

Scientific Program

Day 2 : Thursday, 2 September 2021				
08.00–08.30	Conference Registration at http://conference2021.ri2c.org			
08:30–12:00	Parallel sessions (4 rooms)			
	<u>Room I</u> Innovative Sustainable Sciences (iSS)	<u>Room II</u> Innovative Materials Engineering (iME)	<u>Room III</u> Special session : Innovative Railway Technology & iME	<u>Room IV</u> Innovative Electricals and Electronics (iEE)
12.00–13.00	Break			
13.00–17.00	Parallel sessions (4 rooms)			
	<u>Room I</u> Innovative Sustainable Sciences (iSS)	<u>Room II</u> Innovative Materials Engineering (iME)	<u>Room III</u> Innovative Electricals and Electronics (iEE)	<u>Room IV</u> Innovative Electricals and Electronics (iEE)

2021 Research, Invention, and Innovation Congress (RI²C 2021)
1-2 September 2021 : Virtual Platform

Room I

Session : Innovative Sustainable Sciences (iSS)			
Chairman : Martfin P. Gundupalli			
Time	Paper ID	Title	Presenter
08.30–08.45	ISS2021-09	Value Added Gummy Jelly from Palmyra Palm (<i>Borassus flabellifer</i> Linn.)	Nutsuda Sumonsiri
08.45–09.00	ISS2021-14	Utilization of RS-3 Rice Starch into Development of Food for Elderly: A Ready-to-mix Beverage Case	Pattarawadee Watanakijcharoenman
09.00–09.15	ISS2021-19	Preservations, packaging materials and temperatures affected on quality changes of ready to-eat bamboo shoot during storage	Ratchanee Charoen
09.15–09.30	ISS2021-21	Pretreatment enhanced the physical and antioxidant stability of dried <i>Cordyceps militaris</i> by different drying conditions	Dechapon Chaiya
09.30–09.45	ISS2021-28	Effect of protein and prebiotic on the survival of encapsulated probiotic during storage	Patchanok Apiwattanasiri
09.45–10.00	ISS2021-29	Optimization and Characterization Freeze Dried Fish Protein Hydrolysate Production	Sasithorn Kongruang
10.00–10.15	ISS2021-35	Production and Quality Evaluation of Young Thai Jasmine Rice Flake Using Drum Dryer	Piyarach Kullamethee
10.15–10.30	ISS2021-37	Effect of hydrochloric acid extraction on yield and gel properties of gelatin from salted jellyfish by-products	Wiriyā Charoenchokpanich
10.30–10.45	ISS2021-38	Effect of pepsin hydrolysis on antioxidant activity of jellyfish protein hydrolyzate	Pratchaya Muangrod
10.45–11.00	ISS2021-42	Acute oral toxicity of zein nanoparticles with encapsulated gamma oryzanol in Sprague Dawley rats	Ubonphan Rodsuwan
11.00–11.15	ISS2021-01	Optimization of Enzyme Assisted Extraction of Chondroitin Sulfate from <i>Bohadschia argus</i> by Response Surface Methodology	Thanagorn Ruensodsai
11.15–11.30	ISS2021-02	Improvement of potassium permanganate pretreatment by enzymatic saccharification of rice straw for production of biofuels	Parita Mutrakulcharoen
11.30–11.45	ISS2021-04	Effect of sodium hydroxide pretreatment on released sugar yields from pomelo peel for biofuel production	Chaichana Chatkaew
11.45–12.00	ISS2021-03	Comparative evaluation of DNA extraction from rice's root-associated bacterial consortium for population structure study	Nichapat Kittiborwornkul

