Co., Ltd., China



IEEM22-F-0375/An Integrated Digital Twin Simulation and Scheduling System under Cyber-physical Digital Twin Environment

Weidong Lin^{#1}

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IEEM22-F-0404/Factors Affecting Perceived Decision Making Among Filipinos in National Elections: An Integration of Theory of Planned Behavior and Behavioral Decision Theory

Xiarlene Joyce Cañares¹, Lady Lalaine Estipular¹, Tisha May Protacio¹, Betsy Dhanna Ramos⁺¹, Yoshiki Kurata^{#1}, Joehanna Ngo¹

¹*University of Santo Tomas, Philippines*

IEEM22-F-0423/Energy-conscious Single-machine Scheduling Problem with Release Dates under Time-of-use Electricity Tariffs

Nan Li⁺¹, Peng Wu^{#1}, Yun Wang¹, Junheng Cheng²

¹*Fuzhou University, China*

²*Fujian Normal University, China*

IEEM22-F-0428/Political Connection, Technological Innovation Capability and Business Performance of Latecomer Firms in Emerging Economy

Tianwei Huang⁺¹, Xiaoya Yang¹, Yufei Liu^{#2}, Haibing Liu¹

¹*Wuhan University of Science and Technology, China*

²*Zhejiang University, China*

IEEM22-F-0430/The Impact of E-commerce Delivery Alternatives on Urban Freight Movements and Cost: A Carrier Perspective

Wilna Bean^{#1}, Elizna Cilliers¹

¹*University of Pretoria, South Africa*

IEEM22-F-0431/Text Mining for Exploring UX Issues of Qualitative Think Aloud Data on EV Sound

Cai Wang⁺¹, Soo Yeon Kim¹, Yein Song¹, Sungho Kim¹, Minsik Choi¹,

Donghoon Seu¹, Myung Hwan Yun^{#1}

¹*Seoul National University, Korea, South*

IEEM22-F-0478/Challenges of Digital Twin Application in Manufacturing

Christian Kober^{#1}, Marc Fette¹, Jens Peter Wulfsberg¹

¹*Helmut Schmidt University, Germany*

IEEM22-F-0037/User-based Battery Swapping Strategy in an Electric Bike-sharing System

Hang Yang⁺¹, Wei Qin¹, Yaoming Zhou^{#1}

¹*Shanghai Jiao Tong University, China*

IEEM22-F-0102/A Dynamic Maintenance Task Scheduling Method Considering Maintenance Mode

Danping Lin^{#1}, Shu Chu⁺¹, Leilei Wei¹

¹*Shanghai Maritime University, China*



Poster Set-Up

Friday 09 December 2022, 4pm to 5:30pm
Outside Meeting Rooms 401 to 404; 406 to 410

Row 1 Posters

IEEM22-A-0060	IEEM22-F-0327	IEEM22-F-0077	IEEM22-F-0428
IEEM22-F-0242	IEEM22-F-0335	IEEM22-F-0197	IEEM22-A-0049
IEEM22-F-0266		IEEM22-F-0265	IEEM22-F-0309

Row 2 Posters

IEEM22-A-0041	IEEM22-F-0375	IEEM22-F-0201	IEEM22-F-0404
IEEM22-A-0050	IEEM22-F-0037	IEEM22-F-0239	IEEM22-F-0431
IEEM22-F-0366	IEEM22-F-0102	IEEM22-F-0333	

Row 3 Posters

IEEM22-F-0083	IEEM22-F-0095	IEEM22-F-0103	IEEM22-F-0250
IEEM22-F-0430	IEEM22-F-0348	IEEM22-F-0109	IEEM22-F-0101
IEEM22-F-0478		IEEM22-F-0234	IEEM22-F-0175

Row 4 Posters

IEEM22-F-0085	IEEM22-F-0291	IEEM22-A-0074	IEEM22-F-0089
IEEM22-F-0092	IEEM22-A-0001	IEEM22-F-0276	IEEM22-F-0156
IEEM22-F-0188	IEEM22-F-0219	IEEM22-F-0423	

Schedule

POSTER SET-UP

1pm to 3pm
Information & Assistance – See Help Desk

POSTER SESSION

4pm to 5:30pm
Presenter Attendance Required

POSTER TEAR-DOWN

5:30pm to 6pm.
After this time, any posters left on the panels will be discarded



Guidelines for Presenters

1. Oral Presentations

Presenters need to use the computers provided in the meeting rooms to present their materials. Total presentation duration is 15 minutes including time for Q & A and speaker changeover.

a. Making the Presentation Onsite

i. Prepare Your Presentation

Length of presentation material should be in accordance with your time allotted. Total duration including Q&A and speaker changeover is 15 minutes for each talk. Please refer to the Final Schedule for actual presentation times. You are kindly requested to be at the presentation room at least 15 minutes before the session starts.

ii. Determine Your Audio-Visual Needs

Each meeting room comes equipped with a laser pointer and clicker, computer, LCD projector and screen. The computers in the meeting rooms are being provided to Windows-based PC users. The PC will be configured with Microsoft Windows operating system. Please bring your presentation files in Thumb drives only.

iii. Create a Backup Copy of Your Presentation

We recommend that you bring at least 2 copies of your presentation to the meeting for backup purposes. Only thumb drives are acceptable.

iv. Give Your Presentation

Be considerate to the other speakers and audience by staying within your allocated time. The allocated time for your presentation includes a discussion and a changeover to the next speaker. Session Chairs will hold you to the allotted time. This is essential to ensure adequate time for questions and discussion as well as adherence to the schedule. Please discuss the same material as reported in your abstract/paper submission. At the end of the meeting, all presentation files will be destroyed.



2. Poster Presentations

a. Poster Session - Friday, 9 December 2022 from 4pm to 5:30pm

Poster boards are pre-assigned and marked with your Paper ID. At least one author of your paper is expected to be present during the poster session.

Schedule

POSTER SET-UP	1pm to 3pm Information & Assistance – See Help Desk
POSTER SESSION	4pm to 5:30pm Presenter Attendance Required
POSTER TEAR-DOWN	5:30pm to 6pm. After this time, any posters left on the panels will be discarded

b. Each presenter is provided with a 1m x 2.5m high poster panel.

- i. Place your Paper ID, Paper Title and Authors' names prominently at the top of the poster to allow viewers to identify your presentation easily. Presenter's name must be underlined and in bold letterings.
- ii. Author's names, e-mails and address information must be provided in case the viewer is interested in contacting you for more information.
- iii. You have complete freedom in displaying your information in figures, tables, text, photographs, etc. in the poster.
- iv. A successful poster presentation depends on how well you convey information to an interested (but not expert) audience. You may wish to structure your poster by including the background of your research followed by results and conclusions.



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