

2025 11th International Conference on Engineering, Applied Sciences, and Technology (ICEAST 2025)

**Phuket, Thailand
6-9 May 2025**



**IEEE Catalog Number: CFP25O99-POD
ISBN: 979-8-3315-4249-8**

**Copyright © 2025 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP25O99-POD
ISBN (Print-On-Demand):	979-8-3315-4249-8
ISBN (Online):	979-8-3315-4248-1
ISSN:	2768-4849

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Proceeding	
Parallel power supply half-bridge topology with CV Mode 0-150 V and CC Mode 0-5A	1
Theerapat Antachai	
<i>Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.</i>	
Weera Pengchan	
<i>Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.</i>	
Supakorn Suwan	
<i>Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.</i>	
Partial Discharge Identification in High-Voltage Systems Using Frequency Extraction and Machine Learning Techniques	5
Tai Bandisak	
<i>Department of Electrical and Computer Engineering, Naresuan University Phitsanulok, Thailand.</i>	
Krissana Romphuchaiyapruet	
<i>Department of Electrical and Computer Engineering, Naresuan University Phitsanulok, Thailand.</i>	
Sarawut Wattanawongpitak	
<i>Department of Electrical and Computer Engineering, Naresuan University Phitsanulok, Thailand.</i>	
Integration of Charcoal Kiln Waste Heat in a Thermal Water Pump System	9
Pakorn Promkaew	
<i>Department of Industrial Technology Phuket Rajabhat University Phuket, Thailand.</i>	
Pathiwat Waramit	
<i>Department of Mechanical Engineering Rajamangala University of Technology Isan Nakhon Ratchasima, Thailand.</i>	
Bundit Krittacom	
<i>Department of Mechanical Engineering Rajamangala University of Technology Isan Nakhon Ratchasima, Thailand.</i>	
Jirawat Sitranon	
<i>Department of Energy Technology Management Rajamangala University of Technology Tawan-ok Chonburi, Thailand.</i>	
Panusak Moonsri	
<i>Department of Energy and Air Conditioning Engineering Rajamangala University of Technology Isan Nakhon Ratchasima, Thailand.</i>	
A Fuzzy Multi-Criteria Decision-Making Approach for Ranking Renewable Energy Systems Based on Economic and Environmental Aspects	15
Danupun Visuwan	

Industrial Statistics and Operational Research Unit (ISO-RU), Department of Industrial Engineering, Faculty of Engineering, Thammasat School of Engineering, Thammasat University, Pathumthani, 12120 Thailand.

Atiwat Nanphang

Industrial Statistics and Operational Research Unit (ISO-RU), Department of Industrial Engineering, Faculty of Engineering, Thammasat School of Engineering, Thammasat University, Pathumthani, 12120 Thailand.

Pongchanun Luangpaiboon

Industrial Statistics and Operational Research Unit (ISO-RU), Department of Industrial Engineering, Faculty of Engineering, Thammasat School of Engineering, Thammasat University, Pathumthani, 12120 Thailand.

Apirak Tepvarin

Industrial Statistics and Operational Research Unit (ISO-RU), Department of Industrial Engineering, Faculty of Engineering, Thammasat School of Engineering, Thammasat University, Pathumthani, 12120 Thailand.

The Comparison between Dielectric Frequency Response and Polarization and Depolarization Current Techniques for Investigating the Defected ZnO Arrester

19

Winai Methavithit

Department of Electrical Engineering Faculty of Engineering Rajamangala University of Technology Krungthep Bangkok, Thailand.

Pittaya Pannil

Department of Instrumentation and Control Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Chaitawat Chuayin

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Phitthaya Aiamrungruang

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Matthieu Zinck

Paralec Energy Co., Ltd Bangkok, Thailand.

Siwakorn Jeenuang

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.

Norasage Pattanadech

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Chanin Bunlaksananusorn

Department of Mechatronics Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Experiment of Dielectric Frequency Response for Aged ZnO Surge Arrester

24

Phitthaya Aiamrungruang

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Winai Methavithit

Department of Electrical Engineering Faculty of Engineering Rajamangala University of Technology Krungthep Bangkok, Thailand.

Pittaya Pannil

Department of Instrumentation and Control Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Chaitawat Chuayin

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Matthieu Zinck

Paralec Energy Co., Ltd Bangkok, Thailand.

Siwakorn Jeenuang

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.