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Session : Innovative Sustainable Sciences (iSS)			
Chairman : Prapakorn Tantayotai			
Time	Paper ID	Title	Presenter
13.00–13.15	ISS2021-39	Use of waste mushroom beds for the production of value-added biodegradable fiber sheet	Walaiporn Suksai
13.15–13.30	ISS2021-40	Preparation and properties of biodegradable cat litter produced from cassava (<i>Manihot esculenta</i> L. Crantz) trunk	Nistha Saikew
13.30–13.45	ISS2021-13	Study on the effects of green-based plant extracts and water-proofers as anti-corrosion agents for steel-reinforced concrete slabs	Jagadeesh Bhattarai
13.45–14.00	ISS2021-34	Viscosity improvement of recycled poly (ethylene terephthalate) from waste bottle by adding antioxidants and chain-extender	Siriorn Isarankura Na Ayutthaya
14.00–14.15	ISS2021-15	Effect of Chelating Agents on Removal of Heavy Metal Cations of Cellulose-based Ion Exchange Resins from Water Hyacinth	Matcharee Suppapruak
14.15–14.30	ISS2021-22	Application of Biochar for Cadmium Stabilization in Contaminated Paddy Soil	Marisa Oranratmanee
14.30–14.45	ISS2021-10	Statistical design and optimization of nutritive value production by an oleaginous yeast <i>Yarrowia lipolytica</i> cultured in industrial – waste molasses	Benjamaporn Wonganu

Room II

Innovative Materials Engineering (iME)			
Chairman : Somrat Kerdsuwan			
Time	Paper ID	Title	Presenter
08.30–09.00	Invited Speaker	Insights into Synergistic Effects in Co-pyrolysis of Pinewood and Polycarbonate Waste	Prof. Ashwani K. Gupta University of Maryland
09.00–09.15	MATPR-D-21-05953	An Equilibrium Analysis of Hydrogen Production from Ethanol-Gasoline Fuel Blends Reforming	Attaphon chaimanatsakun
09.15–09.30	MATPR-D-21-04551	Molecular modeling of 2D graphene grain boundaries: Mechanical and Fracture aspects	Aditya Kataria
09.30–09.45	MATPR-D-21-06075	Predictive Investigation on Earring Profiles of Aluminum Alloy Sheet with a Cylindrical-Cup Drawing Test	Kanisorn Chalermsermsri
09.45–10.00	MATPR-D-21-06140	Oil Lubrication Effect on Roughness and Profile Error in Single Point Incremental Forming Product	Wannalak Laotaweesub
10.00–10.15	MATPR-D-21-06705	Influence of Sodium Bicarbonate Treatment on the Free Vibration Characteristics of Phoenix sp. Fiber Loaded Polyester Composites	G. Rajeshkumar
10.15–10.30	MATPR-D-21-06029	Optimization of Geometric Parameters for Mode-I Fracture Analyze on Glass Fiber Woven Mat Thermoplastic Laminated Composites	T. Palanisamy Sathishkumar
10.30–10.45	MATPR-D-21-05900	Basalt Fibre Reinforced Polymer Composites Filled with Nano Fillers: A Short Review	Vinay S. S.
10.45–11.00	MATPR-P-21-00003	Mechanical Property Evaluation of Hybrid Areca//Basalt/Carbon Fibers Reinforced Epoxy/Bio-Epoxy Composites	Yashas Gowda Thyavihalli Girijappa
11.00–11.15	MATPR-D-21-05811	Polybutylene succinate thermo-coated corn husk as laminar reinforcement for crosslinked tapioca starch composite foams	Manisara Phiriyawirut
11.15–11.30	MATPR-D-21-05867	Aluminium dross neutralization and its application as plant fertilizer	Rapeephun Dangtungee
11.30–11.45	MATPR-D-21-05504	Natural rubber/gelatin composite capsule shell for controlling	Chirasak Kusonwiriawong
11.45–12.00	MATPR-P-21-00002	Influence of Chemical Treatment on Thermal and Mechanical Properties of Novel Morinda Citrifolia Reinforced Bio-Epoxy Composites	Vinod Ayyappan

