



Organized by:
Faculty of Industrial Technology, Institut Teknologi Nasional (Itenas) Bandung, West Java Indonesia.

Program and Book of Abstracts

The 2nd Faculty of Industrial Technology International Congress 2020 International Conference

*Towards Industry 4.0:
Challenges and Opportunities for Industrial Technology
and Other Sectors*

January 28 - 30, 2020
Faculty Building, 3rd floor
Campus of Itenas Bandung – Indonesia

FoITIC 2020

FINAL PROGRAM

Venue:

Faculty Building (Darmawan Building) - the 3rd Floor, ITENAS
Jl. PKHH Mustapa No. 23 Bandung 40124, West Java – Indonesia

Room for welcoming reception, opening and closing ceremony: 14301

Rooms for Parallel sessions:

Room 1 (14301); Room 2 (14302); Room 3 (14303 A); Room 4 (14303 B)

	Time	International Conference Program
January 28, 2020	16:00 – 19:00	Registration
		Welcoming reception
January 29, 2020	07:30 – 08:30	Registration
	08.30 – 09.00	Opening ceremony: 1. Dean of FTI tenas 2. Chair of FoITIC International Committee 3. Rector of Itenas
	09:00 – 09.45	Keynote speaker: Prof. Dr. Istvan Farkas (Director of Mechanical Engineering Doctoral School, Szent Istvan University - Hungary)
	09:45 – 10:00	Coffee break
	10:00 – 10:45	Keynote speaker: Prof. Dr. Rizalman Mamat (Universiti Malaysia Pahang - Malaysia)
	10:45 – 11:30	Invited Speaker: Dr. Marisa Widyastuti Paryasto (Founder and CEO ProCodeCG)
	11:30 – 12:30	Lunch break
	12:30 – 13.00	Preparation
	13:00 – 13:45	Invited Speaker: Ahmad Taufik, M.Eng., Ph.D. (Chair of Indonesian Society for Reliability)
	13:45 – 14:30	Invited Speaker: Dr. Fahmi Arif (Head of MSc Program, Industrial Engineering, Institut Teknologi Nasional Bandung)

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	14:30 – 15:00	Coffee break			
	15:00 – 15:30	Travel to Padasuka			
	15:30 – 18:00	Cultural evening			
	18:00 – 19:30	Dinner and networking			
	19:30 – 20:00	Travel to Itenas			
January 30, 2020	12:15 – 12:45	Registration and Lunch			
	12:45 – 13:00	Preparation for parallel session			
	13:00 – 15:00	Parallel session 1			
		Parallel session 1 schedule			
		Room 1	Room 2	Room 3	Room 4
		Paper ID 106	Paper ID 105	Paper ID 100	Paper ID 107
		Paper ID 125	Paper ID 110	Paper ID 111	Paper ID 109
		Paper ID 127	Paper ID 119	Paper ID 113	Paper ID 116
		Paper ID 130	Paper ID 133	Paper ID 114	Paper ID 117
		Paper ID 134	Paper ID 135	Paper ID 115	Paper ID 123
		Paper ID 137	Paper ID 141	Paper ID 145	Paper ID 128
	15:00 – 15:30	Coffee break			
	15:30 – 17:30	Parallel session 2			
		Parallel session 2 schedule			
		Room 1	Room 2	Room 3	Room 4
		Paper ID 142	Paper ID 149	Paper ID 146	Paper ID 136
		Paper ID 143	Paper ID 150	Paper ID 147	Paper ID 144
		Paper ID 153	Paper ID 151	Paper ID 148	Paper ID 152
		Paper ID 156	Paper ID 159	Paper ID 154	Paper ID 155
		Paper ID 158	Paper ID 164		Paper ID 161
		Paper ID 163	Paper ID 165		Paper ID 162
	17:30 – 18:00	Closing ceremony and refreshment			

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LIST OF PAPER PRESENTED IN EACH ROOM

ROOM 1: Engineering (Energy, Mechanical & Chemical)

