

KKU - IENC2021 Program
On May 12, 2021
Faculty of Engineering, Khon Kaen University, Khon Kaen, Thailand

<i>Wednesday 12 May 2021</i>	
Room	Engineering Library Hall
08.30 - 09.00	Registration
09.00 - 09.30	Opening Ceremony
	Welcome Speech by <i>Assoc. Prof. Ratchaphon Suntivarakorn, PhD.</i> Dean, Faculty of Engineering, Khon Kaen University
	Opening Speech by <i>Assoc. Prof. Charnchai Panthongviriyakul, M.D.</i> President, Khon Kaen University
9.30 - 10.15	Keynote Speaker I : Direction of Thai Industrial Development in the Digital Age By <i>Mr. Kobchai Sungsitthisawad</i> Permanent Secretary, Ministry of Industry, Thailand
10.15 - 10.30	Refreshment Break
10.30 - 11.15	Keynote Speaker II : Socio-Economic Changes with AI and Robots By <i>Prof. Hideyuki Sawada</i> Waseda University, Japan
11.15 - 12.00	Keynote Speaker III : The University's Role in Sustainable Social Development in the Disruptive By <i>Prof. Supachai Pathumnakul</i> Deputy Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, Thailand
12.00 - 13.00	Lunch
13.00 - 13.30	Innovative Bioremediation of Highly PCDD/F-Contaminated Field Soil – Green and Sustainable Treatment Technologies By <i>Prof. Chitsan Lin</i> National Kaohsiung University of Science and Technology, Taiwan

Session 1			
Topic A: Civil Engineering and Construction Technology			
No.	Time	Paper ID	Title
	13.30-14.00	Invited Speaker : Prof. Atsushi FUKUDA (Japan)	
1	14.00-14.15	215	Development of a geopolymer made from bagasse ash for use as a cementitious material
2	14.15-14.30	117	Strength development and thermal conductivity of POFA lightweight geopolymer concrete incorporating FA and PC
3	14.30-14.45	165	Improving drying shrinkage and strength development of alkali-activated high-calcium fly ash using commercial-grade calcium sulfate as expansive additive
4	14.45-15.00	224	Experimental study of pile set-up of driven piles in Bangkok soft clay
5	15.00-15.15	120	Future Hydrological Drought Hazard Assessment under Climate and Land use Projections in Upper Nan River Basin, Thailand
6	15.15-15.30	125	An evaluation of stiffness properties of asphalt concrete material through resilient modulus and dynamic modulus tests
7	15.30-15.45	135	A preliminary examination of fly ash-based geopolymer mortar with an addition of waste iron powder: heat retention ability and mechanical properties
8	15.45-16.00	137	Electrical energy harvesting from asphalt concrete based on triboelectric nanogenerator concept
9	16.00-16.15	168	Large scale failure of waste dump at the Mae Moh open-pit lignite mine, Thailand
10	16.15-16.30	193	Local Geoid Improvement Using Least-Squares Collocation with Parameters for Topographic Height Determination in Thailand
11	16.30-16.45	242	Estimating fundamental periods for Thai buildings using ambient vibration data with HVSR Technique
12	16.45-17.00	208	Cyclic performance improvement of cement stabilized lateritic soil using natural rubber latex

Session 2			
Topic B: Electrical Engineering, Electronics and Telecommunication			
No.	Time	Paper ID	Title
	13.30-14.00	Invited Speaker : Dr. Steven H. Voldman (USA)	
1	14.00-14.15	147	Microbial Reduction of Bitter Melon (<i>Momordica charantia</i> L.) and Chan Khao (<i>Tarenna hoagensis</i> Pitard) Herb Powder by Dielectric Barrier Discharge Plasma for Food
2	14.15-14.30	124	A Comparative Study of Finite-Control-Set MPC and Quasi-Continuous-Control Set MPC for control of Permanent Magnet Synchronous Motor-Fed Back-to-Back Converter
Topic J : Biomedical Engineering and Technology			
	14.30-15.00	Invited Speaker : Prof. Jean-Christophe Lapayre (France)	
1	15.00-15.15	227	The effect of reduced graphene oxide and methionine film for electrochemical detection of sunset yellow
Topic H: Computer and Information Technology			
	15.15-15.45	Invited Speaker : Assoc. Prof. Julien Henriet (France)	
1	15.45-16.00	248	Analysis of temporal consistency management protocols for resource-constrained multi-agent systems
2	16.00-16.15	189	Strategy and barriers to overcome for Cambodian e-government: a discussion paper
3	16.15-16.30	190	Machine learning classifier to differentiate the hissing behavior from the other behavior of <i>Apis cerana</i> , Thailand

Session 3			
Topic D: Industrial Engineering, Logistics and Supply Chain			
No.	Time	Paper ID	Title
	13.30-14.00	Invited Speaker : Prof. Jozo Acksteiner (Germany)	
1	14.00-14.15	121	Hybrid genetic algorithm for multi-period vehicle routing problem with mixed pickup and delivery with time window, heterogeneous fleet, duration time and rest
2	14.15-14.30	182	Simulation and optimization model for cross-docking distribution center: case study of railway business
3	14.30-14.45	167	Integrated Self-Report and Observational Risk Assessment for Work-related Musculoskeletal Disorder in Small and Medium Enterprises
4	14.45-15.00	115	Workstation improvement to reduce muscle aches during silk degumming and dyeing in silk weaving profession in Nakhon Ratchasima province
5	15.00-15.15	112	The Impact of Supply Chain Linkages on the Business Performance of the Business: A Case Study in Vietnam
6	15.15-15.30	128	Curriculum development approach ranking of higher education institutions: an application of hybrid multiple criteria decision-making approach.
7	15.30-15.45	197	Designing Food Packaging of Bitter Melon Chips Using Kano and Quality Function Deployment : Case Study in Kripik Pare Pak Iphe
8	15.45-16.00	219	Reduction of Sewing Thread Stock by DMAIC Concept in Garment Industry
9	16.00-16.15	240	Integrated CAD/CAM with Neuro Fuzzy CAPP to predict CNC Turning Operation Time

