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**Chiang Mai, Thailand
1 – 4 July 2020**



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Technical Program

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10:15-10:30	Coffee Break
10:30-12:10	Technical session 1-3
12:10-13:00	Lunch
13:00-14:40	Technical session 4-6
14:40-14:55	Coffee Break
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Session 1: Industrial Engineering, Material and Manufacturing

Session chair: *Monsak Pimsarn and Lonesy Thammavong*

Room: A

10:30-10:50	Paper ID 4: Development of an Assessment Tool for Prioritizing...N/A Influencing Factors of Sustainability in Higher Education <i>Siripong Jungthawan and Ronnachai Tiyyarattanachai, Thailand</i>
10:50-11:10	Paper ID 5: Development of locally designed smart bike-sharing system on Thai campus: Lessons learnt of a pilotscale study...N/A <i>Chitsanu Pakdeewanich, Ronnachai Tiyyarattanachai and Isara Anantavrasilp, Thailand</i>
11:10-11:30	Paper ID 12: Optimal Assignment Problem of Classrooms in Nursery Schools...N/A <i>J. Pittayarugsarit, S. Tajima and Y. Song, Japan</i>
11:30-11:50	Paper ID 26: Thermal Property of Poly(lactic acid)/Polypropylene/Bamboo Fiber Composite for Injection Molding application...N/A <i>Jutamas Kordsaart, Weraporn Pivsa-Art and Sommai Pivsa-Art, Thailand</i>
11:50-12:10	Paper ID 40: Biodegradation of POM/PLA Multifilament in Sea Water...N/A <i>A. Wongkorn, W. Pivsa-Art and S. Pivsa-Art, Thailand</i>

Session 2: Mechanical, Mechatronics and Civil Engineering - 1

Session chair: *Wibool Piyawattanametha and Wipassorn Vinichayakul*

Room: B

10:30-10:50	Paper ID 67: Fully Autonomous Drug and Food Delivery Robot for Hospital and Patient Care Logistic Management based on Artificial
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- Intelligence...N/A
Antica Eam opha, Sittikorn Titaviriya and Wibool Piyawattanametha, Thailand
- 10:50-11:10 Paper ID 56: Reconfigurable Pinart to help the Blinds Visualization...1
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- 11:10-11:30 Paper ID 25: Tracking of drone flight by neural network Siamese-RPN...4
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- 11:30-11:50 Paper ID 57: Deep Learning Technology for Drunks Detection with Infrared Camera...7
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- 11:50-12:10 Paper ID 49: Optical-Based Foot Plantar Pressure Measurement with Application in Human Postural Balance, Gait and Recognition Analysis...11
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Hisayuki Aoyama, Japan

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Session chair: *Petchsasithorn Arthit and Vimane Phoummavong*

Room: C

- 10:30-10:50 Paper ID 23: Proposed Methods to Prevent Continuous Collapse of Utility Concrete Poles...N/A
Petchsasithorn Arthit and Sujaritpong Atavit, Thailand
- 10:50-11:10 Paper ID 34: Risk factors affecting conflict management for construction government project in Thailand...N/A
Bancha Teanngen, Wuttipong Kusonkhum, Surapong Liwthaisong, Tanayut Chaitongrat and Korb Srinavin, Thailand
- 11:10-11:30 Paper ID 14: Stress Analysis of Three-Span Prestressed Concrete Bridge According to Modified Span Length Subjected to Thai Truck Load...N/A
Atavit Sujaritpong and Wareeyot Thiradulkul, Thailand
- 11:30-11:50 Paper ID 18: Numerical Modelling for Energy Absorption of Reinforced Concrete Barriers Covered with Natural Rubber...N/A
Lwin Lwin Aung, Amphon Jarasjarungkiat and Suvisit Banyam, Thailand
- 11:50-12:10 Paper ID 31: A Study of Recycle Cellular Lightweight Concrete as Coarse Aggregates in Concrete Bricks...N/A
Amphon Jarasjarungkiat and Setsawat Chuaisrinual, Thailand

Session 4: Telecommunication, Computer Science, Instrumentation and Control, Electrical and Electronic Engineering - 1