Norasage Pattanadech

Department of Electrical Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Chanin Bunlaksananusorn

Department of Mechatronics Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Mosquito Trap HV Power Supply Turn On/Off Time Parameter Consideration Measurement 29

Jirawath Parnklang

Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Nattanicha Sowanee

Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Kasamaphon Pakhunophat

Tx Engineer, TeraHop (Thailand) Co., Ltd. 198, Moo 7, Nong Planoh sub district, NongKhae district, Saraburi 18140 Bangkok, Thailand.

Siriwat Ganasut

Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Pasuthida Wisitthikorn

Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Tanutpong Ramkaow

Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Interdigitated Extended Gate Field Effect Transistor for pH Sensor Based on Porous Silicon Layer 33

Narin Atiwongsangthong

Department of Electronics Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

A Dual-Band Implantable Antenna with Flag-Inspired Patch and Grounded Structure	37
Rula Alrawashdeh	
<i>Electrical Engineering Department Mutah University Al-Karak, Jordan.</i>	
Real-Time Locating Systems: A bibliometric Analysis	41
Letizia Tebaldi	
<i>Department of Engineering for Industrial Systems and Technologies University of Parma Parma, Italy.</i>	
Andrea Volpi	
<i>Department of Engineering for Industrial Systems and Technologies University of Parma Parma, Italy.</i>	
Giulia Azzolini	
<i>Department of Engineering for Industrial Systems and Technologies University of Parma Parma, Italy.</i>	
A Flexible Loop Sensor Antenna for Ice and Frost Detection	45
Rula Alrawashdeh	
<i>Electrical Engineering Department Mutah University Al-Karak, Jordan.</i>	
Numerical Study of 500 kHz Electromagnetic Wave Irradiation for Root Canal Sterilization in Apical Periodontitis Treatment	49
Yanakorn Srianant	
<i>KOSEN-KMITL, King Mongkut's Institute of Technology Ladkrabang, Thailand National Institute of Technology, Kagawa College, Japan.</i>	
Thanadol Tiengthong	
<i>Department of Electrical and Electronics Engineering, KOSEN-KMITL, King Mongkut's Institute of Technology Ladkrabang, Thailand.</i>	
<i>Hiroo Tarao Department of Electrical and Computer Engineering, National Institute of Technology, Kagawa College, Japan</i>	
Hiroo Tarao	
<i>Department of Electrical and Computer Engineering, National Institute of Technology, Kagawa College, Japan.</i>	
Masatake Akutagawa	
<i>Tokushima University Japan.</i>	
Hiromichi Yumoto	
<i>Tokushima University Japan.</i>	
Toshihiko Tominaga	
<i>Tominaga Dental Clinic, Japan.</i>	
Intelligent Multi-Link Selection for IEEE 802.11be Using Reinforcement Learning with Radiation Pattern Awareness	53
Bhurisub Dejpgipatpracha	
<i>Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University Phuket, Thailand.</i>	

- Akarachai Inthanil
*Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University
Phuket, Thailand.*
- Wimonnat Sukpol
*Department of Mathematics Faculty of Science and Technology Phuket Rajabhat University Phuket,
Thailand.*
- Worrarat Jongkrajak
*Department of Business Computer Faculty of Management Sciences Phuket Rajabhat University
Phuket, Thailand.*
- Modeling the Performance of Wi-Fi Networks Using 5GHz, 6GHz, and
Multi-Link Operation** 57
- Wimonnat Sukpol
*Department of Mathematics Faculty of Science and Technology Phuket Rajabhat University Phuket,
Thailand.*
- Akarachai Inthanil
*Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University
Phuket, Thailand.*
- Bhurisub Dejjipatpracha
*Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University
Phuket, Thailand.*
- Accuracy Analysis of Indoor Positioning Using Min-Max Method** 61
- Pichaya Supanakoon
*Department of Telecommunications Engineering School of Engineering King Mongkut's Institute of
Technology Ladkrabang Bangkok 10520, Thailand.*
- Wipassorn Vinichayakul
*Establishment office for Aeronautical and Space Training Center U-Tapao Civil Aviation Training
Center Bangkok 10900, Thailand.*
- Sirinya Tabsombat
*Establishment office for Aeronautical and Space Training Center U-Tapao Civil Aviation Training
Center Bangkok 10900, Thailand.*
- Thanadol Tiengthong
*Department of Electrical and Electronic Engineering KOSEN-KMITL King Mongkut's Institute of
Technology Ladkrabang Bangkok 10520, Thailand.*
- Sathaporn Promwong
*Department of Telecommunications Engineering School of Engineering King Mongkut's Institute of
Technology Ladkrabang Bangkok 10520, Thailand.*
- Monchai Chamchoy
*Department of Telecommunications Engineering School of Engineering King Mongkut's Institute of
Technology Ladkrabang Bangkok 10520, Thailand.*
- Applying Generative AI for Fraud and Cybercrime Prevention in Thailand** 65
- Chairat Thanomwong
Electrical Engineering Rajamangala University of Technology Phra Nakhon Bangkok, Thailand.
- Korn Puangnak
Computer Engineering Rajamangala University of Technology Phra Nakhon Bangkok, Thailand.