Paper ID	Author	Title
106	D. R. Harahap, Wei-Chin Chang, S. Ariyono	Energy Management Strategy for Nickel Metal Hydride (NiMH) Battery and Proton Exchange Membrane Fuel Cell (PEMFC) on 3-wheel Hybrid Electric Car Equipped with Continuously Variable Transmission (CVT)
125	Amrizal, Muhammad Irsyad, Amrul , Agung Nugroho, Miftahul Aziz	Effect of nanofluid concentration on the performance of PV/T collector under the tropical climate conditions of Indonesia
127	Syifa Tiara Saskia Mulya, Maria Agustina Rani Findriyani, Nugroho Adi Sasongko	Potential of Glycerol and Derivatives Based on Palm Oil as a Green Solvent
130	W. Priharti, M. Ramdhani, F.R.J. Putra, A. Khansalya	Feasibility Study of Thermoelectric Generator Configuration in Electricity Generation
134	Pratomo Setyadi	Pressure Reducing Station Design for small scale business from 200 bar to 2 bar pressure
137	Feby Aryanhi, Regna Tri Jayanti	Enhancing the Nickel Recovery of Morowali Nickel Laterite in Atmospheric Citric Acid Leaching
142	Wirawan, Regna Tri Jayanti	Particle Size Analysis of Morowali Nickel Laterite on Atmospheric Citric Acid Leaching
143	Regna Tri Jayanti, Yusdianto	Effect of Agitation Speed and Leaching Time for Nickel Recovery of Morowali Limonite Ore in Atmospheric Citric Acid Leaching
153	Nuha D. Anggraeni, Alfian E. Latief, Ramadhan L. Tawadha, and Rifki R. R.	Specimen Test Making of Polypropylene High Impact (PPI) Polymer Composite Reinforced with Natural Fibres using Hand Lay-Up Methods
156	Muhammad Pramuda N. S, Muhammad Ridwan, Agung Priambudi	Evaporator Design with Ammonia-Water Mixture as Working Fluid for Kalina KCS34 Cycle On Electric Power Plant
158	Rifah Amalia, Hendrik E.G.P , Achmad B. Ulum, and Eka S.N	Pilot Plant Biodiesel from Waste Cooking

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163	Muhammad Haekal, Dani Rusirawan, Istvan Farkas	Effect of nanofluid concentration on the performance of PV/T collector under the tropical climate conditions of Indonesia
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ROOM 2: Engineering (Electric, Electronics & Mechatronics)

Paper ID	Author	Title
105	Muhammad Yaser , Untung Priyanto, Fauzie Busalim	Measurement of Wastewater Turbidity Based on Total Dissolved Solids at Pancasila University
110	Adam Tsany Magrifaghبران, Dharu Arseno, and Rizky Satria	Design of Microstrip Array Antenna with Beamforming Capability for 5G Communication
119	Marisa Premitasari, Ung Ungkawa, Adjie Putra Perdana	Automatic Location using ADS-B Mode for Ground Vehicle
133	Iyus Rusmana	Determination of Ignition Voltage in Tank Vehicles Carrying Gasoline and LPG in Electric Field Zone
135	Putri Angelia, Levy Olivia Nur, Bambang Setia Nugroho	Wearable Microstip Antenna with Defected Ground Structure for Breast Cancer Detection
141	Raaida Widyananda, Levy Olivia Nur, Heroe Wijanto, Yuda Nugraha	Design of Ultra Wide-Band Bowtie Antenna for GPR Applications
149	Feralia Fitri, Heroe Wijanto, Aloysius Adya Pramudita, Yuda Nugraha	Design of Vivaldi Antenna at 0.9 – 6 GHz for Mobile Cognitive Radio Base Station (MCRBS)
150	Muhammad Zakiy Burhanudin, Samsinar Ilyas, Syahrul Nugraha supian	Rectenna dual-band GSM and Wi-fi band for Low Power Wireless Electronic Device
151	Dwi Agung Al Ayubi, Dwi Arman Prasetya, Irfan Mujahidin	Haar Cascade Classifier Method for Real Time Face Detector in 2 Degree of Freedom (DOF) Robot Head
159	Fachrur Razy Rahman, Mohammad Wirandi, Yusdianto	Speed Response Comparison of PD, PI, and PID Controller of BLDC Motor on an Autonomous Vehicle Prototype (AVP)
164	Fortinov Akbar Irdam, Dani Rusirawan	Photovoltaic's Characteristics Modelling Based on Fuzzy Time Series

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165	Andika Prasetiadi, Dani Rusirawan	Effect of cooling systems on photovoltaic efficiency
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ROOM 3: Information Technology