Room II

Innovative Materials Engineering (iME)			
Chairman : Tanaporn Rojhirunsakool / Wanlop Kitisatorn			
Co-Chairman : Pornsak Srisungsitthisunti			
Time	Paper ID	Title	Presenter
13.00–13.15	MATPR-D-21-05999	Effect of Cleaning Solution on Corrosion Resistance of AISI 304 Austenitic Stainless Steel in Railway Industry	Thammaporn Thublaor
13.15–13.30	MATPR-D-21-06925	Microstructure and Mechanical Behavior of Al6061/Ni/Cr Hybrid Nano Metal Matrix Composites with Addition of Graphene and Magnesium	Raj Kumar
13.30–13.45	MATPR-D-21-06071	Application of Flux Shielding Instead of Active Gas Shielding for Improving Quality of Arc Welded ASME SA455	Jednupong Palomas
13.45–14.00	MATPR-D-21-05502	Effects of Shear Deformation via Torsion on Tensile Strain-hardening Behavior of SCM415 Low-alloy Steel	Ukrit Thamma
14.00–14.15	MATPR-D-21-07369	Approximation in Ellingham diagram and calculation approach using heat capacity of oxides and metals constituent in stainless steels	Panya Wiman
14.15–14.30	MATPR-D-21-05957	Reaction of Aluminium Alloy in NaOH with 8-hydroxyquinoline for Application as Anode Electrode	Nuntawat Kiatisereekul
14.30–14.45	MATPR-D-21-07257	Effects of Deposition Time on Characteristics of RF Sputtered Silicon Carbide (SiC) Thin Films	Oluseyi Philip Oladijo
14.45–15.00	MATPR-D-21-05761	High temperature erosion of T22 steel coated by Cr–Ni electroplating, HVOF sprayed Stellite 6 and WC–12Co	Aumpava Kiatisereekul
15.00–15.15	MATPR-D-21-05690	Effect of thermal cycling and vibration on cracking in Sn-3.0Ag- 0.5Cu solder bump	Kittisak Pongvittayapanu
15.15–15.30	MATPR-D-21-06519	Development of Bio-based Epoxy Resin from Natural Oil	Thapanee Jaengmee
15.30–15.45	MATPR-D-21-05689	Electromagnetic wave absorbing properties of carbon black-filled natural rubber latex	Pornlada Pongmuksuwan
15.45–16.00	MATPR-D-21-05810	Effect of Advanced Oxidation Process for Chemical Structure Changes of Polyethylene Microplastics	Devita Amelia
16.00–16.15	MATPR-D-21-05955	Effects of Reinforcements on the Hardness of Composite Seal Rings	Penpisuth Thongyoug
16.15–16.30	MATPR-P-21-00001	Development of Ecofriendly Antimicrobial Materials Based on Biopolymers and Natural Antimicrobial Agents for Food Packaging Applications	Sandhya Alice Varghese
16.30–16.45	MATPR-D-21-05469	Eudragit® RL in 2-pyrrolidone as antisolvent based in-situ forming matrix	Thawatchai Phaechamud