- Natworapol Rachsiriwatcharabul
Industrial Technology Program in Sustainable Innovation Engineering Technology Rajamangala University of Technology Phra Nakhon Bangkok, Thailand.
- Manthana Tiawongsuwan
Computer Engineering Rajamangala University of Technology Phra Nakhon Bangkok, Thailand.
- Krerak Puangnak
Computer Engineering Rajamangala University of Technology Phra Nakhon Bangkok, Thailand.
- A Comparative Analysis of Machine Learning Algorithms for Allergy Scale Prediction** 69
- Aumnat Tongkaw
Faculty of Science and Technology Songkhla Rajabhat University Songkhla, Thailand.
- Sasalak Tongkaw
Faculty of Science and Technology Songkhla Rajabhat University Songkhla, Thailand.
- Sustainable Waste Management: Enhancing Efficiency with Vehicle Routing Optimization Techniques** 73
- Nichaphat Phurichteerarat
Department of Mathematics and Statistics, Faculty of Science and Technology, Thammasat University Pathumthani, 12120 Thailand.
- Auksarapuk E-dee
Department of Mathematics and Statistics, Faculty of Science and Technology, Thammasat University Pathumthani, 12120 Thailand.
- Anuwat Boonmechot
Department of Mathematics and Statistics, Faculty of Science and Technology, Thammasat University Pathumthani, 12120 Thailand.
- Thapanita Thongpap
Department of Mathematics and Statistics, Faculty of Science and Technology, Thammasat University Pathumthani, 12120 Thailand.
- Lakkana Ruekkasaem
Department of Mathematics and Statistics, Faculty of Science and Technology, Thammasat University Pathumthani, 12120 Thailand.
- Pongchanun Luangpaiboon
Industrial Statistics and Operational Research Unit (ISO-RU), Department of Industrial Engineering, Faculty of Engineering, Thammasat School of Engineering, Thammasat University Pathumthani, 12120 Thailand.
- Explainable AI to enhance demand forecasting model for autonomous taxis in smart cities** 77
- Adeel Munawar
Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand.
- Mongkut Piantanakulchai
Sirindhorn International Institute of Technology, Thammasat University, Pathum Thani, Thailand.

Blockchain As A Notarization System For Military Data Sharing	81
Chatchawan Chamnikul <i>Department of Defence Engineering School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.</i>	
Amnach Khawne <i>Department of Computer Engineering School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.</i>	
Application of Deep Learning Techniques for Predicting Leaf Lesions in KDML105 Rice Variety	85
Sittisak Promtara <i>School of Information Technology, King Mongkut's University of Technology Thonburi Bangkok, Thailand</i>	
Watanyoo Suksa-ngiam <i>School of Information Technology, King Mongkut's University of Technology Thonburi Bangkok, Thailand</i>	
Pornchai Mongkolnam <i>School of Information Technology, King Mongkut's University of Technology Thonburi Bangkok, Thailand</i>	
Comparative Analysis of Common Compression Algorithms for Sentinel-2 Multispectral Band Compression	91
Aljaž Zel <i>Faculty of Electrical Engineering and Computer Science, University of Maribor.</i>	
Domen Mongus <i>Faculty of Electrical Engineering and Computer Science, University of Maribor.</i>	
Borut Zalik <i>Faculty of Electrical Engineering and Computer Science, University of Maribor.</i>	
Image Processing Threshold of Acetabulum Porosity for Age Estimation	95
Supachard Krudtong <i>Biomedical Engineering Institute Chiang Mai University Chiang Mai, Thailand.</i>	
Pasuk Mahakkanukrauh <i>Department of Anatomy Faculty of Medicine Chiang Mai University Chiang Mai, Thailand.</i>	
Nipon Theera-Umpon <i>Biomedical Engineering Institute Chiang Mai University Chiang Mai, Thailand.</i>	
Recognition of Marijuana Plant Leaf Diseases Based on Deep Learning	99
Qingye Kong <i>Department of Telecommunications Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.</i>	
Siraphop Tooprakai	

