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11<sup>TH</sup> INTERNATIONAL SEMINAR ON INDUSTRIAL ENGINEERING & MANAGEMENT

# PROCEEDING 11<sup>th</sup> ISIEM 2018



*"Technology & Innovation Challenges  
Towards Industry 4.0 Era"*

NOV  
27-29

**MAKASSAR**

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# PANTAI LOSARI

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# PROCEEDING

11<sup>th</sup> ISIEM

The 11<sup>th</sup> International Seminar on  
Industrial Engineering and Management

Swiss-Belhotel Makassar, Sulawesi Selatan-Indonesia  
November 27 – 29, 2018

Organized by :

**Industrial Engineering Department of**

- Universitas Pasundan • Universitas Tarumanagara •
- Universitas Trisakti • Al Azhar Indonesia University •
- Universitas Esa Unggul • University of Pancasila •
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# PREFACE

*Bismillahirrahmanirrahim,  
Assalamu'alaikum Warrahmatullah Wabarrakatuh,*

This issue is published in line with the Eleventh International Seminar on Industrial Engineering and Management (11<sup>th</sup> ISIEM). The articles cover a broad spectrum of topics in Industrial Engineering and Management, which are Quality Engineering Management, Decision Support System and Artificial Intelligent, Ergonomics, Supply Chain Management, Production System, Operation Research, and Industrial Management. These articles provide an overview of critical research issues reflecting on past achievements and future challenges. Those papers were selected from 120 abstracts, and we send these papers to IOP to be published there as an Open Access Proceeding. This statistic shows the high competition to get published on this proceeding. This issue and seminar become special as more delegates come and join from various country as well as universities. We host 90 delegates both from abroad and local.

The 11<sup>th</sup> ISIEM is hosted by seven universities, which are Universitas Pasundan, Universitas Esa Unggul, Universitas Trisakti, Universitas Tarumanagara, Universitas Al-Azhar Indonesia, Atma Jaya Catholic University of Indonesia, and Universitas Pancasila.

This is the thirteenth years of the collaboration of those universities, and the second time we had MOU with IOP in United Kingdom to publishing the papers that is indexed by Scopus.

In this occasion, let us give special thanks to Prof. Dr. Md. Mamun Habib, from BRAC Business School (BBS), BRAC University, Bangladesh, Editor-in-Chief, International Journal of Supply Chain Management (IJSCM) UK, Prof. Dr. Dzuraidah Abd. Wahab from Center for Integrated Design of Advanced Mechanical Systems Faculty of Engineering and Built Environment, University Kebangsaan Malaysia, for their contribution as keynote speakers. We are also grateful to all reviewers, for their commitment, effort and dedication in undertaking the task of reviewing all of the abstracts and full papers. Reviewing a large number of submissions in a relatively short time frame is always challenging. Without their help and dedication, it would not be possible to produce this proceeding in such a short time frame. I highly appreciate all members of committees (advisory, steering, and organizing committees) for mutual efforts and invaluable contribution for the success of seminar.

*Wassalamu'alaikum Warrahmatullah Wabarrakatuh.*

Ir. Wahyukaton, MT.  
Chairman

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# AGENDA

## November 27, 2018

- 18:00 - 18:30 Registration  
18:30 - 19:30 Dinner  
19:30 - 20:00 Opening Ceremony: Representation of Universitas Pasundan, Al Azhar Indonesia University, Universitas Trisakti, Atma Jaya Catholic University of Indonesia, Universitas Tarumanagara, Universitas Esa Unggul, and University of Pancasila's greeting  
20:00 - 21:15 Keynote Speech # 1  
**Prof. Dr. Md. Mamun Habib**  
**BRAC Business School, BRAC University, Bangladesh**  
Moderator: Dr. Ir. Syarif Hidayat, M.Eng.Sc, M.M.  
21:15 - 21:30 Photo Session

