



***2021 Asia Pacific Industrial Engineering & Management  
Systems 5th Webinar  
(2021 APIEMS Online Symposium)***

December 3rd - 4th, 2021

"Industrial Engineering in Practices"  
[www.apiems2021.org](http://www.apiems2021.org)

**Conference Chairs**

**Ming-Lang Tseng**, Asia University, Taiwan

**Anthony SF Chiu**, De La Salle University,  
Philippines

**Remen CW Lin**, Asia University, Taiwan

**Mohd Helmi Ali**, Universiti Kebangsaan Malaysia

## **Table of Contents**

<i>Organizers</i> .....	<i>ii</i>
<i>International Advisory Team</i> .....	<i>iv</i>
<i>The 2021 APIEMS 5th Webinar Schedule</i> .....	<i>v</i>
<b>SESSION PROGRAM</b> .....	<b>vi</b>
<i>Conference chair</i> .....	<i>viii</i>
<i>Opening Remarks</i> .....	<i>x</i>
<i>Conference Keynotes</i> .....	<i>xi</i>
<i>Plenary Speaker</i> .....	<i>xii</i>
<i>Abstracts</i> .....	<i>1</i>

## Organizers

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*Universiti Kebangsaan Malaysia*



*Rajamangala University of Technology, Thailand*



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***Conference Chairs***

***Prof. Dr. Ming-Lang Tseng***  
Asia University, Taiwan

***Prof. Dr. Anthony SF Chiu***  
De La Salle University, Philippines

***Prof. Dr. Remen CW Lin***  
Asia University, Taiwan

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## The 2021 APIEMS 5th Webinar Schedule

### Day 1: December 3rd, 2021

Time	
13:50-14:00	The online system will be open
14:00-14:10	Opening remarks: Prof. <b>Kono Hirokazu</b> President, APIEMS (2021 - 2022) Keio University, Japan
14:10-14:20	Opening remarks: Prof. <b>Chen Fu Chien</b> President, CIE Tsinghua University, Hsinchu, Taiwan
14:20-14:50	<b>Keynote Speaker:</b> Prof. Dr. <b>Kanchana Sethanan</b> Khon Kaen University, Thailand <i>Topic: IE at Work in Thailand</i>
14:50-15:20	<b>Keynote Speaker:</b> Prof Dr. <b>Charlle Sy</b> De La Salle University, Philippines <i>Topic: Integrating Uncertainty in Decision Planning Systems: A Target Oriented Robust Optimization Approach</i>
15:20-15:50	<b>Keynote Speaker: Assoc. Prof Dr. Yudi Fernando</b> Universiti Malaysia Pahang, Malaysia <i>Topic: The Implications of Industry 4.0 for Circular Economy-Based Reverse Logistics</i>

### Day 2: December 4th, 2021

Time	
08:20-08:30	The online system will be open
08:30-08:40	Welcome speech Yeneneh Tamirat Negash Department of Business Administration, Asia University, Taiwan Institute of Innovation and Circular Economy, Asia University, Taiwan
08:40-09:10	<b>Plenary Speech: Municipal solid waste management technological barriers under industry 4.0 practices</b> Dr. Tat-Dat Bui Institute of Innovation and Circular Economy, Asia University, Taiwan

**SESSION PROGRAM**  
**(Day 2: December 4th, 2021)**

*Parallel section I – Moderated by Raditia Yudistira Sujanto*

09:10-09:25	<b>APIEMS_2021_001:</b> Sustainable recycle packaging in Indonesian food and beverage industry: a consumption process integration
09:25-09:40	<b>APIEMS_2021_003:</b> A Spherical Fuzzy Subjective Weighting Method to Evaluate Critical Risks on Agribusiness Supply Chain Under COVID-19 Impacts
09:40-09:55	<b>APIEMS_2021_005:</b> Causality of circular business strategy under uncertainty in the seafood processing industry in Vietnam
09:55-10:10	<b>APIEMS_2021_007:</b> Nexus of Sustainable Social Supply Chain Practices, Local Supplier Development and Safety Performance
10:10-10:25	<b>APIEMS_2021_009:</b> Sentiment Analysis of 5G Implementation and Its Impact on Technological Developments in Jakarta using the Latent Dirichlet Allocation Model
10:25-10:40	<b>APIEMS_2021_0011:</b> Developing food and beverage corporate sustainability performance structure in Indonesia: enhancing leadership role and tenet value in ethical perspective
10:40-10:55	<b>APIEMS_2021_0013:</b> Hybrid approach to corporate sustainability performance in Indonesia's cement industry
10:55-11:05	<b>APIEMS_2021_0015:</b> internet of things technology for operational efficiency strategies in freshwater fish cultivation business in Indonesia
11:05-11:20	<b>APIEMS_2021_0017:</b> 3 dimensional object marketplace application design for building information modeling
11:20-11:35	<b>APIEMS_2021_0019:</b> Interplay between Supply Chain Visibility and Cyber Security Performance
11:35-11:50	<b>APIEMS_2021_0021:</b> AI-Improved in Identifying Chained Virus Transmissions for COVID-19
11:50-12:05	<b>APIEMS_2021_0023:</b> The Business Process of Domain Architecture Design on Electronic-Based Governance System in Bogor City
12:05-12:20	<b>APIEMS_2021_0025:</b> Augmented Reality Technology Development in Indonesia
12:31-12:45	<b>APIEMS_2021_0027:</b> Economic status grouping system using naive bayes algorithm in citizens of rt. 002 rw.04 kampung kekupu pancoran mas depok west java indonesia