Department of Telecommunications Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Advanced Car Rental System: Integrating Blockchain, AI, and Real-Time Inventory Management for Enhanced User Experience 103

Sokyna Alqatawnah

School of Computing Department of Health Sciences, Meditech and Technology Bradford College Bradford, UK.

Muhammad Tayyib

School of Computing Department of Health Sciences, Meditech and Technology Bradford College Bradford, UK.

Improving Children's Reading And Writing Abilities By Utilizing Augmented Reality 106

Suzanna

Information Systems Department, Binus Online Learning Bina Nusantara University Jakarta, Indonesia.

Harco Leslie Hendric Spits Warnars

Computer Science Department, BINUS Graduate Program, Doctor of Computer Science, Bina Nusantara University Jakarta, Indonesia.

Mahaning Indrawaty Wijaya

Information System Departement, Bina Nusantara University Jakarta, Indonesia.

Diana

Information System Departement, Bina Nusantara University Jakarta, Indonesia.

Attention Thresholds for Brand Impact 112

John Hawkins

GumGum, Sydney, Australia.

Shannon Bosshard

Neuroconsulting, Sydney, Australia.

Enigme: Generative Text Puzzles for Evaluating Reasoning in Language Models 117

John Hawkins

Centre for Artificial Intelligence and Innovation Pingla Institute, Sydney, Australia.

An Ensemble model of Dual learning for Gambling and Pornographic Websites Classification 122

Sirapat Thianphan

School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.

Kietikul Jearanaitanakij

School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.

Quality classification of sunglasses lens by deep learning	126
Charin Theskham	
<i>Department of Computer Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang, Bangkok.</i>	
Kietikul Jearanaitanakij	
<i>Department of Computer Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang, Bangkok.</i>	
A Hybrid Greedy Algorithm for the Capacitated Vehicle Routing Problem	130
Udom Janjarassuk	
<i>Department of Industrial Engineering, School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand</i>	
A study on developing a robust screen navigation pattern for SwiftUI based iOS Applications	134
Shubham Kamdi	
<i>Independent Researcher Mountain View, USA.</i>	
Enhancing a Creative Support Tool with the TRIZ Method: A Textile Design Prototype Utilizing Projection Mapping	139
Chanathinat Chaiyapoo	
<i>Creative Product Innovation, Faculty of Science and Technology, Phuket Rajabhat University Phuket, Thailand.</i>	
Jakraphan Chaopreecha	
<i>Digital Media Design, Computing, College of Computing, Prince of Songkla University Phuket, Thailand.</i>	
Chutima Changpum	
<i>Creative Product Innovation, Faculty of Science and Technology, Phuket Rajabhat University Phuket, Thailand.</i>	
Nichia Tovankasame	
<i>Department of Asian Studies Faculty of International Studie, Prince of Songkla University Phuket, Thailand.</i>	
Development of adventure games and puzzle solving in mysterious museums	144
Kriangkrai Phutongkan	
<i>Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University Phuket, Thailand.</i>	
Akarachai Inthanil	
<i>Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University Phuket, Thailand.</i>	
Attapon Pillai	
<i>Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University Phuket, Thailand.</i>	
Fine-Tuning AI Models with Limited Resources	148
Kritsada Singhapoo	

*Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University
Phuket, Thailand.*

Akarachai Inthanil

*Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University
Phuket, Thailand.*

Attapon Pillai

*Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University
Phuket, Thailand*

Efficient American Sign Language Recognition using ResNet-50

152

Md Sharifuzzaman

Information Studies Trine University Indiana, USA.

Anik Sen

Faculty of Information Science & Technology Multimedia University Melaka, Malaysia.

Joyashish Ghosh

*Faculty of Science & Engineering Jashore University of Science and Technology Jessore,
Bangladesh.*

Tze Hui Liew

Faculty of Information Science & Technology Multimedia University Melaka, Malaysia.

Debanjon Dutta Purkaystha

Faculty of Engineering American International University-Bangladesh Dhaka, Bangladesh.