## November 28, 2018

- 06:30 - 08:00 Breakfast and Registration  
08:00 - 09:15 Keynote Speech # 2  
**Prof. Dr. Dzuraidah Abd. Wahab**  
**Center for Integrated Design of Advanced Mechanical System -  
Faculty of Engineering and Built Environment, University  
Kebangsaan Malaysia**  
Moderator: Dr. Iphov Kumala Sriwana, S.T., M.Si., IPM  
09:15 - 09:30 Coffee and Tea Break  
09:30 - 12:10 Parallel session #1  
12:10 - 13:00 Lunch break  
13:00 - 15:40 Parallel session #2  
15:40 - 16:00 Coffee and Tea Break  
16:00 - 18:40 Parallel session #3  
18:40 - 21:00 Dinner

## November 29, 2018

- 06:00 - 08:00 Breakfast  
08:00 - 21:00 City Tour

## November 30, 2018

- 06:30 - 10:00 Breakfast  
- 12:00 Check Out



# KEYNOTE SPEECH

#1

**Prof. Dr. Md. Mamun Habib**

BRAC Business School, BRAC University, Bangladesh

Visiting Scientist, University of Texas - Arlington (UTA), USA

Editor-in-Chief, International Journal of Supply Chain Management (IJSCM), UK



#2

**Prof. Dr. Dzuraidah Abd. Wahab**

Center for Integrated Design of Advanced Mechanical System

Faculty of Engineering and Built Environment

University Kebangsaan Malaysia



# PARALLEL SESSION

## SESSION 1 ROOM 1

Moderator: Rina Fitriana, S.T., M.M., IPM

TIME	PAPER	PAPER NO	FIELD
9:30 - 9:40	<b>Schedule risk analysis by different phases of construction project using CPM-PERT and Monte-Carlo simulation</b> <i>Andrie Pasca Hendradewa.</i> Universitas Islam Indonesia	38	OR
9:40 - 9:50	<b>Planting system modeling of chrysanthemum seedling plants stock for profit optimization</b> <i>Anita Ilmaniati and Dani Hamdan Taufik.</i> Suryakencana University	50	OR
9:50 - 10:00	<b>Analysis daily newspaper distribution in Solo by agent-based simulation</b> <i>Izatul Fitria Febriandini, Yuniaristanto, Wahyudi Sutopo and Muhammad Hisjam.</i> Sebelas Maret University	7	OR
10:00 - 10:10	<b>Improvement route for distribution solutions MDVRP (Multi Depot Vehicle Routing Problem) using Genetic algorithm (case study: PT. KM)</b> <i>Rina Fitriana, Parwadi Moengin and Utami Kusumaningrum.</i> Universitas Trisakti	116	OR
10:10 - 10:20	<b>Multi responses optimization for the sugar content and microbial impurities of carrot syrup</b> <i>O Isabella and Yurida Ekawati.</i> Universitas Ma Chung	14	OR
10:20 - 10:30	<b>Domino algorithm: a novel constructive heuristics for travelling salesman problem</b> <i>Asrul Harun Ismail</i> University of Birmingham	119	OR
10:30 - 10:40	<b>Integer Linear Programming Model and Algorithm to Integrate Heuristics Scheduling EDD, Inventory Control and Distribution Problems in a Modular Production System</b> <i>Parwadi Moengin, Elfira Febriani Harahap, Sucipto Adisuwiryo, and Weny Ango Fransiska</i> Universitas Trisakti	79	OR
10:40 - 10:50	<b>Waste assessment using lean manufacturing in rubber production</b> <i>Elita Amrina, Nilda Tri Putri and Dwara Mitha Anjani.</i> Universitas Andalas	56	PS
10:50 - 11:00	<b>Integration of lean manufacturing and group technology layout to increase production speed in the manufacture of furniture</b> <i>Ukurta Tarigan, Uni Pratama P. Tarigan and Vincent Sukirman.</i> Univeristas Sumatera Utara	84	PS
11:00 - 11:10	<b>Flow shop scheduling with drum-buffer-rope and CDS algorithm to minimize lateness and work in process at PT. AKS</b> <i>Akma Septia Viady, Praty Poeri Suryadhini and Meldi Rendra.</i> Telkom University	92	PS

