

FINAL TECHNICAL PROGRAM
2022 IEEE Ninth International Conference on Communications and Electronics
(IEEE ICCE 2022)
July 27-29, 2022

SUBMISSION and ACCEPTANCE at GLANCE

- Number of submitted papers	193
- Number of full accepted papers	83
- Number of poster papers	29
- Acceptance rate of full papers	43.0%
- Number of submitting countries	32

PROGRAM AT A GLANCE

Wednesday, July 27, 2022

8:45 – 9:15	<p>Opening Ceremony: [Opening + Keynote] Location: Ballroom 1</p> <ul style="list-style-type: none"> – Welcome speeches: Prof. Mai Thanh Phong, General Co-Chair, Rector of Ho Chi Minh City University of Technology, Vietnam (Host Institution–ICCE2022) – Conference introduction: Prof. Dr. Tuan Do-Hong, LOC Co-Chair, Ho Chi Minh University of Technology, Vietnam
	<p>Keynote Session Time: 9:15 – 10:45 Location: Ballroom 1 Session Chair: Prof. Thuong Le-Tien, Ho Chi Minh University of Technology, Vietnam</p>
9:15 –	<p>Keynote 1: <i>“CMOS based sub-THz Wireless Transceivers for Future Communications: Directions and Remaining Issues”</i></p>

10:00	by Sang-Gug Lee, KAIST, Daejeon, Korea		
10:00 – 10:45	Keynote 2: “High Penetration Renewable Energy and the Role of Energy Storage” by Eduard Muljadi, Auburn University, Alabama, USA		
10:45 – 11:15	Coffee Break		
11:15 – 11:35	Industrial talk: “Solid-State RF Energy Technology” by Dr. Sanghun Lee, CEO, Wavepia Inc.		
11:35 – 13:00	Lunch at the restaurant Cookbook Café		
13:00 – 14:30	Tutorial 1: “Open Campus Networks - Driving the Evolution of 5G to 6G” by Thomas Magedanz, Technische Universität Berlin, Fraunhofer FOKUS, Germany	Tutorial 2: “From Digital Twins to the Metaverse: Are they hype or reality?” by Huan X. Nguyen, Middlesex University London, U.K.	
	Room: KANDAPUR Chair by Prof. Florian Wamser (Lucerne University of Applied Sciences and Arts, Switzerland)	Room: SIMHA Chair by Prof. Sang-Gug Lee (KAIST, Korea)	
14:30 – 15:00	Coffee Break (Always available)		
Time	Room: KANDAPUR	Room: SIMHA	Room: VIRA
15:00 – 16:20	CNS–1: Communications 1	SS–2A: Advances in Design of Power Electronics Converters	SS–1: MmWave

16:20 – 17:40	CNS–2: Networking 1	SS–2B: Advances in Design and Control of Motor Drives and Energy Systems	ES– 1: Embedded System & IoT Applications
Thursday, July 28, 2022			
Time	Room: KANDAPUR	Room: SIMHA	Room: VIRA
8:30 – 10:20	CNS–3: UAV-aided Communications	SPA–1: Signal Analysis 1	ES– 2: Circuits
10:20 – 10:50	Coffee Break & Poster Session 1		
10:50 – 12:10	CNS–4: Communications 2	SPA-2: Image and Video Processing 1	ES– 3: Hardware Implementations
12:10 – 13:30	Lunch at the restaurant Cookbook Café		
13:30 – 15:10	CNS–5: IRS-aided Communications	SPA-3: Image and Video Processing 2	ME– 1: Microwave Devices and Systems
15:10 – 15:40	Coffee Break & Poster Session 2		
15:40 – 17:20	CNS–6: Networking 2	SPA-4: Machine Learning and Applications	ME– 2: Antenna Design and Applications
GALA DINER			

Time: 18:30 – 21:00

July 28, 2022

Venue: TBD

Friday, July 29, 2022

Keynote Session

Time: 8:30 – 9:10

Room: KANDAPUR

Session Chair: Prof. Thuong Le-Tien, Ho Chi Minh University of Technology, Vietnam

8:30 – 9:10 **Keynote 3:**
“Ultra-Reliable and Low-Latency Communications for 6G”
by Trung Q. Duong, Queen’s University Belfast, U.K.

