

## SCIENTIFIC PROGRAM

Day 1 : Thursday, 8 August 2024				
Room: Fortune IV	8:00 a.m.–9:00 a.m.	Conference Registration		
Room: Grand Ballroom	9:00 a.m.–9:10 a.m.	Greeting and Welcoming by Master of Ceremony (MC)		
	9:10 a.m.–9:20 a.m.	Opening Session Welcome Speech from Conference Chair: Professor Somrerk Chandra-Ambhon Vice President for Research and Technology Development of KMUTNB		
	9:20 a.m.–9:30 a.m.	General Introduction of RI <sup>2</sup> C 2024		
	9:30 a.m.–10:15 a.m.	<b>Keynote Speaker I : Mr. Kritsada Uttamote</b> BMW (Thailand) Co., Ltd. Topic : Moving towards Electrification		
	10:15 a.m.–11:00 a.m.	<b>Keynote Speaker II : Mr. Chatchai Loybundit</b> BCPG Public Company Limited, Thailand Topic : Accelerating Innovation Towards Net Zero: Pathways and Opportunities		
Room: Fortune Gold	11:00 a.m.–11:15 a.m.	Poster Presentation / Coffee Break		
Room: Grand Ballroom	11:15 a.m. –12:00 p.m.	<b>Keynote Speaker III : Prof. Dr.Vutipong Areekul</b> Kasetsart University, Thailand Topic : Current Biometric Research: Strategies for Surviving in a Competitive Research Environment		
12:00 p.m.–1:00 p.m.		Lunch Break		
Room: Fortune I, II, III	1:00 p.m.–2:30 p.m.	Parallel sessions (3 rooms)		
		<b>Fortune I</b> Innovative Electricals and Electronics (iEE)	<b>Fortune II</b> Innovative Electricals and Electronics (iEE)	<b>Fortune III</b> Innovative Mechanical and Materials (iMM)
		1571038613	1571034747	RI2C_2024_Paper_4
		1571039171	1571034750	RI2C_2024_Paper_5
		1571039133	1571039162	RI2C_2024_Paper_6
		1571048833	1571046810	RI2C_2024_Paper_44
1571058311	1571034762	RI2C_2024_Paper_45		
1571058316	1571035941	RI2C_2024_Paper_46		
2:30 p.m.–2:40 p.m.		Break		
Room: Fortune I, II, III	2:40 p.m.–3:55 p.m.	<b>Fortune I</b> Innovative Electricals and Electronics (iEE)	<b>Fortune II</b> Innovative Electricals and Electronics (iEE)	<b>Fortune III</b> Innovative Mechanical and Materials (iMM)
		1571034387	1571039128	RI2C_2024_Paper_48
		1571039456	1571048834	RI2C_2024_Paper_58
		1571035539	1571048836	RI2C_2024_Paper_11
		1571039313	1571048843	RI2C_2024_Paper_12
		1571039409	1571048847	1571037606

<i>Room:</i> <i>Fortune Gold</i>	3:55 p.m.–4:10 p.m.	<b>Poster Presentation / Coffee Break</b>		
<i>Room:</i> <i>Fortune I, II, III</i>	4:10 p.m.–5:40 p.m.	<b>Fortune I</b>	<b>Fortune II</b>	<b>Fortune III</b>
		<b>Innovative Electricals and Electronics (iEE)</b>	<b>Innovative Electricals and Electronics (iEE)</b>	<b>Innovative Mechanical and Materials (iMM)</b>
		1571037869	1571033986	RI2C_2024_Paper_50
		1571051818	1571034006	RI2C_2024_Paper_10
		1571051819	1571034887	RI2C_2024_Paper_61
		1571051820	1571039021	RI2C_2024_Paper_20
		1571051821	1571039022	RI2C_2024_Paper_18
		1571058315	1571039024	RI2C_2024_Paper_57
<i>Room:</i> <i>Fortune Gold</i>	5:40 p.m.–6:00 p.m.	<b>Poster Presentation</b>		
<i>Room:</i> <i>Platinum Hall</i>	6:00 p.m.–8:00 p.m.	<b>Dinner Party</b>		