**SESSION 1 ROOM 1**

Moderator: Rina Fitriana, S.T., M.M., IPM

TIME	PAPER	PAPER NO	FIELD
11:10 - 11:20	<b>A comparison of forecasting building material inventory with Back propagation Neural Network and Arima</b> <i>Iwan Aang Soenandi and Cynthia Hayat.</i> Krida Wacana Christian University	16	PS
11:20 - 11:30	<b>The applications of Cobb-Douglas Production Function in remanufacturing industry</b> <i>Docki Saraswati, Debbie Kemala Sari and Dina Hapsari.</i> Universitas Trisakti	77	PS
11:30 - 11:40	<b>The Relation of Indonesia's strategic industry principles and supply chain operations reference (SCOR)</b> <i>Joko Sulistio and Rizal Bayu Al Fatih.</i> Universitas Islam Indonesia	91	SCM
11:40 - 11:50	<b>A framework for the impact of lean six sigma on supply chain performance in manufacturing companies</b> <i>Gihon Davilia Pardamean Gultom and Eric Wibisono.</i> University of Surabaya	106	SCM
11:50 - 12:00	<b>Development of vendor management and e-procurement system using android platform</b> <i>Bendy Angrian and Taufik Roni Sahroni.</i> Bina Nusantara University	28	SCM
12:00 - 12:10	<b>Measurement of human resource performance and making proposed improvement with human resources scorecard approach and OMAX (objective matrix) tools in production division in PT. OCM</b> <i>Lilyana Jap, Ahmad, Lamto Widodo, Lina Gozali dan Jesen Hardi</i> Universitas Tarumanagara	22	IM

**SESSION 1 ROOM 2**

Moderator: Nunung Nurhasanah, S.T., M.Si

TIME	PAPER	PAPER NO	FIELD
9:30 - 9:40	<b>A Fuzzy Analytic Hierarchy Process approach for determining the criteria success factors of MRT parts' e-procurement: the case of Jakarta MRT project</b> <i>Tony Hartanto, Meriastuti Ginting and Oki Sunardi.</i> Krida Wacana Christian University	15	DA&IS
9:40 - 9:50	<b>Information system design using labor productivity measurement for construction</b> <i>Abdullah 'Azzam, Suci Miranda and Sri Indrawati.</i> Universitas Islam Indonesia	90	DA&IS
9:50 - 10:00	<b>Risk management analysis using FMECA and ANP methods in the supply chain of wooden toy industry</b> <i>Widya Nurcahayanty Tanjung, Saaras Ayu Atikah, Syarif Hidayat, Endang Ripmiatin, Selvy Sekar Asti and Ratu Siti Khodijah.</i> University of Al Azhar Indonesia	80	DA&IS
10:00 - 10:10	<b>Supply chain risk management analysis using the development of fuzzy reasoning methods and analytical network process (ANP) at wooden toy industries</b> <i>Widya Nurcahayanty Tanjung, Selvy Sekar Asti, Syarif Hidayat, Endang Ripmiatin, Saaras Ayu Atikah and Ratu Siti Khodijah.</i>	81	DA&IS