Paper ID	Author	Title
100	Slamet Risnanto, Ts Dr Yahaya Abd.Rahim, Prof Gs Dr Nanna Suryana	Success Implementation of E-Voting Technology in Various Countries: A Review
111	Irawan Afrianto, Sri Wahjuni, Taufik Djatna	Model of Ubiquitous Precision Livestock System 4.0: A Technological Review
113	Atho' Novian Awlarijal, Ahmad Almaarif, Avon Budiono	Vulnerability Assessment for Basic Data of Education Website in Regional Government X – A Black Box Testing Approach
114	Jelita Putri Deviarinda, Avon Budiyo, Ahmad Almaarif	Analysis of Potential Security Issues in Regional Government X Website Using Scanning Method in Kali Linux
115	Aulia Fakhri, Ahmad Almaarif, and Avon Budiono	Analysis of Potential Security Vulnerability on Website of Informatics and Communication Office of Regional X using Penetration Testing Execution Standard (PTES) Method
145	Syahril Ardi, Chandra Kirana Kaomu	Design of Auto Height Check Machine Control System Based on PLC to Improve Quality the Complete Piston Rod Assembly Process
146	Muhammad Adam Nugraha, Nyoman Bogi Aditya Karna, Ridha Muldina Negara	The Usage of Quick Response Code and Captive Portal for Wi-Fi Security and Bandwidth
147	Bintang Wibawa Mukti, Cahyadi Nugraha, Fadillah Ramadhan	Design of IoT-Based Manufacturing Quality Control System with Exponentially Weighted Moving Average Chart
148	Aldi Nahla Firdaus, Cahyadi Nugraha, Fadillah Ramadhan	Implementation of The Internet of Things for \bar{X} and R Control Chart in Quality Control
154	Syahril Ardi, Nanda Indah Angger Lestari	Design of Monitoring and Control of SCADA Systems on Curing Machine using PLC and HMI Wonderware InTouch

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**ROOM 4: Information System, Business Management & Industrial Engineering,
Education Technology**

Paper ID	Author	Title
107	Fred Soritua Rudiyanto, Agus Sachari, Setiawan Sabana , Yannes Martinus Pasaribu	The Role of Technology and social transformation challenge in Industrial Revolution 1.0 – 4.0.
109	Leonardi Paris Hasugian, Deden Abdul Wahab, Yeffry Handoko Putra, Rangga Sidik, and Yusrila Yeka Kerlooza	Design of Information System for the Protection of Indonesian Migrant Workers
116	Agus Sasmito Aribowo, Yuli Fauziah and Siti Khomsah	Machine Learning for Clustering Emotional Features in Public Opinion during the 2019 Presidential Candidate Debates in Indonesia
117	Roosdiana Noor Rochmah	An Innovation Capability Model to Increase Micro, Small and Medium Enterprise (MSME) Competitiveness in Indonesia: A Conceptual Model
123	Sely P. Oktaviani, Rspianda	Determination of The Shortest Route of Electrical Scooters Maintenance Patrol in Bandung Using Nearest Neighbor and Genetic Algorithm Approaches
128	Teddy Andriawan, Aloysius Adya Pramudita, Erfansyah Yudhi Eka Ali	Study of GPR Method for Detecting Void in Concrete
136	Dzikri Firmansyah Hakam, Meiri Triani, I Putu Wirasangka, Siti Aisyah	Economic Simulation of Indonesia's Clean Energy Policy: Shifting from LPG to Induction Stove
144	Fajar Azhari Julian, Rspianda	Study of Company Revenue Based on Production Planning Configuration Using Goal Proqraming Method.
152	Juwairiah, Herry Sofyan, Vincentius Dian Asa Putra, Herlina Jayadianti	Detection of Decreased Kidney and Lung Function Through the Iris of the Eye Using the Method Convolutional Neural Network (CNN)
155	Mira Musrini Barmawi, Sofia Umaroh	Decision Support System Using TOPSIS method for Smartphone Selection.
161	Rosa Karnita	Interactive Digital Storytelling: Engaging 21st Century Learners in Virtual Learning Environment

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162	Dzulfikar Ali Hafizh, Dani Rusirawan, Ahmad Taufik, Deddy Nugraha	Safety Integrity Level (SIL) Study for HIPPS
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