Saptanil Ghose

*Faculty of Science & Technology American International University-Bangladesh Dhaka,
Bangladesh.*

Masud Pervez

Faculty of Mathematical & Physical Sciences Jahangirnagar University Dhaka, Bangladesh.

Md Jakir Hossen

Faculty of Engineering Technology Multimedia University Melaka, Malaysia.

Predicting Faulty Production Lines Causing Head Gimbal Assembly Damage from Electrostatic Discharge Using Machine Learning

159

Nuttanon Bilgasun

*Department of Artificial Intelligence for Business Analytics Faculty of Information Technology, King
Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.*

Bundit Thanasopon

*Department of Artificial Intelligence for Business Analytics Faculty of Information Technology, King
Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.*

Using the Analytic Hierarchy Process (AHP) for Decision Making in Tourism Product Distribution Channel

163

Klinsukon Nimkanjana

*Department of Information Technology Rajamangala University of Technology Srivijaya
Nakhon si thammarat, Thailand.*

Kornsirinut Rothjanawan

Department of Computer Engineering Princess of Naradhiwas University Narathiwat, Thailand.

Supawadee Mak-on

Department of AI Engineering Rajamangala University of Technology Srivijaya Songkhla, Thailand.

Development an Ontology Knowledge Base for Biodiversity, Identify plants of Community forest: A Case study of Baan Wang sai Community 167

Klinsukon Nimkanjana

Department of Information Technology Rajamangala University of Technology Srivijaya Nakhon si thammarat, Thailand.

Premjit Ruengsaawat

Department of Bioproduct Technology Rajamangala University of Technology Srivijaya Nakhon si thammarat, Thailand.

Sarit Panjan

Department of Information Technology Rajamangala University of Technology Srivijaya Nakhon si thammarat, Thailand.

TabFuseNet: A Cancer Prediction Model Utilizing Sample Cohort Data 171

ChaeYoon Han

Department of MetaBioHealth, Sungkyunkwan University, Suwon, South Korea.

NangKyeong Lee

Department of Precision Medicine, Sungkyunkwan University School of Medicine, Suwon, South Korea.

Jun Kim

Department of MetaBioHealth, Sungkyunkwan University, Suwon, South Korea.

Muhammad Afzal

College of Computing, Birmingham City University, England.

Zeeshan Abbas

Department of Precision Medicine Sungkyunkwan University School of Medicine, Suwon, South Korea.

SeungWon Lee

Department of Precision Medicine Sungkyunkwan University School of Medicine, Suwon, South Korea.

Implemented Machine Learning Models to Predict Life Satisfaction Using Demographic and Religious Data 175

Aryan Shah

Department of Computer Science William P. Clements High School Sugar Land, United States.

Anshul Mago

Department of Computer Science William P. Clements High School Sugar Land, United States.

Shreyan Shah

Department of Computer Science William P. Clements High School Sugar Land, United States.

Michelle A. Patriquin

Department of Psychiatry and Behavioral Sciences John P. and Kathrine G. McGovern Medical School Houston, United States.

Integrating Machine Learning For Automated Root Cause Analysis Of Critical-To-Quality (CTQ) In Hard Disk Drive Manufacturing 180

Mullika Inpang

Department of Artificial Intelligence for Business Analytics Faculty of Information Technology King Mongkut's Institute of Technology Ladkrabang Bangkok Thailand.

Bundit Thanasopon

Department of Artificial Intelligence for Business Analytics Faculty of Information Technology King Mongkut's Institute of Technology Ladkrabang Bangkok Thailand.

Automated Assembly Machine Stopping System Using Machine Learning for Electrical Failure Prediction in Hard Disk Drive Manufacturing 184

Tanakrit Panjasamanwong

School of Information Technology King's Mongkut Institute of Technology Ladkrabang Bangkok, Thailand.

Bundit Thanasopon

School of Information Technology King's Mongkut Institute of Technology Ladkrabang Bangkok, Thailand.

Some Practical Aspects of the Relational Database Normalization Process 188

Putsadec Pornphol

Department of Digital Technology Faculty of Science and Technology Phuket Rajabhat University Phuket, Thailand.