**SESSION 1 ROOM 2**

**Moderator: Nunung Nurhasanah, S.T., M.Si**

TIME	PAPER	PAPER NO	FIELD
	University of Al Azhar Indonesia		
10:10 - 10:20	<b>Best concept selection for dry-soybean cracking machine process optimization by TOPSIS method</b> <i>Rino Andias Anugraha, Nadiah Mumtaz Darmawan and Muhamad Iqbal.</i> Telkom University	12	DA&IS
10:20 - 10:30	<b>Development of Information Systems as a Means to Improve Sharia Cooperative Services</b> <i>Riri Safitri, Dody Haryadi, Endah Sulisthyani and Vareza Noorliko.</i> University of Al Azhar Indonesia	114	DA&IS
10:30 - 10:40	<b>Decision Making Strategy for Decreasing The Potential Hazards of Work Accidents at Division R&amp;D Using SWOT and AHP Methods</b> <i>Dino Rimantho, Annisa Elistiani, Sambas Sundana and Anggina Sandy Sundari.</i> Pancasila University	48	DA&IS
10:40 - 10:50	<b>Taguchi experimental design to optimize the sugar content of candied carrot</b> <i>Maria Notowidjaja, Yurida Ekawati and Sunday Noya.</i> Ma Chung University	13	QM
10:50 - 11:00	<b>Mapping of noise levels made by drilling machines on projects Y using contour zone method</b> <i>Bambang Cahyadi and Gita Timang.</i> Pancasila University	107	QM
11:00 - 11:10	<b>Concept Selection of Dry-Soybean Cracking Machine for Process Optimization using TOPSIS (Technique for order of preference by similarity to ideal solution)</b> <i>Rino Andias, Muhamad Yogaswara Wiraditya, Muhammad Iqbal, and Nadiah Mumtaz Darmawan</i> Telkom University	19	QM
11:10 - 11:20	<b>Integrated logistics and transportation routing in rural logistics system</b> <i>Tuti Sarma Sinaga and Senator Nur Bahagia.</i> USU	23	SCM
11:20 - 11:30	<b>Cooperation between power plant in East Kalimantan by integrating renewable energy power plant</b> <i>Muslimin, Willy Tambunan and Wahyuda.</i> Universitas Mulawarman	11	SCM
11:30 - 11:40	<b>Supply chain risk management on wooden toys industries by using House of Risk (HOR) and Analytical Network Process (ANP) method</b> <i>Widya Nurcahayanty Tanjung, Ratu Siti Khodijah, Syarif Hidayat, Endang Ripmiatin, Saaras Ayu Atikah and Selvy Sekar Asti.</i> University of Al Azhar Indonesia	85	SCM
11:40 - 11:50	<b>Risk mitigation for agricultural products distribution in agro-business Terminal Mantung, Kabupaten Malang</b> <i>Teguh Oktiarto and Andi Haifa Kania Nadira.</i> Universitas Ma Chung Malang	87	SCM
11:50 -	<b>Multi echelon distribution model for electric market deregulation collaboration strategy in East Kalimantan</b>	46	SCM

**SESSION 1 ROOM 2****Moderator: Nunung Nurhasanah, S.T., M.Si**

TIME	PAPER	PAPER NO	FIELD
12:00	<i>Irwan Gani, Wahyuda, Budi Santosa and Muliati.</i> Universitas Mulawarman		
12:00 - 12:10	<b>Analysis of supply chain network of FBS production in small and medium textile and textile product (TTP) industry</b> <i>Nunung Nurhasanah, Marcia Devana, B Aribowo, R Safitri, B Samiono, CF Luthfia, P Kalifa, S W Fauzia and A Supriyanto.</i> University of Al Azhar Indonesia	58	SCM