9:10 – 9:30 **Coffee Break**

Time	Room: KANDAPUR	Room: SIMHA	Room: VIRA
9:30 – 11:30	PE-1: High and Low Power Converters	SPA-5: Signal Analysis 2	

11:30 – 13:30 **Lunch at the restaurant Cookbook Café**

13:30 – 17:20 **Panel Discussion and Internal LOC Meeting**

I. TRACK: COMMUNICATION NETWORKS AND SYSTEMS

Wednesday, July 27, 2022

CNS-1: Communications 1

Time: 15:00 – 16:20

Room: KANDAPUR

Session chair: Prof. Oh-Soon Shin (Soonsil University, Korea)

Time	Title	Presenter
15:00 – 15:20	Optimal User Pairing for NOMA-Assisted Cell-Free Massive MIMO System	Oh-Soon Shin (Soonsil University, Korea)
15:20 – 15:40	On Optimal Channel Uses in Ultra-Reliable Short-Packet Relaying Communications	Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden)
15:40 – 16:00	De-Multiplexing of NOMA VLC Signals Using Probabilistic Neural Network	Thai Pham Quang (HoChiMinh City University of Technology, Vietnam)
16:00 – 16:20	Joint Optimization of Clustering and Resource Allocation Based on Game Theory for Ultra-Dense Networks	Tinh T. Bui (Ho Chi Minh City University of Technology, Vietnam)

CNS-2: Networking 1

Time: 16:20 – 17:30

Room: KANDAPUR

Session chair: Prof. Nguyen Huu Thanh (Hanoi University of Science and Technology, Vietnam)

Time	Title	Presenter
16:20 – 16:50	Invited talk: Cellular IoT Traffic: Some Insights into Global Roaming and IoT Traffic Characteristics	Florian Wamser (Lucerne University of Applied Sciences and Arts, Switzerland)
16:50 – 17:10	Data-Driven Network Performance Prediction for 5G Networks: A Graph Neural Network Approach	Mahnoor Yaqoob (Middlesex University, United Kingdom)
17:10 – 17:30	Rate Adaptation: A Practical Algorithm for Heterogeneous Wi-Fi Networks	Ngoc-Khuyen Le (VNPT Technology, Vietnam)

Thursday, July 28, 2022

CNS-3: UAV-aided Communications

Time: 8:30 – 10:10

Room: KANDAPUR

Session chair: Prof. Sunghwan Kim (University of Ulsan, Korea)

Time	Title	Presenter
8:30 – 8:50	Optimization of UAV-Mounted Intelligent Reflecting Surface for the Downlink of Cellular Systems	Mai T. P. Le (Danang University of Science and Technology, Vietnam)
8:50 –	Path Planning for UAV Harvesting Information from Dynamical Wireless Sensor Nodes at Sea	Tu Dac Ho (The Arctic University of Norway - UiT & Electrical Engineering, Norway)

9:10		
9:10 – 9:30	Short-Packet Communication for Cooperative UAV-Based MIMO Systems with Rate Splitting Multiple Access	Thai-Hoc Vu (University of Ulsan, Korea)
9:30 – 9:50	On the Spectral Efficiency Analysis and Optimization for UAV-Relay Massive MIMO Network	Mai T. P. Le (Danang University of Science and Technology, Vietnam)
9:50 – 10:10	Protection Solution for an EH IoT Networks Under a Cooperative UAV Eavesdropper and Malicious Jammer Attack	Tu Dac Ho (Duy Tan University, Vietnam)
10:10 – 10:50	Coffee Break & Poster Session 1	

CNS-4: Communications 2

Time: 10:50 – 12:10

Room: KANDAPUR

Session chair: Prof. Hans-Jürgen Zepernick (Blekinge Institute of Technology, Sweden)