Session chair: *Kriangkrai Sooksood and Theerayod Wiangtong*

Room: A

- 13:00-13:20 Paper ID 47: A High Voltage Biphasic Current Driver with Compliance Monitor for Electrical Stimulator...N/A
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Emilia Noorsal, Malaysia
- 13:20-13:40 Paper ID 30: SITO Current-Mode Multifunction Biquad Using Readily Available IC LT1228s...15
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- 13:00-13:20 Paper ID 71: Acoustical Analysis of the Thai Duct Flute, Khlui...31
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- 13:40-14:00 Paper ID 70: Experimental Study on Comparison Sound Quality Measurement of Thai fiddle Resonator...39
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Kerem Ergener, Thailand

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Harigopal Sasikumar, Thailand

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Session chair: *Unnat Pinsopol and Phoumy Indarack*

Room: C

13:00-13:20 Paper ID 50: Applying Image Processing and Edge Computing for Plant Growth Monitoring in Smart Farm...N/A
K. Namee and J. Polpinij, Thailand
G. M. Albadrani, Saudi Arabia

13:20-13:40 Paper ID 87: CFD based Improvement of Thai Irrigation Pump...N/A
Kittipass Wasinarom, Dachdanai Boonchaay and Jarruwat Charoensuk, Thailand

13:40-14:00 Paper ID 21: Ergonomic improvements for consumer cameras...N/A
Jinyu Lin, Wenyu Wu and Chengqi Xue, China

14:00-14:20 Paper ID 9: Low Wind Speed Wind Turbine Blade Design for Thailand...N/A
Natchanon Suppaadirek, Noppakoon Saengsuwan and Sirichai Tammaruckwattana, Thailand

14:20-14:40 Paper ID 41: Analysis of icon similarity method based on visual perception...N/A
Yaping Huang, Haiyan Wang and Shi Yiming, China

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Session chair: *Chaiwat Nuthong and Jirapat Sangthong*

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Daniel Ekwuazi and Chaiwat Nuthong, Thailand

15:35-15:55 Paper ID 35: Research on Smart Street Lamp Control System Based on Internet of Things Technology...N/A
Jian Xu and Jianli Wang, China

- 15:55-16:15 Paper ID 22: Railway Service Planning System: case study Thailand first high speed railway...55
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- 16:15-16:35 Paper ID 91: Adaptive Cutting Force Control for CNC Milling Machine...N/A
Noppadol Maneerat, Adisak Khaengsarigid and Bandit Pasaya, Thailand

Session 8: Telecommunication, Computer Science, Instrumentation and Control, Electrical and Electronic Engineering - 3

Session chair: *Boontee Kruatrachue and Donekeo Lakenchan*

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- 15:15-15:35 Paper ID 39: The effect of vibration on the reliability of HUD information recognition...N/A
Yitian Li, Yi Xie, Haiyan Wang, Bingzheng Shi and Yafeng Niu, China
- 15:35-15:55 Paper ID 48: The Effectiveness of RPA in Fine-tuning Tedious Tasks...63
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Session chair: *Aditep Chaisang and Bundit Ruckveratham*

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- 15:15-15:35 Paper ID 63: A Fast and Accurate Dielectric Response Measurement for Transformer Moisture Assessment and Remaining Life Estimation...78
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- 15:55-16:15 Paper ID 54: Energy Harvesting for Self-Powered Systems...86
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- 16:15-16:35 Paper ID 130: UHF Two-Rays Reflection Model in Distribution Transformer for PD Detection...N/A
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- 10.10-10.25 Coffee Break
- 10.15-12.05 Technical session 13-14
- 12.15-13.00 Lunch
- 13.00-14.40 Steering committee meeting
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Session chair: *Sirichai Tammaruckwattana and Gilbert Siy Ching*

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Session 13: Telecommunication, Computer Science, Instrumentation and Control, Electrical and Electronic Engineering - 8

Session chair: *Phichet Moungnoul and Myo Myint Maw*

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Session 14: Innovative Engineering

Session chair: *Sathaporn Promwong and Chayapol Khamyod*

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- 11:25-11:45 Paper ID 29: Study of lactic acid production from invert sugar with ion exchange membrane electro dialysis...N/A
R. Sirisangsawang and P. Kitchaiya, Thailand