Room III

Special session : Innovative Railway Technology & iME			
Chairman : Pithaya Jamsawang			
Time	Paper ID	Title	Presenter
08.30–08.45	MATPR-D-21-05996	Time-Dependent Chloride Transport Models for Predicting Service Life of Bridge Decks Under Chloride Attack	Aruz Petcherdchoo
08.45–09.00	MATPR-D-21-05958	Effects of Fillet Weld to Large-size Stud Shear Connector in Full-depth Precast Bridge Deck Panel	Krissachai Sriboonma
09.00–09.15	MATPR-D-21-05997	Time-Based Corrosion Cost Assessment of Chloride-Exposed Concrete Structure Using Probabilistic Approach	Pattanan Petchchedchoo
09.15–09.30	MATPR-D-21-05956	Fatigue Behavior of Steel Ring Confinement for a Clustered Stud Shear Connector in Full-Depth Precast Concrete Bridge Deck Panel	Krissachai Sriboonma
Innovative Railway Session			
Chairman : Tanaporn Rojhirunsakool			
10.00–10.10	Innovative Railway Session opening		
10.10–10.40	Keynote speaker	(Topic will be informed soon)	Prof.Gemmina Di Emido, Ghent University
10.40–10.55	Rail 01	Progress on Study of Microstructure and Mechanical Properties of Wire Arc Additive Manufactured Low Alloy Carbon Manganese Steels for Repairing of Railway Knuckle Couplers Application	Kittichai Sojiphan
10.55–11.10	Rail 02	Study of Microstructure Evolution on Mechanical Properties and Corrosion Behavior of Bainitic Steels for Railway Applications	Thammaporn Thublaor
11.10–11.25	Rail 03	Real-time Quality Monitoring of Laser Cladding by Infrared Camera	Pornsak Srisungsithisunti
11.25–11.40	Rail 04	Geotechnical engineering properties of cement fly ash gravel mixtures for application as column-supported highway and railway embankments	Pithaya Jamsawang
11.40–11.55	Rail 05	Comparative flexural performance of cement-treated soils reinforced with geogrids for use as subbases of railway structures	Pithaya Jamsawang
11.55–12.30	Railway Research Collaboration		

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Room III

Innovative Electricals and Electronics (iEE) : Information Communication Technology, Education and Related Topics			
Time	Paper ID	Title	Presenter
13.00–13.15	1570710956	Development Intelligence Career Prediction System Based on the Cognitive Technology for Producing Graduates to the Digital Manpower	Pongsaton Palee
13.15–13.30	1570711083	Development of Virtual Professional Training Community System to Develop Digital Teacher Competencies	Napajit Dusadee
13.30–13.45	1570711156	Synthesis of Multicultural Digital Publicist Competencies	Phudit Kannikar
13.45–14.00	1570711178	Synthesis of Digital Supervisor Competency	Chutirut Prasongmanee
14.00–14.15	1570711218	Transition Elements, Enterprise Architecture for Digital Entrepreneurial University	Tippawan Meepung
14.15–14.30	1570711493	Augmented Intelligence Coaching System	Sajeewan Pratsri
14.30–14.45	1570712566	The Development of 4D Model for Learning Management with Free Platform to Encourage the ICT Literacy Skills of Undergraduates	Kanitta Hinon
14.45–15.00	1570714144	Transfer of a Scientific Concept in the Field of Renewable Energy with a Creative Group Work	Seyyed Amin Sadat Sakkak
15.00–15.15	1570714153	Effect of Wide Observation of Nature in Renewable Energy Engineering Education	Yeganeh Ghandriz
15.15–15.30	1570714171	Attractive Educational Strategy Based on the Story on Hybrid Vehicles Integrated with the Human Family	Amin Yousefi
15.30–15.45	1570714184	Investigating the Transfer of Scientific Content with the Help of Comic Stories at the Level of Higher Education	Parham Karimi
15.45–16.00	1570705666	On Extended Generalized Weak Proximal Contractions	Manuel de la Sen
16.00–16.15	1570706814	Classes of Dual to Modified Ratio Estimators for Estimating Population Mean in Simple Random Sampling	Natthapat Thongsak