**\*\* Oral Presentation 15 min (12 min presentation + 3 min Q&A) \*\***

### Fortune I

<b>Innovative Electricals and Electronics (iEE)</b>			
Time	Paper ID	Title	Authors
1:00-1:15 p.m.	1571038613	Study of the electromagnetic absorber made by natural rubber composites based on Fe <sub>3</sub> O <sub>4</sub>	Kiadtisak Salayong, Titipong Lertwiriapapa, Pornlada Pongmuksuwan, Wanlop Kitisatorn
1:15-1:30 p.m.	1571039171	Comparative study of PEC half-plane diffraction between CST and UTD	Montree Saowadee, Suramate Chalermwisutkul, Titipong Lertwiriaprapa
1:30-1:45 p.m.	1571039133	Electromagnetic (EM) Spherical Near-Field Interpolation Using Discrete Cosine Transform (DCT) techniques	Kitiphon sukpreecha, Titipong Lertwiriaprapa, Danai Torrungrueng, Suramate Chalermwisutkul, Kittisak Phaebua
1:45-2:00 p.m.	1571048833	DESIGN OF A KU BAND MICROSTRIP ANTENNA FOR SATELLITE COMMUNICATION	Ramesh Deshpande, Gottumukala Varshini, G.Abhi Ram, Penmetsa Meher Chaitanya Varma, Penmetsa Sriya, Naresh kumar B
2:00-2:15 p.m.	1571058311	Radiation Analysis of Slotted Array Antenna on Coated Curved Surface Using High-frequency Technique	Kittisak Phaebua, Titipong Lertwiriaprapa, Danai Torrungrueng, Suramate Chalermwisutkul
2:15-2:30 p.m.	1571058316	Development of a Rotated 3D-Printed Lens Assembly Integrated with an Ultra-Wideband Antenna for Beam Steering Applications	Patchadaporn Sangpet, Virote Pirajanchai, Suramate Chalermwisutkul, Nonchanutt Chudpooti
2:30-2:40 p.m.	<b>Break</b>		
<b>Innovative Electricals and Electronics (iEE)</b>			
Time	Paper ID	Title	Authors
2:40-2:55 p.m.	1571034387	Development of Multi-Resonance Chipless RFID Tag for Moisture Sensing	Thanyawut Sukapan, Patharapol Tambanjong, Ruslee Sutthaweekul, Pisit Vanichchanunt, Sukritta Paripurana, Wilaiporn Saelee, Adi Mahmud Jaya Marindra
2:55-3:10 p.m.	1571039456	Clustering Interval Effects on Dynamic CoMP Clustering in Ultra-Dense Networks	Kittipong Nuanyai, Phornthip Tarbut, Soamsiri Chantaraskul
3:10-3:25 p.m.	1571035539	Design and Development of Electric Motor Torque Meter Using Microcontroller	Peerawat Meesuk, Natthaphong Nak-Udom, Kittiphong Phimyotha
3:25-3:40 p.m.	1571039313	Design of Digital Twins for Collaborative Robots from Universal Robots	Borihan Butsanlee, Watcharin Pongaen, Nuttapon Rothong, Songkran U-Thathong
3:40-3:55 p.m.	1571039409	Automatic Vehicle License Plate Detection from Security Cameras using Deep Learning Techniques	Wichan Thumthong, Phayung Meesad
3:55-4:10 p.m.	<b>Poster Presentation / Coffee Break</b>		

### Innovative Electricals and Electronics (iEE)

Time	Paper ID	Title	Authors
4:10-4:25 p.m.	1571037869	A Compact and Low Profile UWB All-Textile antenna for WBAN Applications	Wanwisa Thaiwirot, Jariyane Ardhan, Saowarat Prengsri, Suramate Chalermwisutkul
4:25-4:40 p.m.	1571051818	Design of 0.26 THz Low-Loss Single-Mode 3D-Printed Anti-Resonant Fibers	Li Bin, Huihuang Li, Zhenyi Xia, Nutapong Somjit, Nonchanutt Chudpooti, Binbin Hong
4:40-4:55 p.m.	1571051819	Optimization of Heatsink Design for Enhanced Thermal Management in LED-Based Optical Wireless Communication Systems for In-Pipe Inspection Robots	Kamol Boonlom, Rungrat Viratikul, Jarun Khonrang, Tim Amsdon, Nonchanutt Chudpooti, Suppat Rungraungsilp, Ian Robertson, Panuwat Janpugdee, Nutapong Somjit
4:55-5:10 p.m.	1571051820	All-dielectric Frequency Selective Surface Using 3D-Printable Material for Sub-THz Applications	Nutchanon Ngamthanacom, Taran Anusorn, Rungrat Viratikul, Nonchanutt Chudpooti, Panuwat Janpugdee, Nutapong Somjit
5:10-5:25 p.m.	1571051821	Development of a Phased Array Feeds Prototype Using a Uniform Linear Array Antenna for Direction of Arrival Estimation Applications	Nattapong Duangrit, Attapon Bunwong, Wijitra Potakum, Apichat Leckngam, Songklod Punyawarin, Nonchanutt Chudpooti
5:25-5:40 p.m.	1571058315	CPW-fed Monopole Antenna with 3.5/5.5 GHz Band-Notched Characteristics for Ultrawideband Applications	Nipont Tangthong, Pichet Moeikham, Patchadaporn Sangpet, Atthakorn Jamnien, Prayoot Akkaraekthalin, Nonchanutt Chudpooti

## Fortune II

Innovative Electricals and Electronics (iEE)			
Time	Paper ID	Title	Authors
1:00-1:15 p.m.	1571034747	Enhancing Sensor-based Human Activity Recognition Using Hybrid Deep Learning and Data Augmentation	Sakorn Mekruksavanich, Wikanda Phaphan, Anuchit Jitpattanakul
1:15-1:30 p.m.	1571034750	Squeeze-and-Excitation Hybrid Network for Biometric Identification via Photoplethysmography	Sakorn Mekruksavanich, Wikanda Phaphan, Anuchit Jitpattanakul
1:30-1:45 p.m.	1571039162	Optimization of Smoothing Parameters in Splines in GWAS Using a Replication Strategy	Chanunya Pailoung, Pianpool Kamoljitprapa, Sirikanlaya Sookkhee
1:45-2:00 p.m.	1571046810	Statistical analysis for genome data based on multiple SNPs using kernel machine based test	Pianpool Kamoljitprapa, Sirikanlaya Sookkhee, Orathai Polsen
2:00-2:15 p.m.	1571034762	Bilinear Neural Network Construction for a Fractional Konopelchenko-Dubrovsky-KaupKupersmidt Equatio	Nguyen Minh Tuan, Phayung Meesad
2:15-2:30 p.m.	1571035941	Markov Chain-Based Stock Forecasting: A Case Study on ADVANC Using Moving Averages	Patchanok Srisuradetchai
2:30-2:40 p.m.	<b>Break</b>		
Innovative Electricals and Electronics (iEE)			
Time	Paper ID	Title	Authors
2:40-2:55 p.m.	1571039128	On the Properties of New Mixture Gamma and Nakagami Distribution	Ibrahim Abdullahi, Obalowu Job, Wikanda Phaphan
2:55-3:10 p.m.	1571048834	The Effect of Trust, Perceived Risk, User Interface and User Experience on M-Commerce's Purchase Intention	Suryanto, Anderes Gui, Adele B L Mailangkay, Siti Rohaida Mohamed Zainal, Erwin Halim, Steven Apriyadi
3:10-3:25 p.m.	1571048836	From Skepticism to Acceptance: Trust and Behavior in Smart City Adoption	Anderes Gui, Yosefin Aprilia, Dedy Syamsuar, Siti Rohaida, Erwin Halim, Daniel Kartawiguna
3:25-3:40 p.m.	1571048843	The Influence of Users' Information Needs Regarding Diabetes on Their Intention to Use Health Platforms	Erwin Halim, Silvia Natalia, Tomy Khosasi, Anderes Gui, Daniel Kartawiguna, Placide Poba-Nzaou
3:40-3:55 p.m.	1571048847	Ten Important Factors for Massive Open Online Courses (MOOC) Providers as a Learning Technology Platform	Yakob Utama Chandra, Erwin Halim
3:55-4:10 p.m.	<b>Poster Presentation / Coffee Break</b>		

<b>Innovative Electricals and Electronics (iEE)</b>			
<b>Time</b>	<b>Paper ID</b>	<b>Title</b>	<b>Authors</b>
4:10-4:25 p.m.	1571033986	A Simple Transimpedance-mode Instrumentation Amplifier Based on Only Single Second Generation Voltage Conveyor (VCII)	Burin Theppota, Montree Siripruchyanun
4:25-4:40 p.m.	1571034006	A Versatile Precision Rectifier Providing Both Half-wave and Full-wave Outputs Using VCII <sub>s</sub>	Burin Theppota, Wiset Saksiri, Montree Siripruchyanun
4:40-4:55 p.m.	1571034887	Single VDGA-based Electronically Controllable Grounded Inductance Simulator	Burin Theppota, Montree Siripruchyanun
4:55-5:10 p.m.	1571039021	Fabrication and Experimental Study Screen Printed Carbon Paste on Lab on a Chip	Triwit Plurksasukkaseam, Kessararat Ugsornrat, Wichayaporn Kamsong, Chanpen Karuwan, Assawapong Sappat, Adisorn Tuantanont
5:10-5:25 p.m.	1571039022	Experimental Study of Electrowetting on Dielectric Combine with Electrochemical Sensor for Depressive Substance Analysis	Warisara Boonsiri, Kessararat Ugsornrat, Wichayaporn Kamsong, Chanpen Karuwan, Assawapong Sappat, Adisorn Tuantanont
5:25-5:40 p.m.	1571039024	Design of Screen Printed Lab on a Chip with Conductive ink	Thanakrit Thanacharoenchanaphas, Kessararat Ugsornrat, Adisorn Tuantanont

### Fortune III

#### Special session : Innovative Mechanical and Materials (iMM)

Chair: Prof. Pitthaya Jamsawang

Co-Chair: Prof. Panich Voottipruex

Time	Paper ID	Title	Authors
1:00-1:15 p.m.	RI2C_2024_Paper_4	The study of improved silty sand with stone columns under consolidation condition	Asarut Noorak, Marupatch Jammongwong, Uthairith Rochanavibhata
1:15-1:30 p.m.	RI2C_2024_Paper_5	Performance of using geocell for slope erosion control compared in different geocell installing areas	Supphanut Chuenjaidee, Nuttawut Thanasisathit, Uthairith Rochanavibhata
1:30-1:45 p.m.	RI2C_2024_Paper_6	The Mechanical Properties of Laterite Substituted with Cement and Bottom Ash	Sakda Lhajai, Marupatch Jammongwong, Nuttawut Thanasisathit
1:45-2:00 p.m.	RI2C_2024_Paper_44	Utilizing cement and eucalyptus wood to stabilize dredged sediments for use as road materials	Nunthanis Wongvatana, Manote Sappakittipakorn
2:00-2:15 p.m.	RI2C_2024_Paper_45	Root system architecture of wedelia triborata for reinforcement embankment modelling	Chinnakrit Ounjai, Raksiri Sukkarak, Panich Voottipruex, Suched Likitlersuang, Trung Nghia Phan
2:15-2:30 p.m.	RI2C_2024_Paper_46	Evaluating the efficiency of dust stone as an improvement material for cement gravel column	Teerawut Pansuwannakun, Raksiri Sukkarak, Panich Voottipruex, Siriphat Maneekaew, Ittipon Meepon
2:30-2:40 p.m.	<b>Break</b>		

#### Special session : Innovative Mechanical and Materials (iMM)

Chair: Prof. Pitthaya Jamsawang

Co-Chair: Prof. Panich Voottipruex

Time	Paper ID	Title	Authors
2:40-2:55 p.m.	RI2C_2024_Paper_48	Using triaxial geogrid in reinforcing crushed rock base constructed on soft soil subgrade	Hatairat Poorahong, Pochara Kruavit
2:55-3:10 p.m.	RI2C_2024_Paper_58	Experimental investigation of internal erosion of gap-graded sands	Kasidit Chawanaputorn, Jitakon Prasomsri, Suched Likitlersuang
3:10-3:25 p.m.	RI2C_2024_Paper_11	Influence of Temperature on Shear Strength and Elastic Stiffness Behaviours of Ottawa Sand under Triaxial Compression Test	Kosit Jariyatatsakorn, Warat Kongkitkul
3:25-3:40 p.m.	RI2C_2024_Paper_12	Utilization of Asphalt Waste Dust and Fly Ash for Sustainable Mortar	Jiratchaya Ayawanna, Namthip Kingnoi, Pimchanok Sertsoongnern, Salisa Chaiyaput
3:40-3:55 p.m.	1571037606	Using ERI and MASW for Subsurface Characterization of Pile Road Embankments	Khin Nyein Chan Kyaw, Avirut Puttiwongrak, Taweephong Suksawat
3:55-4:10 p.m.	<b>Poster Presentation / Coffee Break</b>		

## Innovative Mechanical and Materials (iMM)

Chair: Dr. Wikanda Sridech

Co-Chair: Dr. Natee Tanman

Time	Paper ID	Title	Authors
4:10-4:25 p.m.	RI2C_2024_Paper_50	Numerical Investigation of Process Parameters and Sample Size Influence on Heat Behavior and Material Characteristics for Coating Improvement in PTA Processes	Palida Hama, Tharanon Usana-Ampaipong, Peerawatt Nunthavarawong, Pruet Kowitwarangkul
4:25-4:40 p.m.	RI2C_2024_Paper_10	Techno-Economic Analysis between Traditional and Fused-Deposition Modeling-based Additive Manufacturing	Chanipa Nivasanon, Pornthep Anussornnitisarn, Kasin Ransikarbum
4:40-4:55 p.m.	RI2C_2024_Paper_61	Multidisciplinary Design Optimisation of UAVs: Conceptual Design of a MATLAB-Based Framework	Natee Tanman, Douglas Thomson, David Anderson
4:55-5:10 p.m.	RI2C_2024_Paper_20	High-Efficiency Oxygen Production through Autotuned Pressure Swing Adsorption Technology	Thana Chotchuangchutchaval, Pramot Wongnoopanao, Sarayut Kleepbua, Sitthichai Sarannat, Thotsaporn Kaewwichit, Naratip Sangsai, Sittichai Limrungruengrat, Nathapong Sukhawipat
5:10-5:25 p.m.	RI2C_2024_Paper_18	Accuracy of NIBP Monitors Service in The Queen Sirikit Heart Center of the Northeast Hospital Thailand, According to SMM02-1 Calibration Procedure	Saowalak Somjid, Theera Leedomwong, Sayrung Moonwicha, Tassanai Sanponpute
5:25-5:40 p.m.	RI2C_2024_Paper_57	Impact of CO <sub>2</sub> Exposure on the Compressive Strength, Carbonation Depth, and Surface Chemistry of Cement Mortar Cubes	Srideep Dasari, Lakshmi Thotakura, Laksh Goud, Madhav Chand Chowdary, Sirish Manuka, Suksun Amornraksa, Keerthi Katam
5:40–6:00 p.m.	<b>Poster Presentation (Room: Fortune Gold)</b>		
6:00–8:00 p.m.	<b>Dinner Party (Room: Platinum Hall)</b>		