Time	Title	Presenter
10:50 – 11:10	Performance Evaluation of the Angle of Arrival of LoRa Signals Under Interference	Hussein Zeaiter (University of Franche-Comte, France)
11:10 – 11:30	Non-Asymptotic Bounds of Point-To-Point Communication with or Without Perfect Feedback Using α -Information Theory	Olivier Rioul (Telecom Paris, Institut Polytechnique de Paris, France)
11:30 – 11:50	Large-Scale MIMO Communications with Low-Resolution ADCs Using 16-Ary QAM and Protograph LDPC Codes	Duc Hoang (Posts and Telecommunications Institute of Technologies, Vietnam)
11:50 – 12:10	Power Control in a Modified Strict Frequency Reuse Algorithm Utilizing Deep Q-Learning	Sinh Cong Lam (VNU - University of Engineering and Technology, Vietnam)
12:10 – 13:30	Lunch at the restaurant Cookbook Café	

CNS-5: IRS-aided Communications

Time: 13:30 – 15:10

Room: KANDAPUR

Session chair: Prof. Insoo Koo (University of Ulsan, Korea)

Time	Title	Presenter
13:30 – 13:50	Aerial IRS-Aided Vertical Backhaul FSO Networks over Fisher-Snedecor F Turbulence Channels	Hoang D. Le (University of Aizu, Japan)
13:50 – 14:10	Secrecy Rate Optimization for IRS-Aided MIMO Cognitive Radio Systems with SWIPT	Vo The Duy (Ho Chi Minh City University of Technology (HCMUT))
14:10 – 14:30	Performance Analysis of Uplink MISO Systems with RIS Selections and MRC/SC Configurations	Khac-Tuan Nguyen (University of Ulsan, Korea)

14:30 – 14:50	Secrecy Outage Performance Analysis for IRS-Aided Cognitive Radio NOMA Networks	Tu-Trinh Thi Nguyen (Ho Chi Minh City University of Technology (HCMUT))
14:50 – 15:10	Information Security in Intelligent Reflecting Surface-Aided Two-Way Network	Pham Viet Tuan (Hue University, Vietnam)
15:10 – 15:40	Coffee Break & Poster Session 2	
CNS–6: Networking 2 Time: 15:40– 17:20 Room: KANDAPUR Session chair: Prof. Huan Nguyen (Middlesex University, England)		
Time	Title	Presenter
15:40 – 16:00	Safety Message Broadcast Reliability Enhancement MAC Protocol in VANETs	Duc Ngoc Minh Dang (FPT University, Ho Chi Minh, Vietnam)
16:00 – 16:20	Edge-Case Integration into Established NAT Traversal Techniques	Simon Keller (University of Wuerzburg, Germany)
16:20 – 16:40	IoT Management Services: A Comparative Assessment of Popular FIWARE Agents	Jorge Sá Silva (University of Coimbra, Portugal)
16:40 – 17:00	A Hierarchical Model Based Survivability and Resiliency Evaluation of Medical Edge Networks	Tuan Anh Nguyen (Konkuk University, Korea)
17:00 – 17:20	Effective Authentication Mechanism for Vehicular Fog Infrastructure	Phung Kieu Ha (Hanoi University of Science and Technology, Vietnam)
GALA DINER Time: 18:30 – 21:00 July 28, 2022 Venue: TBD		

II. TRACK: ELECTRONIC SYSTEMS

Wednesday, July 27, 2022

ES- 1: Embedded Systems & IoT Applications

Time: 16:20 – 17:30

Room: VIRA

Session chair: Dr. Tran Hoang Linh (Ho Chi Minh University of Technology, Vietnam)

Time	Title	Presenter
16:20 – 16:50	Feature Reinforcement in Intelligent Automated External Defibrillators for Sudden Cardiac Arrest Detection	Minh Tuan Nguyen (Posts and Telecommunications Institute of Technology, Vietnam)
16:50 – 17:10	Implementation of an Irregular Lung Sound Diagnostic System	Vinh Truong Quang (Ho Chi Minh City University of Technology, Vietnam)
17:10 – 17:30	User-Item Correlation in Hybrid Neighborhood-Based Recommendation System with Synthetic User Data	Tan Nghia Duong (Hanoi University of Science and Technology, Vietnam)

Thursday, July 28, 2022

ES- 2: Circuits

Time: 8:30 – 9:50

Room: VIRA

Session chair: Dr. Pham Nguyen Thanh Loan (Hanoi University of Science and Technology, Vietnam)

Time	Title	Presenter
8:30 – 8:50	A Fast-Lock Technique for Digital Sub-Sampling Fractional-N Phase-Locked-Loops	Tuan Minh Vo (University of Science and Technology & The University of Danang, Vietnam)
8:50 – 9:10	A 0.47- μ W Multi-Stage Low Noise Amplifier Employing 0.2-V-Supply OTA	Viet Nguyen-Thien (Hanoi University of Science and Technology, Vietnam)
9:10 – 9:30	A Protein Preconcentration Platform Utilizing Dual Gate Structure and Ion-Selective Membrane	Phu Nguyen Dang (Vietnam National University, Hanoi, Vietnam)
9:30 – 9:50	A 5.8- μ W 61.29-dB-SNDR 10-Bits Configurable EEG Acquisition System	Tien-Dung Le Van (Hanoi University of Science and Technology, Vietnam)
9:50 – 10:20	Coffee Break & Poster Session 1	

ES- 3: Hardware Implementations

Time: 10:20 – 11:20

Room: VIRA

Session chair: Dr. Tran Hoang Linh (Ho Chi Minh University of Technology, Vietnam)

Time	Title	Presenter
10:20 – 10:40	An Efficient Masking Method for AES Using Tower Fields	Phuong Nguyen (Le Quy Don Technical University, Vietnam)

10:40 – 11:00	Enhanced Model of Long-Short Term Memory for Music Generation in Hardware	Thinh Quang Do (HCM University of Technology, Vietnam)
11:00 – 11:20	Implementation of a 32-Bit RISC-V Processor with Cryptography Accelerators on FPGA and ASIC	Duc-Hung Le (The University of Science Ho Chi Minh City, Vietnam)
11:20 – 13:30	Lunch at the restaurant Cookbook Café	
GALA DINER Time: 18:30 – 21:00 July 28, 2022 Venue: TBD		

III. TRACK: MICROWAVE ENGINEERING

Thursday, July 28, 2022

ME– 1: Microwave Devices and Systems

Time: 13:30 – 15:10

Room: VIRA

Session chair: Prof. Jong-Wook Lee (Kyung Hee University, Korea)

Time	Title	Presenter
13:30 – 13:50	A Low Loss Wideband DC-67 GHz SP3T Switching Network on 45nm SOI-CMOS Process	Stephen Pancrazio (University of California Davis, USA)
13:50 – 14:10	A Compact 50W GaN MMIC Power Amplifier for C-Band Applications	Nam Nguyen (University of Technology, Vietnam)
14:10 – 14:30	Performance Evaluation of mmWave SAR Imaging Systems Using K-Domain Interpolation and Matched Filter Methods	Phuc Cao Hong Nguyen (University of Technology, VNUHCM)
14:30 – 14:50	Design of PCB Litz Coils for Improved Skin and Proximity Effects	Duyen Thi Nguyen (Ulsan Institute of Science and Technology-Korean, Korea)
14:50 – 15:10	Ultrashort Microwave Pulse Generation Based on Passive Mode Locking	Naum Ginzburg (Institute of Applied Physics RAS, Russia)
15:10 – 15:40	Coffee Break & Poster Session 1	

ME– 2: Antenna Design and Applications

Time: 15:40 – 17:20

Room: VIRA

Session chair: Prof. Muhammad Alam (Imam Mohammad Ibn Saud Islamic University (IMSIU), Saudi Arabia)

Time	Title	Presenter
15:40 – 16:00	Dual-Band Widebeam Dual-Polarized Antenna for Full-Duplex Communications	Son Xuat Ta (Hanoi University of Science and Technology, Vietnam)
16:00 – 16:20	High Gain and Wide Bandwidth Fabry-Perot Frequency-Reconfigurable Antenna for Multiple LTE Radio Wireless Communication	Truong Khang Nguyen (Ton Duc Thang University, Vietnam)
16:20 – 16:40	Investigation of Phase Compensation Lens to Improve the Gain of Vivaldi Antenna in Ka-Band	Thi-Hong-Le Dam (Grenoble Alpes University & Grenoble INP, France)
16:40 – 17:00	Preliminary Results on Convex Conformal Dielectric-Based Reflectarrays	Paola Pirinoli (Politecnico di Torino, Italy)
17:00 – 17:20	Design of Wideband High Isolation MIMO Antenna for 5G Mobile Terminal	Nguyen Khac Kiem (Hanoi University of Science and Technology, Vietnam)

GALA DINER

Time: 18:30 – 21:00

July 28, 2022

Venue: TBD

IV. TRACK: SIGNAL PROCESSING AND APPLICATIONS

Thursday, July 28, 2022

SPA-1: Signal Analysis 1

Time: 8:30 – 10:10

Room: SIMHA

Session chair: Prof. Ha Hoang Kha (Ho Chi Minh City University of Technology, Vietnam)

Time	Title	Presenter
8:30 – 8:50	A High-Order Convex Variational Model for Denoising MRI Data Corrupted by Rician Noise	Tran Dang Khoa Phan (Danang University of Science and Technology, Vietnam)
8:50 – 9:10	Possibility in Analyzing Real-Time LFM Signals Under Complex Jamming Conditions	Phuong Nguyen (Le Quy Don Technical University, Vietnam)
9:10 – 9:30	Semi-Blind Structure-Based SIMO System Estimation	Karim Abed-Meraim (University of Orleans & PRISME Lab., France)
9:30 – 9:50	Development of DNN-Based Diagnostic Platform for Self-Diagnosis of Electric Vehicle Automatic Transmission Controller Production Equipment	Rae Hyeon Kim (Tech University of Korea, Korea)
9:50 – 10:10	A Multi-Task Conformer for Spoofing Aware Speaker Verification	Thang Ta (Viettel Cyberspace Center, Viettel Group, Vietnam)
10:10 – 10:40	Coffee Break & Poster Session 1	

SPA-2: Image and Video Processing 1

Time: 10:40 – 12:00

Room: SIMHA

Session chair: Prof. Thanh-Hai Tran (Hanoi University of Science and Technology, Vietnam)

Time	Title	Presenter
10:40 – 11:00	Empirical Study of RepPoints Representation for Object Detection in Aerial Images	Huyen Ngoc N. Van (University of Information Technology, VNU-HCM, Vietnam)
11:00 – 11:20	Deep Learning Models for Skeleton-Based Action Recognition for UAVs	Dinh-Tan Pham (Hanoi University of Science and Technology & Hanoi University of Mining and Geology, Vietnam)
11:20 – 11:40	Automatic Recognition and Assessment of Physical Exercises from RGB Images	Quang-Tien Pham (Hanoi University of Science and Technology, Vietnam)
11:40 – 12:00	A Local Structure-Aware 3D Hand Pose Estimation Method for Egocentric Videos	Tung Son Tran (Hanoi University of Science and Technology, Vietnam)
12:00 – 13:30	Lunch at the restaurant Cookbook Café	

SPA-3: Image and Video Processing 2

Time: 13:30 – 14:50

Room: SIMHA

Session chair: Prof. Vu Hai (Hanoi University of Science and Technology, Vietnam)

Time	Title	Presenter
13:30 – 13:50	U-Shape-Based Architecture with Adjusted Bilateral Guided Aggregation Layer for Nuclei Image Segmentation	Thi-Thao Tran (Hanoi University of Science and Technology, Vietnam)
13:50 – 14:10	Image Super Resolution Using Deep Learning	Nguyen Phan Long Le (International University, Vietnam)
14:10 – 14:30	Comparative Study on Super Resolution Techniques for Upper Gastrointestinal Endoscopic Images	Thanh-Hai Tran (Hanoi University of Science and Technology, Vietnam)
14:30 – 14:50	Axial Attention MLP-Mixer: A New Architecture for Image Segmentation	Thi-Thao Tran (Hanoi University of Science and Technology, Vietnam)
14:50 – 15:40	Coffee Break & Poster Session 2	

SPA-4: Machine Learning and Applications

Time: 15:30-17:40

Room: SIMHA

Session chair: Prof. Thi-Lan Le (Hanoi University of Science and Technology, Vietnam)

Time	Title	Presenter
15:30 – 16:00	Invited talk: AIoT based Neural Decoding and Neurofeedback for a Cognitive Training Acceleration	Van-Tam NGUYEN (Télécom Paris - Institut Polytechnique de Paris)
16:00 – 16:20	CNN Quantization for Anatomical Landmarks Classification from Upper Gastrointestinal Endoscopic Images on Edge Devices	Minh-Quan Le (Hanoi University of Science and Technology, Vietnam)
16:20 – 16:40	Violence Detection Using Feature Fusion of Optical Flow and 3D CNN on AICS-Violence Dataset	Cuong Vo-Le (School of Electrical - Electronics Engineering, Hanoi University of Science and Technology, Vietnam)
16:40 – 17:00	Efficient Type and Polarity Classification of Chromosome Images Using CNNs: A Primary Evaluation on Multiple Datasets	Le Quoc Anh (AVITECH, University of Engineering and Technology, VNU, Hanoi, Vietnam)
17:00 – 17:20	A Method for Automatic Honey Bees Detection and Counting from Images with High Density of Bees	Dinh-Tu Nguyen (Ha Noi University of Science and Technology, Vietnam)
17:20 – 17:40	Applying Texture Feature Based on Local Ternary Pattern for Binary Particle Swarm Optimization plus Support Vector Machine-Based Classification of Rice Varieties	Nga Thi Kim Tran (Ho Chi Minh City University of Technology, Vietnam)

GALA DINER

Time: 18:30 – 21:00

July 28, 2022

Venue: TBD

Friday, July 29, 2022

SPA-5: Signal Analysis 2

Time: 9:30-10:50

Room: SIMHA

Session chair: Prof. Karim Abed-Meraim (University of Orleans & PRISME Lab., France)

Time	Title	Presenter
9:30 – 9:50	A Novel Method for Quantification of Vacant Parking Spaces at On-Street Parking Lots	Phung Kieu Ha (Hanoi University of Science and Technology, Vietnam)
9:50 – 10:10	A Cloud-Based Visual Map Reconstruction for UAV Navigation Using Wireless Streaming	Manh Tien Ha (Hanoi University of Science and Technology, Vietnam)
10:10 – 10:30	Speaker Diarization for Vietnamese Conversations Using Deep Neural Network Embeddings	Lam Tung Nguyen (Viettel, Vietnam)
10:30 – 10:50	Key Agreement Protocol Based on Chaotic Authenticated Encryption Scheme	Thang Manh Hoang (Hanoi University of Science and Technology, Vietnam)
11:30 – 13:30	Lunch at the restaurant Cookbook Café	

V. Power Electronics

Friday, July 29, 2022

PE-1: High and Low Power Converters

Time: 9:30 – 11:30

Room: KANDAPUR

Session chair: Prof. Nguyen Ngac Ky (Laboratory of Electrical Engineering and Power Electronics of Lille (L2EP), France)

Time	Title	Presenter
9:30 – 9:50	DC-Link Capacitor Voltage Balancing Control Without Auxiliary Circuits for Five-Level Hybrid T-Type Neural-Point Clamped Inverters	Min-Seok Kim (Yeungnam University, Korea)
9:50 – 10:10	Space Vector Pulse Width Modulation for Asymmetric Flying Capacitor Three-Level Inverter	Nam Xuan Doan (Ho Chi Minh City University of Technology, Vietnam)
10:10 – 10:30	Common-Mode Voltage Reduction in Two-Level Voltage Source Inverter with Carrier-Based PWM Strategies	Phong Nguyen Hong Le (Ho Chi Minh City University of Technology, Vietnam)
10:30 – 10:50	Decentralized Loss Balancing Control for Modular Multilevel Converter	Quoc Dung Phan (Ho Chi Minh City University of Technology, Vietnam)
10:50 – 11:10	Fault-Tolerant Control for Non-Sinusoidal Seven-Phase PMSMs with Similar Copper Losses	Ngac Ky Nguyen (Laboratory of Electrical Engineering and Power Electronics of Lille (L2EP), France)
11:10 – 11:30	Integrated Modified Three-Level Buck Converter with Flying Capacitor-Voltage Self-Balance	Quy Nguyen (Hanoi University of Science and Technology, Vietnam)

VI. Special Session on MmWave Technologies and Circuits for RF Systems

Wednesday, July 27, 2022

SS-1: MmWave

Time: 15:00 – 16:30

Room: VIRA

Session chair: Dr. Sanghun Lee (CEO, Wavepia Inc.) and Dr. Huynh Phu Minh Cuong (Ho Chi Minh City University of Technology, Vietnam)

Time	Title	Presenter
15:00 – 15:30	Invited talk: Development of V-Band CMOS PA and Phase Shifter for 60 GHz Phase Array System	Jong-Wook Lee (Kyung Hee University, Korea)
15:30 – 15:50	A Compact Codesign of Antenna-LNA Sub-System for 60GHz Communication	Muhammad Alam (Imam Mohammad Ibn Saud Islamic University (IMSIU), Saudi Arabia)
15:50 – 16:10	A 10W 27-31 GHz MMIC GaN Power Amplifier	Kim Van Phan (Ho Chi Minh City University of Technology, Vietnam)
16:10 – 16:30	A 22 - 30 GHz Single-Ended-To-Differential LNA Using Double Defected Ground Marchand Balun	Tan Do (Viettel High Technology Industries Corporation, Vietnam)

VII. Special Session on Advances in Design and Control of Power Converters, Motor Drives and Energy Systems

Wednesday, July 27, 2022

SS–2A: Advances in Design of Power Electronics Converters

Time: 15:00 – 16:20

Room: SIMHA

Session chair: Dr. Ramani Kannan (Universiti Teknologi Petronas, Malaysia)

Time	Title	Presenter
15:00 – 15:20	Input-Parallel Output-Parallel Current-Fed Isolated DC-DC Converters with Double Step-Down Converter	Chan-Viet Nguyen (Kyungpook National University, Korea)
15:20 – 15:40	Asymmetrical PWM Scheme Balancing Voltages Dual-Outputs Interleaved Four-Switch Buck-Boost DC-DC Converter	Dai Van Bui (Kyungpook National University, Korea)
15:40 – 16:00	A Two-Stage Interleaved Bridgeless SEPIC Based PFC Converter for Electric Vehicle Charging Application	Vinukumar Luckose (SEGI University Malaysia & Universiti Teknologi Petronas, Malaysia)
16:00 – 16:20	A Single-Phase Transformerless Buck-Boost Inverter with Common-Ground Feature	Gia Minh Thao Nguyen (Toyota Technological Institute, Japan)

SS–2B: Advances in Design and Control of Motor Drives and Energy Systems

Time: 16:20 – 17:40

Room: SIMHA

Session chair: Dr. Nguyen Chan Viet (Kyungpook National University, Korea)

Time	Title	Presenter
16:20 – 16:40	Direct Flux-Vector Oriented Control for Interior Permanent Magnet Synchronous Motor	Thien Phuoc Nguyen (National Cheng Kung University, Taiwan)
16:40 – 17:00	Reduction of Harmonics and Inverter Temperature in Experimental GaN-Based Motor Drive System at High Frequencies Using LC Filter	Gia Minh Thao Nguyen (Toyota Technological Institute, Japan)
17:00 – 17:20	Application of Artificial Intelligence in Detecting and Classifying Faults of Solar Panels	Ho Trong Dat Nguyen (Ho Chi Minh City University of Technology, Vietnam)

POSTER SESSION 1 while in parallel with Coffee Break

Thursday, July 28, 2022

Poster 1

Time: 10:20–10:50

Location: TBD

Time	Title	Presenter
1	Sum Rate of OTFS-NOMA Systems with K-Means Clustering of User Equipments	Hans-Jürgen Zepernick (Blekinge Institute of Technology, Sweden)
2	A Design of Machine Learning Supported Orchestration System for Cloud Resource Management	Phuong Bac Ta (Soongsil University, Korea)
3	Detecting and Tracking Vehicles on Highway Using Convolutional Neural Network	Phat Huu Nguyen (Hanoi University of Science and Technology, Vietnam)
4	Designing the Educational Certificate Management System Based on Hyperledger Fabric Platform	Trong-Minh Hoang (Thang Long University, Vietnam)
5	Analysis on Reliability and Security of Energy Harvesting-Assisted Relaying Communications	Pham Thi Dan Ngoc (PTITHCM, Vietnam)
6	A Study on the Performances of Metaheuristic Offloading Strategies in Mobile Edge Computing	Trong-Minh Hoang (Posts and Telecommunications Institute of Technology, Vietnam)
7	Research and Implementation of ORAN Processing Module for Fronthaul Network on FPGA in 5G - NR gNodeB Base Station	Hieu Tran (Viettel High Technology Industries Corporation, Viettel Group, Vietnam)
8	High Performance and Scalable Architecture for Flow Table on FPGA	Nguyen Phu Lam (Viettel High Technology, Vietnam)
9	A Study on Handover and Implement in 5G Non-Standalone Network	Tuan Ngoc Do (Viettel High Technology Industries Corporation (VHT), Vietnam)
10	Performance Study of Scalable 360 Video Streaming Methods	Nguyen Viet Hung (East Asia University of Technology, Vietnam)
11	A MEC-Assisted Network Selection Handover Control Scheme for Distributed Mobility Management (DMM) in the Vehicular Environment	Duy-Tuan Dao (University of Science and Technology Da Nang, Vietnam)
12	High-Performance 5G gNodeB Protocol Stack Design Based on DPDK	Thanh Van Nguyen (Viettel High Technology, Vietnam)
13	High-Voltage Driver for Anti-Fuse OTP Memory Applications in Standard CMOS Technology	Cong-Kha Pham (The University of Electro-Communications, Japan)
14	Development of A Portable Electrospinning Device for Nanofiber Membrane Generation	Phu Nguyen Dang (Vietnam National University, Hanoi, Vietnam)

POSTER SESSION 2 while in parallel with Coffee Break

Thursday, July 28, 2022

Poster 2

Time: 15:10– 15:40

Location: TBD

Time	Title	Presenter
1	Improve Color Feature Extraction Method and SIFT Algorithm for Iris Recognition System	Tan-Phuoc Ho (Ho Chi Minh City University of Technology (HCMUT), Vietnam)
2	Covid-19 Patient Severity Assessment in Chest X-Ray Using Deep Learning	Tuan Dinh Le (Pukyong National University, Korea)
3	Meta Learning and CNN-Based Model for Face Forgery Detection in Unseen Domain	Ki-Ryong Kwon (Pukyong National University, Korea)
4	Discriminant Multiple Direction Pattern for Palmprint Recognition	Thang Nguyen (University of Information Technology (UIT), Vietnam)
5	A Deep Learning Framework with Transfer Learning and XGBoost for Multi-Label Classification of Coronary Artery Disease from SPECT Polar Maps	Hau Tran (Hanoi University of Science and Technology, Vietnam)
6	What If Time, or past Context, Improved Human Activity Recognition in Smart Homes?	Damien Bouchabou (IMT Atlantique Engineer School, France)
7	Hand Tracking and Identifying in the Egocentric Video Using a Graph-Based Algorithm	Nguyen Sinh Huy (Military Institute of Science and Technology, Vietnam)
8	3D Reconstruction System Using Kinect Camera	Thuong Le-Tien (Ho Chi Minh University of Technology, Vietnam)
9	Human-Robot Collaboration with Dynamic Spatial Path in Mixed Reality Environment	Sanghun Nam (Changwon National University, Korea)
10	High Efficiency Anomalous Reflection Using Bianisotropic Metasurface	Anh Mai Nguyen (Ulsan National Institute of Science and Technology, Korea)
11	High Efficiency 25-W X-Band Power Amplifier MMIC Utilizing 250 nm GaN Technology	Nhat Tran (University of Technology, Vietnam)
12	A Random Carrier Frequency PWM Method for Decentralized Multilevel Full Bridge Converters	Quoc Dung Phan (Ho Chi Minh City University of Technology, Vietnam)
13	Processor-In-The-Loop Simulation of Space Vector Modulation for Three-Phase Voltage Source Inverter	Quan Kien Nguyen (Ho Chi Minh City University of Technology (HCMUT), Vietnam)
14	Characterizing Maximum Efficiency of PM Motors Using the Two-Port Chain Transmission Matrix	Shemon Kesia Baptiste (National Cheng Kung University, Taiwan)
15	Wind Power Forecasting Using Machine Learning Techniques	Gia Huy Le (Ho Chi Minh City University of Technology, Vietnam)