Suphamit Chittayasothorn

School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Fin Coil Dent Detection Using Deep Learning 193

Akapot Tantrapiwat

Department of Mechanical Engineering School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand

Unnat Pinsopon

Department of Mechanical Engineering School of Engineering, King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand

A Design and Experimental Study of Fog Spraying into the Greenhouse Roof for Radiation and Relative Humidity Control 197

Sakapan Klaydokjan

Department of Engineering at King Mongkut's Institute of Technology Ladkrabang, Prince of Chumphon Campus, Chumphon, Thailand.

Kamonwan Chucheeep

Department of Applied Science and Liberal Art at King Mongkut's Institute of Technology Ladkrabang, Prince of Chumphon Campus, Chumphon, Thailand.

Nathaporn Suwanpayak

Department of Applied Science and Liberal Art at King Mongkut's Institute of Technology Ladkrabang, Prince of Chumphon Campus, Chumphon, Thailand.

Development of a Real-Time Water Monitoring and Alert System for Sustainable Aquaculture in the Tapi River	201
<p>Prasert Nonthakarn <i>Faculty of Science and Technology Rajamangala University of Technology Srivijaya Nakhon Si Thammarat, Thailand.</i></p> <p>Sulaiman Madyod <i>Faculty of Veterinary Science Rajamangala University of Technology Srivijaya Nakhon Si Thammarat, Thailand.</i></p> <p>Chariya Nonthakarn <i>Faculty of Science and Technology Rajamangala University of Technology Srivijaya Nakhon Si Thammarat, Thailand.</i></p>	
Machine Learning Approach to CMYK Label Identification through Screen Angles	205
<p>Chitsanuwit Ar-Karachaiphong <i>School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.</i></p> <p>Farzin Asadi <i>Department of Computer Engineering Ostim Technical University Ankara, Turkiye.</i></p> <p>Asst. Prof. Dr. Krit Smerpitak <i>School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.</i></p>	
Compensation Motion and Calibration for Scale Calibration Machine	211
<p>Siriwat Kitsompong <i>National Institute of Metrology (Thailand) Pathumthani, Thailand</i></p> <p>Yuttana Hongaromkij <i>National Institute of Metrology (Thailand) Pathumthani, Thailand</i></p>	
Linear Interpolation using Siemens S7-1200 Fine-Tuning AI Models with Limited Resources	215
<p>Noppadol Maneerat <i>Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok 10520 Thailand.</i></p> <p>Tharathorn Wongworrada <i>Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok 10520 Thailand.</i></p> <p>Thepjit Cheypoca <i>Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok 10520 Thailand.</i></p> <p>Kasemsuk Sepsirisuk <i>Department of Engineering King Mongkut's Institute of Technology Ladkrabang Prince of Chumphon Campus Chumphon 86160 Thailand.</i></p>	
Apply PLC to Control 3-Axis Machines	219

Thepjit Cheypoca

Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok 10520 Thailand.

In Thaiyai

Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok 10520 Thailand.

Noppadol Maneerat

Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok 10520 Thailand.

Athasart Narkthewan

Department of Engineering King Mongkut's Institute of Technology Ladkrabang Prince of Chumphon Campus Chumphon 86160 Thailand.

Real-Time Production Monitoring System: An IoT and Open-Source Solution for SMEs 223

Manisra Baramechai

School of Engineering, The University of the Thai Chamber of Commerce Bangkok, Thailand.

Vorrapath Kokaew

School of Engineering, The University of the Thai Chamber of Commerce Bangkok, Thailand.

Application of 3D printer to create pet casts 227

Pipat Phaisalpanumas

Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.

Acting Sub Lt. Nattasit Monkaew

Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.

Damisara Chutikan

Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.

Premporn Khemavuk

Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.

Narin Tammarugwattana

School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Sirichai Tammaruckwattana

School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Prototype of Chipping and Briquetting Machine for Eucalyptus Wood Processing 231

Pipat Phaisalpanumas

Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.

Nattarat Namboot

Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.