Session 4			
Topic E: Energy Technology, Thermal Systems and Applied Mechanics			
No.	Time	Paper ID	Title
	13.30-14.00	Invited Speaker : Dr.Kesorn Pechrach Weaver (UK)	
1	14.00-14.15	181	Numerical heat transfer investigation in a solar receiver heat exchanger channel with punched elliptical-winglet vortex
2	14.15-14.30	241	A two-stage anaerobic digester of pig manure and food waste for biogas production with heat exchanger
3	14.30-14.45	184	3D Simulation on Turbulent Flow and Heat Transfer Behaviors in Five-start Corrugated Tube
4	14.45-15.00	213	Study of air distribution in tray dryer using computational fluid dynamics
5	15.00-15.15	207	Effect of Insole-footwear Combination on Foot Biomechanics: A Finite Element Study
6	15.15-15.30	131	An experimental investigation of an integrated system of split air conditioner and indirect evaporative cooler
7	15.30-15.45	146	Valorization of bioplastic through chemical process toward for biodiesel production
8	15.45-16.00	170	A methodology to characterizing natural fracture networks using experimental approach
9	16.00-16.15	214	Design and development of GNC systems for fully autonomous flight of a small fixed-wing UAVs flight simulator using meta-heuristics
Topic C: Agricultural Engineering and Food Technology			
1	16.15-16.30	211	Effects of operating conditions on quality attributes of instant brown rice porridge prepared by microwave assisted foam-mat drying
2	16.30-16.45	226	The effect of ultrasonic atomization and infrared heating assisted vacuum evaporation on evaporation rate, the color of pineapple juice

Session 5			
Topic F: Environmental Engineering and Management			
No.	Time	Paper ID	Title
	13.30-14.00	Invited Speaker : Prof. Eakalak Khan (USA)	
1	14.00-14.15	166	The synthesis of triamine-bearing porous silica for the effective adsorption of nitrate and phosphate ions
2	14.15-14.30	132	Application of Amberlite and Magnetic Ion-Exchange Resins for Removals of Dissolved Organic Matters in Sugar Mill Effluent
3	14.30-14.45	133	Removal of dissolved organic matter in sugar mill effluent by catalytic ozonation with activated carbon (O ₃ /GAC)
4	14.45-15.00	183	Insight into molecular weight cut off characteristics and reduction of melanoidin using microporous and mesoporous adsorbent
5	15.00-15.15	209	Effect of salinity concentrations on lipid content of <i>Chlorella vulgaris</i> in frozen seafood effluent
6	15.15-15.30	212	Impact of Multi-Air Plasma Jets on Biological Nitrogen Variance in Effluent of Membrane Bioreactor Pilot-Plant
7	15.30-15.45	127	Measured wet season of isoprene emission from forests in Northern Thailand
Topic G: Chemical Engineering			
	15.45-16.15	Invited Speaker : Assoc. Prof. C.W. Daniel Tsang (Hong Kong)	
1	16.15-16.30	196	Green diesel production from oleic acid deoxygenation using subcritical water under hydrogen-free condition
2	16.30-16.45	185	Stability of Pickering emulsion stabilized by spray-dried nanofibrillated cellulose and co-carriers mixtures as an emulsifier
3	16.45-17.00	169	An integrated approach to characterize naturally fractured reservoirs and quantify their properties in the bugani field
Topic C: Agricultural Engineering and Food Technology			
1	17.00-17.15	126	Characteristics and antioxidant activity of royal lotus pollen, butterfly pea flower, and oolong tea kombucha beverages

Session 6			
Topic I: Materials Science and Engineering			
No.	Time	Paper ID	Title
	13.30-14.00	Invited Speaker : Dr. Wikrom Vajragupta (Thailand)	
1	14.00-14.15	155	Properties of barium ferrite nanoparticles and bacterial cellulose-barium ferrite nanocomposites synthesized by a hydrothermal method
2	14.15-14.30	161	Fabrication of natural rubber-TiO ₂ nanocomposite for nanogenerator application
3	14.30-14.45	173	Improving Properties of Modified Silica by Admicellar Polymerization Technique for Inner Rubber Tube Products
4	14.45-15.00	179	Preliminary study of unmodified wax printing using FDM 3D-printer for jewelry
5	15.00-15.15	191	Effect of (Cr, Fe)-substitution at B sites of CuB _{1-x} (Cr _{1/2} Fe _{1/2}) _x O ₂ delafossite oxides on optical, magnetic, and dielectric properties
6	15.15-15.30	235	The study of optical and colossal dielectric properties of (Ga, Cu)-doped ZnO nanoparticles: DFT and experimental approaches
7	15.30-15.45	176	Prediction of earing profiles of aluminum alloy in cylindrical cup drawing through both finite element and analytical approaches
8	15.45-16.00	222	Study of Effect of Chemical Substances on Mechanical Properties of Natural Rubber Compound for Rubber Band Production using Design of Experiment
9	16.00-16.15	239	Preparation of dissolvable laundry detergent sheet: Effect of polyvinyl alcohol content
10	16.15-16.30	148	(La ³⁺ -Mg ²⁺) co-doped BiFeO ₃ nanopowders: Synthesis, characterizations, and giant dielectric relaxations