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Room IV

Innovative Electricals and Electronics (iEE) : Devices, Circuit and Power Systems			
Time	Paper ID	Title	Presenter
08.30–08.45	1570694033	A Study on the Design of A Semi-Cylindrical Capacitive Sensor for Intravenous Drip Detection	Theera Leeudomwong
08.45–09.00	1570710520	Modified Sliding Mode-Based Control of a Three-Level Interleaved DC-DC Buck Converter for Proton Exchange Membrane Water Electrolysis	Wattana Kaewmanee
09.00–09.15	1570711106	Design, Development, and Fabrication of an Intravenous Infusion Monitoring Device	Natapol Phetsuk
09.15–09.30	1570711340	Microcontroller and Internet of Things Application for Smart Restroom	Jirawat Thaenthong
09.30–09.45	1570711381	A New Low-Cost Hardware-In-The-Loop Simulator for Control of Power Electronics Systems Laboratory	Wattana Kaewmanee
09.45–10.00	1570711385	Design of Approximate 2DOF Digital Control for Widely Dimming LCL-T Resonant LED Driver	Satit Mangkalajan
10.00–10.15	1570712956	Temperature Controlling and Monitoring System of Mao-Wine Aging Tank for Local Enterprises	Kongphope Chaarmart
10.15–10.30	1570713584	Mini-Potentiostat for Low Power Chemical Sensing of Graphene-Carbon Paste Lab on a Chip	Kessarat Ugsornrat
10.30–10.45	1570713781	Application of Fall Detection for the Elderly: A Case Study of Thailand	Tapanee Treeratanaporn
10.45–11.00	1570714063	An Optical Fiber Monitoring and Alert System for A Passive Optical Network Based on IoT	Pubet Sangmahamad
11.00–11.15	1570714113	Evaluation of the Performance of a Controller Based on Indirect-Sliding Mode in a Renewable System	Mohammad Afkar
11.15–11.30	1570714125	Stability and Robustness Investigation of a Modular System Using a Large-Signal Average Model	Mohammad Afkar
11.30–11.45	1570714181	Design Guidelines of Passive Balancing Circuit for Li-Ion Battery for Bleeding Current Adjustment Using PWM Technique	Supanat Apipatsakul
11.45–12.00	1570711021	A Comparison of MPPT Solar Charge Controller Techniques: A Case for Charging Rate of Battery	Chantima Lapsongphon

Room IV

Innovative Electricals and Electronics (iEE) : Computer & Information Technology and Industry Applications			
Time	Paper ID	Title	Presenter
13.00–13.15	1570713386	The Development of Deep Learning Methods to Select Passion Fruit for the Ageing Society	Akksatcha Duangsuphasin
13.15–13.30	1570713708	Overmind, A Collaborative Decentralized Machine Learning Framework, the Interpretation of Network Behaviour	Puttakul Sakul-Ung
13.30–13.45	1570713782	Mobile Warehouse Management and Transportation Planning System for Wheat Flour	Auttanit Wongjak
13.45–14.00	1570713877	Deep Learning Technique for a Identify TE Student System by Face Recognition	Kanokwan Klinieam
14.00–14.15	1570713916	Text Compare and Grouping Program Using Dynamic Programming Algorithm	Auttanit Wongjak
14.15–14.30	1570714133	LoRa Network Based Multi-Wireless Sensor Nodes and LoRa Gateway for Agriculture Application	Boonyarit Kumket
14.30–14.45	1570714189	Automatic Sorting Machine Using Industrial Robot and Digital Image Processing	Chanin Joochim
14.45–15.00	1570713874	A Machine Vision Approach for Copper Plating Quality Control System Development	Kanokwan Klinieam
15.00–15.15	1570713911	A Training Set of Digital Image Processing for Object Inspection Using LabVIEW	Chainarong Yensiri
15.15–15.30	1570711452	Fully Connected Autonomous Subassemblies to Enable FMS and Apply Lean's Kanban for Workflow Management	Prasert Jirashayanon
15.30–15.45	1570713380	The Comparison of Methods for Mass Measurement on the Continuing Movement Conveyor Using Digital Processor	Wittaya Koodtalang
15.45–16.00	1570734543	Non-Population Metaheuristics with a New Fitness Evaluation to Minimise Total Penalty Costs for a Hybrid Flow Shop with Assembly Operations Scheduling Problem	Watcharapan Sukkerd
16.00–16.15	1570734550	An Improvement of Instance Generator Featuring Assembly Operations with Parallel Machines for Multi-Level and Multi-Operation Scheduling Problems	Watchara Songserm