*Parallel section II– Moderated by Viqi Ardaniah*

09:10-09:25	<b>APIEMS_2021_002:</b> Constructing the corporate sustainability transition practices within port and shipping industry: a hierarchical structure approach
09:25-09:40	<b>APIEMS_2021_004:</b> A Data-driven Analysis on a Hierarchical Circular Supply Chain Structure
09:40-09:55	<b>APIEMS_2021_006:</b> Exploration of Fishing Ground Model Combination of Backpropagation Neural Network and Generalized Additive - Genetic Algorithm
09:55-10:10	<b>APIEMS_2021_008:</b> LOW COST 2G TECHNOLOGY BASE ON GSM FOR INTERNET OF THINGS (IOT) APPLICATION
10:10-10:25	<b>APIEMS_2021_0010:</b> TIKTOK, A New Business Model That So Adorable
10:25-10:40	<b>APIEMS_2021_0012:</b> MULTIPLE CRITERIA TRANSPORTATION APPLICATION WITH FUZZY COST PARAMETERS USING GENETIC ALGORITHM
10:40-10:55	<b>APIEMS_2021_0014:</b> Analysis of Sharia Banking Management Strategies In The Digital Era
10:55-11:05	<b>APIEMS_2021_0016:</b> Trend Issue Artificial Intelligence for Industrial Engineering in Post Pandemic Covid-19 Era
11:05-11:20	<b>APIEMS_2021_0018:</b> Low Carbon Warehousing Practices and Its Challenges: Insights from Emerging Country
11:20-11:35	<b>APIEMS_2021_0020:</b> Green Technopreneurship: A Content analysis review using social network analysis
11:35-11:50	<b>APIEMS_2021_0022:</b> Scared of the Coronavirus Disease Covid-19 Risk? Avoid By Using an Online Fiqh Learning Management System
11:50-12:05	<b>APIEMS_2021_0024:</b> Evaluation And Monitoring Of Electronic-Based Government System Using Maturity Model E-Government (Case In Banten Regional Government)
12:05-12:20	<b>APIEMS_2021_0026:</b> Corporate Sustainability Transition in Indonesia Banking Industry: economic-environmental transition drives the socio-economy and socio-environment transition
12:20-12:25	<b>APIEMS_2021_0028:</b> Classification system of palawija plant potential using K-means method



## Conference chair



### ***Prof. Dr. Ming-Lang TSENG***

*Chair Professor, Department of Business Administration,  
Director, Institute of Innovation and Circular Economy (Ext. 1770), Asia University, Taiwan*



### ***Prof. Dr. Anthony Shun Fung Chiu***

*BSME MEng IE&M DBA PIE ASEAN ENG FAPIEMS  
University Fellow, Professor and Research Fellow, JM Reyes Professorial Chair, De La Salle  
University, Manila, Philippines*



***Prof. Chun-Wei Remen Lin***

*Distinguished Professor, Department of Business Administration, Asia University, Taiwan  
Director, Center for Creative Innovation and Leadership, Asia University, Taiwan,  
Vice-Director, Institute of Innovation and Circular Economy, Asia University, Taiwan*



***Assoc. Prof. Dr. Mohd Helmi Ali***

*Faculty of Economics and Management, Universiti Kebangsaan Malaysia.*

## **Opening Remarks**



***Prof. Dr. Kono Hirokazu***  
*President, APIEMS (2021 - 2022)*  
*Keio University, Japan*



***Prof. Chen Fu Chien***  
*President, CIIE*  
*Tsinghua University, Hsinchu, Taiwan*

## **Conference Keynotes**



***Assoc. Prof. Dr. Yudi Fernando***  
*Universiti Malaysia Pahang, Malaysia*



***Prof. Dr. Charlle Sy***  
*De La Salle University, Philippines*



***Prof Dr. Kanchana Sethanan***  
*Khon Kaen University, Thailand*

**Plenary Speaker**



***Dr. Tat-Dat Bui***  
*Associate researcher, Institute of Innovation and Circular Economy, Asia University, Taichung, Taiwan*  
*Assistant professor, Department of Business Management, Asia University, Taichung, Taiwan*

ID no. 007

## Nexus of Sustainable Social Supply Chain Practices, Local Supplier Development and Safety Performance

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### Abstract

The purpose of this study is to develop a theoretical model that examines the effect of sustainable social supply chain practices on safety. The development of local suppliers has been identified as a mediating variable as a way to improve company's social performance. This study focused on manufacturing companies registered with the Malaysian Federation of Manufacturers. The 144 questionnaires data were analyzed using structural equation modelling. The findings show that sustainable practices have a significant impact on local supplier development. Furthermore, local supplier development mediated the relationship between sustainable social supply chain practices and safety. It also increases awareness of sustainable practices that can have a substantial impact on firms' attempts to implement safety measure, allowing decision-makers and industrial managers to examine the extent of positive influences on increasing companies' safety measure.

**Keywords:** *Supplier development, sustainable, social supply chain, manufacturing, supplier*

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