**SESSION 1 ROOM 3****Moderator: Dr. Ir. Syarif Hidayat, M.Eng.Sc, M.M.**

TIME	PAPER	PAPER NO	FIELD
9:30 - 9:40	<b>The effect of country of origin and need for uniqueness on female customers purchase intention</b> <i>Luthfia Puspitasari and Gunawan Alif</i> University of Indonesia	127	IM
9:40 - 9:50	<b>Utilizing project management software in project scheduling: a case study</b> <i>Suci Miranda and Muchamad Sugarindra.</i> Universitas Islam Indonesia	43	OR
9:50 - 10:00	<b>Measuring acceptance level of online service for business permit in Surabaya using Technology Acceptance Model</b> <i>I Made Ronyastra, Gunawan and Erlangga Kharisma Muhammad.</i> Universitas Surabaya	83	QM
10:00 - 10:10	<b>Recommendation for marketing communication program of X Natural Skin Care Clinic, Cikupa–Tangerang.</b> <i>Sesilia Michelle and Marsellinus Bachtiar.</i> Atma Jaya Catholic University of Indonesia	112	IM
10:10 - 10:20	<b>Analyze of mitigation waste in Reconditioning Process of Iron Drum with Lean Six Sigma (Case Study at PT Mulya Adhi Paramita)</b> <i>Ahmad, Lilyana Jap, Lamto Widodo, Lina Gozali and Aldian Maryadi</i> Tarumanagara University	21	IM
10:20 - 10:30	<b>Competency measurement instrument design for maintenance staff of electronical expertise with SECI method</b> <i>Agisni, Rayinda Pramuditya Soesanto, Amelia Kurniawati, Nia Ambarsari and Luciana Andrawina.</i> Telkom University	10	QM
10:30 - 10:40	<b>The new management system ISO 21001:2018: what and why educational organizations should adopt it</b> <i>Eric Wibisono</i> University of Surabaya	96	IM
10:40 - 10:50	<b>Designing self-assessment tool for library performance measurement adopting Malcolm Baldrige framework (case study: central library of Andalas University)</b> <i>Nilda Tri Putri, Desto Jumeno, Henmaidi Alfian, Eri Wirdianto, Prima Fithri and Fitryani Zulkhaira.</i> Andalas University	18	IM
10:50 -	<b>Competitiveness model for ecotourism: a case study in Bogor Botanical Garden</b>	111	IM

**SESSION 1 ROOM 3**

Moderator: Dr. Ir. Syarif Hidayat, M.Eng.Sc, M.M.

TIME	PAPER	PAPER NO	FIELD
11:00	<i>Gadiah Ranti, Linda Theresia, Silvia Mahardika and Ramon Bangun.</i> Institut Teknologi Indonesia		
11:00 - 11:10	<b>Factors driving teacher's innovation: a case study at public high schools in Tangerang Selatan, Indonesia</b> <i>Linda Theresia, Abdul Haris Lahuddin and Ramon Bangun.</i> Institut Teknologi Indonesia	34	IM
11:10 - 11:20	<b>Strategy for developing micro small medium enterprise clusters using business model canvas and manufacturing system design</b> <i>Yudha Prasetyawan, Imam Baihaqi, Bustanul Arifin Noer, Harimuti Adly Nindyanto and Fitriana Kartikasari.</i> Institut Teknologi Sepuluh Nopember	71	IM
11:20 - 11:30	<b>Design of job scheduling system and software for packaging process with SPT, EDD, LPT, CDS and NEH algorithm at PT. ACP</b> <i>Lina Gozali, Vincentius Kurniawan and Siti Rohana Nasution.</i> Tarumanagara University	24	PS
11:30 - 11:40	<b>Implementation of Material Requirement Planning (MRP) on raw material order planning system for garment industry</b> <i>Nidaul Hasanati, Efrizka Permatasari, Nunung Nurhasanah and Syarif Hidayat.</i> UIN Syarif Hidayatullah	115	PS
11:40 - 11:50	<b>Advanced ERP Application for Marine Transportation Industry in the South Asia Pacific Country: A Case Study</b> <i>Lalu Tri Wijaya Nata Kusuma, Jun-Der Leu, and Fu-Shiang Tseng</i> University of Brawijaya	49	PS
11:50 - 12:00	<b>Design and improvement layout of a production floor using Automated Layout Design Program (ALDEP) and Craft algorithm at CV. Aji Jaya Mandiri</b> <i>Didien Suhardini and Sarah Dian Rahmawati.</i> Universitas Trisakti	102	PS
12:00 - 12:10	<b>Applying value stream mapping tools and kanban system for waste identification and reduction (case study: a basic chemical company)</b> <i>Wilson Kosasih, Iphov Kumala Sriwana, Evlina C. Sari and Carla Olyvia Doaly.</i> Universitas Tarumanagara	55	PS

**SESSION 2 ROOM 1**

Moderator: Kirana Rukmayuninda Ririh, S.T., M.T.

TIME	PAPER	PAPER NO	FIELD
13:00 - 13:10	<b>Situation awareness analysis on motorcycle riders using quantitative analysis of Situational Awareness</b> <i>Hartomo Soewardi and Amalia Diah Ayu Kiranti.</i> Islamic University of Indonesia	61	ER&PD
13:10 - 13:20	<b>Measuring influence from safety climate to safety behavior in bus rapid transit drivers</b> <i>Dian Mardi Safitri, Winnie Septiani and Anisa Mediana.</i> Universitas Trisakti	2	ER&PD

**SESSION 2 ROOM 1****Moderator: Kirana Rukmayuninda Ririh, S.T., M.T.**

<b>TIME</b>	<b>PAPER</b>	<b>PAPER NO</b>	<b>FIELD</b>
13:20 - 13:30	<b>Design of wood pellet trolley using Finite Element Method (FEM) and Design for Assembly (DFA) approach at PT. Perkebunan Nusantara VIII Ciater</b> <i>Riko Risqullah Putra, Mira Rahayu, Sri Martini, and M Ihsan Kurniawan</i> Telkom University	4	ER&PD
13:30 - 13:40	<b>Development of laboratory website with usability design and testing participatory</b> <i>Salaman Firdaus, Amarria Dila Sari and Muhammad Ragil Suryoputro.</i> Islamic University of Indonesia	86	ER&PD
13:40 - 13:50	<b>Design of wood pellets carrier using Ergonomic Function Deployment (EFD) approach to increase productivity of work: a research at PTPN VIII Ciater</b> <i>Windi Robbania Pradani, Mira Rahayu, Sri Martini, and M Ihsan Kurniawan</i> Universitas Telkom	5	ER&PD
13:50 - 14:00	<b>Failure Mode and Effect Analysis (Fuzzy FMEA) implementation for forklift risk management in manufacturing company PT. XYZ</b> <i>Muhammad Ragil Suryoputro, Khairizzahra, Amarria Dila Sari and Nawang Wahyu Widiatmaka.</i> Universitas Islam Indonesia	95	ER&PD
14:00 - 14:10	<b>Workplace ergonomic risk assessment toward small-scale household business</b> <i>Dessi Mufti, Aidil Ikhsan and Tri Marta Putri.</i> Universitas Bung Hatta	20	ER&PD
14:10 - 14:20	<b>Analysis of double Indian ballbreaker net sorter machine based on overall equipment effectiveness method cases in tea plantation plants</b> <i>Judi Alhilman, Aji Pamoso and Ahmad F. Abdillah.</i> Telkom University	27	PS
14:20 - 14:30	<b>Lean Project Management Using Fabrication Manufacturing StorageTank Cap</b> <i>Tiena Gustina Amran, Devi Saraswati, and Elfira Febriani Harahap</i> Universita Trisakti	57	PS
14:30 - 14:40	<b>Line balancing application analysis of generator production process in DPG Inc.</b> <i>Salsabila Alif and Budi Aribowo.</i> Universitas Al Azhar Indonesia	82	PS
14:40 - 14:50	<b>Design of computer aided process planning system for holster mold at PT. Carnegie Universal Industries</b> <i>Amal Witonohadi, Nanang Ali Sutisna, and Martulan Suryanto Naibaho.</i> Universitas Trisakti	100	PS
14:50 - 15:00	<b>Line balancing with reduced number of operator: a productivity improvement</b> <i>Achad Hasta Muhammad and Harwati Soetanto</i> Universitas Islam Indonesia	94	PS

**SESSION 2 ROOM 1**

Moderator: Kirana Rukmayuninda Ririh, S.T., M.T.

TIME	PAPER	PAPER NO	FIELD
15:00 - 15:10	<b>Maintenance management improvement based on reliability centered maintenance II in energy generating industries</b> <i>Moses Laksono Singgih, Yudha Prasetyawan, Sutikno, Dody Hartanto, Felicius Rindy Kurniawan and Winahyu Tyas Wicaksana.</i> Institut Teknologi Sepuluh Nopember	73	PS
15:10 - 15:20	<b>Inventory level optimization of raw materials for ready-made garment industry X PTY LTD using Mamdani method of Fuzzy Interference System</b> <i>Nunung Nurhasanah, Syita Wida Fauzia, B Aribowo, R Safitri, B Samiono, CF Luthfia, M Devana, P Kalifa, A Supriyanto</i> University of Al Azhar Indonesia	47	PS
15:20 - 15:30	<b>Simulation model development for determination of components production quantity and lead time reduction in mass customization of single production stage</b> <i>Muhammad Ridwan Andi Purnomo and Riadho Clara Shinta.</i> Universitas Islam Indonesia	120	PS
15:30 - 15:40	<b>Workload analysis of chemical analyst at analytical research laboratory PT. UPA-Orang Tua Group</b> <i>Nur Yulianti Hidayah, Irowati Purwaningsih, and Kirana R Ririh</i> Pancasila University	51	ER&PD

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Moderator: Dr. Lamto Widodo, S.T., M.T., IPM

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13:10 - 13:20	<b>Non-technical enablers to digital manufacturing implementation and industrial IOT implementation readiness: a literature review</b> <i>Oki Sunardi, Meriastuti Ginting and Cynthia Hayat.</i> Krida Wacana Christian University	32	IM
13:20 - 13:30	<b>Determining production cost of goyor woven fabric using full costing method to set the selling price: a case study</b> <i>Pungki Mita, Eko Liquiddanu, Wayan Suletra, Muhammad Hisjam and Nanang Rizali.</i> Sebelas Maret University	67	IM
13:30 - 13:40	<b>Analysis of influence of the PPK programs on tenants' business success</b> <i>Niken Parwati and Astri Wibowo.</i> Universitas Al Azhar Indonesia	72	IM
13:40 - 13:50	<b>Understanding mental model of Islamic banking system using System Dynamics</b> <i>Nur Atikah, Akhmad Hidayatno and Komarudin.</i> University of Indonesia	89	IM



**SESSION 2 ROOM 2****Moderator: Dr. Lamto Widodo, S.T., M.T., IPM**

<b>TIME</b>	<b>PAPER</b>	<b>PAPER NO</b>	<b>FIELD</b>
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14:00 - 14:10	<b>Improving the quality of MSMEs cluster products with Quality Function Deployment</b> <i>Bustanul Arifin Noer, Imam Baihaqi, Yudha Prasetyawan, Harimuti 'Adly Nindyanto and Fitriana Kartikasari.</i> Institut Teknologi Sepuluh Nopember	70	QM
14:10 - 14:20	<b>Design of flat shoes quality control system using PDCA (case study at PT DAT)</b> <i>Debbie Kemala Sari, Dorina Hetharia, Docki Saraswati and Rania Marizka.</i> Universitas Trisakti	59	QM
14:20 - 14:30	<b>Effects of cocoa clones and fermentation times on physical and chemical characteristics of cocoa beans (Theobroma cacao L.)</b> <i>Asma Assa, Rosniati and Muh. Ruslan Yunus.</i> Ministry of Industry	104	QM
14:30 - 14:40	<b>Quality and reliability engineering in service industry: a proposed alternative improvement framework</b> <i>Mochammad Arbi Hadiyah, Rahman Dwi Wahyudi, Yenny Sari and Evy Herowati.</i> Universitas Surabaya	76	QM
14:40 - 14:50	<b>Assistance program for the implementation of ISO 9001: 2015 case study of Telkom junior high school</b> <i>Yati Rohayati and Kartika Sari</i> Telkom University	64	QM
14:50 - 15:00	<b>Value Engineering towards the design of bread production process tools</b> <i>Ayu Bidiawati, Inna Kholidasari and Bintang Manggala Elani</i> Universitas Bung Hatta Padang	97	QM
15:00 - 15:10	<b>Measurement and proposal of improving marketing process to improve the quality of aftersales services with Fuzzy Quality Function Deployment and data mining methods in OV Agency</b> <i>Rina Fitriana, Wawan Kurniawan and Muhammad Rizqi Anwar.</i> Universitas Trisakti	53	QM
15:10 - 15:20	<b>Analyze of mitigation waste in reconditioning process of iron drum with lean six sigma (Case study at PT. Mulya Adhi Paramita)</b> <i>Ahmad M, Lilyana Jap, Lamto Widodo, Lina Gozali and A Maryadi</i> Tarumanagara University	21	QM
15:20 - 15:30	<b>Analysis of Increasing Quality of Surfactant Powder at Oversize Parameter Using PDCA and FMEA in PT BCCI</b> <i>Rini Prasetyani, Ahmad Taufiqul Huda and Desinta Rahayu Ningtyas.</i> Pancasila University	65	QM

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Moderator: Dino Rimantho, S.T., M.T.

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13:10 - 13:20	<b>An initial study into Indonesian consumer awareness of the ergonomic product</b> <i>Gradiyan Budi Pratama, Nadira Nurfitriari and Ari Widyanti.</i> Institut Teknologi Bandung	37	ER&PD
13:20 - 13:30	<b>Selection process of sustainable production indicators using Eco-quality Function Deployment</b> <i>Pregiwati Pusporini and Iwan Vanany.</i> University of Muhammadiyah Gresik	42	ER&PD
13:30 - 13:40	<b>The survey on the perception of safety and security culture for nuclear workers</b> <i>Atyanti Prabaswari and Rini Dharmastiti.</i> Universitas Islam Indonesia	39	ER&PD
13:40 - 13:50	<b>The mental workload analysis of staff in study program of private educational organization</b> <i>Atyanti Prabaswari, Chancard Basumerda and Bagus Wahyu Utomo.</i> Universitas Islam Indonesia	40	ER&PD
13:50 - 14:00	<b>Internet addiction among Indonesia university students: musculoskeletal symptoms, physical and psychosocial behavior problems</b> <i>Gradiyan Budi Pratama and Ari Widyanti.</i> Institut Teknologi Bandung	35	ER&PD
14:00 - 14:10	<b>Design of the Kansei board game to motivate the elementary school student in learning English</b> <i>Hartomo Soewardi and Selna Shalawati.</i> Islamic University of Indonesia	30	ER&PD
14:10 - 14:20	<b>Analysis of machine maintenance processes by using FMEA method in the sugar industry</b> <i>Hartomo Soewardi and Siska Ari Wulandari.</i> Islamic University of Indonesia	62	ER&PD
14:20 - 14:30	<b>Empowering product development through creative culinary house design</b> <i>Yudha Prasetyawan, Mokhammad Suef, Hari Supriyanto and Intan Oktasari Kusuma Wardani.</i> Institut Teknologi Sepuluh Nopember	69	ER&PD
14:30 - 14:40	<b>Design of tofu cutting tools to improve repetitive tasks using OCRA</b> <i>Benedikta Anna Haulian Siboro, Vera Methalina Afma, Annisa Purbasari and M Qodri Kasim.</i> Universitas Riau Kepulauan	101	ER&PD
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Moderator: Dino Rimantho, S.T., M.T.

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15:00 - 15:10	<b>Estimating the cost of unreliability in tea plantation factory for sustainable production</b> <i>Judi Alhilman and Aji Pamoso.</i> Telkom University	54	IM
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Moderator: Dr. Ir. Nofi Erni, M.M., IPM

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Moderator: Dr. Ir. Nofi Erni, M.M., IPM

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Moderator: Dr. Ir. Yogi Yogaswara, M.T.

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