- Damisara Chutikan
Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.
- Chartchai Usadornsak
Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.
- Naritsak Tantitippawan
Faculty of Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand.
- Sirichai Tammaruckwattana
School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Re-envisioning On-Ground Aircraft Movement using Reinforcement Learning 235
- Anurag Vallur
Dept. of ECE PES University Bengaluru 560085, India.
- Anuj Jain
Dept. of ECE PES University Bengaluru 560085, India.
- Adi M
Dept. of ECE PES University Bengaluru 560085, India.
- Anirudh Sridhar
Dept. of ECE PES University Bengaluru 560085, India.
- T.S. Chandar
Dept. of ECE PES University Bengaluru 560085, India.
- Energy-Efficient Motion Planning for Dual-Arm Collaborative Robots Using a Digital Twin 239
- Ruj Kantabussabong
The Sirindhorn International Thai German Graduate School of Engineering, King Mongkut's University of North Bangkok, Bangkok, Thailand.
- Chinnawut Nantabut
The Sirindhorn International Thai German Graduate School of Engineering, King Mongkut's University of North Bangkok, Bangkok, Thailand.
- Watcharin Pongaen
Dept. of Teacher Training in Mechanical Engineering, Faculty of Technical Education, King Mongkut's University of North Bangkok, Bangkok, Thailand.
- Nuttapon Rothong
College of Industrial Technology, King Mongkut's University of North Bangkok, Bangkok, Thailand.
- Borihan Butsanlee
Dept. of Teacher Training in Mechanical Engineering, Faculty of Technical Education, King Mongkut's University of North Bangkok, Bangkok, Thailand.
- Effective Bowel Sound Source Localization Based on Sensor Configuration: A Preliminary Index Approach 243

- Kenji Takawaki
Division of Science and Technology, Graduate School of Science and Technology for Innovation, Tokushima University, Tokushima 770-8506, Japan.
- Takeyuki Haraguchi
Division of Science and Technology for Innovation, Graduate School of Sciences and Technology for Innovation, Tokushima University, Tokushima 770-8506, Japan.
- Takahiro Emoto
Division of Science and Technology, Graduate School of Technology, Industrial and Social Sciences, Tokushima University, Tokushima 770-8506, Japan.
- Design and Development of a Portable Static Stability Training System** 247
- Manutchanok Jongprasithporn
Department of Industrial Engineering, School of Engineering, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand.
- Nantakrit Yodpijit
CIHFE2, Department of Industrial Engineering, Faculty of Engineering, King Mongkut's University of Technology North Bangkok, Thailand.
- Improving Accuracy in Image-Recognition Systems With Techniques for Handling Similar-Looking Items in Inventory Management** 251
- Asst. Prof. Dr. Krit Smerpitak
School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Asst. Prof. Sart Kummool
School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Asst. Prof. Dr. Farzin Asadi
Department of Computer Engineering Ostim Technical University Ankara Turkiye.
- Chitsanuwit Ar-Karachaiphong
School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Watcharapon Sopha
School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Assoc. Prof. Dr. Sawai Pongswatd
School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- The Trapezoidal Khim: Sound Radiation of G Notes** 255
- Natcha Techaaphonchai
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Worakrit Thida
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Kittipitch Meesawat
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

- Phonlasit Thinnakorn Na Ayuthaya
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Pakaphol Chitsakul
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Sorasak Danworaphong
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.
- Efficient Modeling of ITD Based on Anthropometrics and KEMAR ITD coefficients using Deep Neural Networks 259
- Saif S. Alotaibi
Department of Electrical and Computer Engineering University of Colorado Colorado Springs Colorado Springs, Colorado 80918, USA.
- Mark Wickert
Department of Electrical and Computer Engineering University of Colorado Colorado Springs Colorado Springs, Colorado 80918, USA.
- Vibroacoustic Study of Tonewood and Solid-body Guitar 264
- Khemapat Tontiwattanakul
Sound and Vibration Engineering Research Group, Department of Mechanical and Aerospace Engineering, Faculty of Engineering, King Mongkut's University of Technology North Bangkok Bangkok, Thailand
- Design and build of a multi-zone beamforming speaker 268
- Khemapat Tontiwattanakul
Sound and Vibration Engineering Research Group, Department of Mechanical and Aerospace Engineering King Mongkut's University of Technology North Bangkok Bangkok, Thailand
- Jiraphat Sueprasert
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand
- Dech Nawik
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand
- Pitak Thumwarin
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand
- Nachanant Chitanont
Institute of Music, Science, and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand
- Development and Preliminary Evaluation of a Wireless Acoustic Sensor Network for Environmental Noise Monitoring 272
- Kittipitch Meesawat
Institute of Music Science and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.

Wanut Padee

Office of Digital Technology Khon Kaen University Khon Kaen, Thailand.

Worakrit Thida

Independent researcher Bangkok, Thailand.

Krittika Lertsawat

ENLAWTHAI Foundation Bangkok, Thailand.

Sorasak Danworaphong

Institute of Music Science and Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand.