

IEEE ICCE 2026

The 2026 Eleventh IEEE International Conference on Communications and Electronics (ICCE)

www.ieee-icce.org

Sheraton Nha Trang Hotel & Spa, Nha Trang City,
Khanh Hoa Province, Vietnam
July 29-31, 2026

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PREFACE

Welcome to the 2026 IEEE 11th International Conference on Communications and Electronics (IEEE ICCE 2026 - <https://ieee-icce.org>), which is held at the Sheraton Nha Trang Hotel & Spa in Nha Trang City, Vietnam, from July 29 to 31, 2026. This biennial event is organized by Hanoi University of Science and Technology (HUST), Danang University of Science and Technology (DUT), and Ho Chi Minh City University of Technology (HCMUT), and is co-organized by the School of Electrical and Electronic Engineering (SEEE) of HUST.

IEEE ICCE 2026 holds a monumental significance as we commemorate two major historical milestones: the 20th anniversary of the IEEE ICCE conference series (2006–2026) and the 70th anniversary of the founding of Hanoi University of Science and Technology (HUST) - the host institution and the original birthplace of this conference series. These dual celebrations mark two decades of global research excellence and seven decades of HUST's leadership in science, technology, and engineering education.

The conference is technically sponsored by the Institute of Electrical and Electronics Engineers (IEEE) and the Korean Institute of Communications and Information Sciences (KICS) including IEEE Vietnam Section and other prestigious IEEE chapters. Furthermore, IEEE ICCE 2026 continues to receive strategic financial support from prestigious partners, including Samsung, Viettel Corporation, Tektronix, VNPT Technology, and Genetron Corporation, etc.

The technical program for this 11th edition focuses on transformative "hot topics" that are shaping the future of the industry, including True 6G Networks, Generative AI (LLM), Semiconductor Technology, and Sustainable Electronics. This year, the conference features specialized sessions on cutting-edge research such as Distributed AI across Edge-Cloud Continuum, 6G Non-Terrestrial Network Technologies, Intelligent Multimodal Perception, and Advances in Medical Imaging. These sessions, along with inspiring keynote talks from world-class researchers, provide a vibrant platform for potential collaborations between international experts and industrial bodies.

We would like to extend our deepest gratitude to the Technical Program Committee members and the reviewers for their invaluable assistance in maintaining the high academic standards of this conference. We are also indebted to the IEEE, KICS, IEEE Vietnam Section and all our technical societies for their continuous support. Special thanks are addressed to the members of the Local Organizing Committee for their dedication to organizing this milestone event.

It is our sincere hope that IEEE ICCE 2026 serves as a vital forum for exchanging scientific information and strengthening the network of scientists, researchers, and engineers worldwide. We also hope you enjoy the beautiful coastal scenery of Nha Trang City and find your stay both professionally rewarding and personally memorable.

General Co-Chairs:

Professor Inkyu Lee

Professor Serge Fdida

Professor Glenn Solomon

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Le Thi Phuong Mai	Danang Uni. of Science and Technology	Vietnam
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Ta Son Xuat	Hanoi Uni. of Science and Technology	Vietnam
Le Minh Thuy	Hanoi Uni. of Science and Technology	Vietnam
Huynh Phu Minh Cuong	Ho Chi Minh City Uni. of Technology-VNUHCM	Vietnam
<i>Signal Processing & Application:</i>		
Le Thi Lan	Hanoi Uni. of Science and Technology	Vietnam
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Nguyen Kien Trung	Hanoi Uni. of Science and Technology	Vietnam
Do Duc Tri	Ho Chi Minh City Uni. of Technology and Education	Vietnam
Phan Quoc Dung	Ho Chi Minh Uni. of Technology - VNUHCM	Vietnam
<i>Special Session on Intelligent Multimodal Perception and Cognitive Engineering:</i>		
Watanabe Katsumi	Waseda University	Japan
Roberto Caldara	University of Fribourg	Switzerland
Montri Phothisonothai	Kasetsart University	Thailand

Special Session on Distributed AI across Edge-Cloud Continuum:

Hoang Dinh	University Technology Sydney	Australia
Nguyen Huu Thanh	Hanoi Uni. of Science and Technology	Vietnam
Tran Thi Thanh Hai	Hanoi University of Science and Technology	Vietnam
Huynh Nguyen	University of Liverpool	UK
Nhien-An Le-Khac	University College Dublin	Ireland
Hung Nguyen	Adelaide University	Australia

Special Session on 6G Non-Terrestrial Network Technologies Toward Global Coverage:

Hans-Jürgen Zepernick	Blekinge Institute of Technology	Sweden
Trung Q. Duong	Memorial University	Canada
Nguyen Tien Hoa	Hanoi Uni. of Science and Technology	Vietnam
Nguyen Tai Hung	Hanoi Uni. of Science and Technology	Vietnam

Special Session on Advances in Medical Imaging and Image Processing:

Lawrence H Le	University of Alberta	Canada
Dean Ta	Fudan University	China
Edmond Lou	University of Alberta	Canada
Rui Zheng	ShanghaiTech University	China
Pham The Bao	Saigon University	Vietnam
Nguyen Viet Dung	Hanoi Uni. of Science and Technology	Vietnam

STATISTICS ABOUT SUBMISSION AND ACCEPTANCE

Items	#
- Number of reviewed papers	259
Number of Full-acceptance papers included in Proceedings	122
- Number of accepted poster papers included in Proceedings	27
- Acceptance rate of Full-acceptance papers included in Proceedings	47.10%
- Number of submitting countries	TBD

1. TECHNICAL PROGRAM AT A GLANCE

Wednesday, July 29, 2026

Time	LOCATION GRAND BALLROOM (on the First Floor)
8:30 – 9:00	Opening Ceremony: – Welcome message by host University – Welcome speech of General Co–Chair – Welcome speech by President of Samsung Vietnam – Conference introduction to IEEE ICCE 2026 by Technical Program Co-chair
Keynote Session 1 Time: 09:00 – 10:30 Session Chair: Professor Thomas Magedanz (Fraunhofer FOKUS Berlin, Germany)	
9:00 – 9:45	Keynote 1: <i>“6G Values and Technologies”</i> by Takehiro Nakamura (NTT DOCOMO, Inc., Japan)
9:45 – 10:30	Keynote 2: <i>“Advances in Millimeter-Wave Circuit Design for Future Communications”</i> by Kenichi Okada (Institute of Science Tokyo, Tokyo, Japan)
10:30 – 11:00	Coffee Break
Keynote Session 2 Time: 11:00 – 12:30	

Session Chair: Professor Serge Fdida (Sorbonne Université, France)				
11:00 – 11:45	Keynote 3: <i>“Ultrafast Laser-enabled High-resolution Ultrasonic Characterization of Semiconductor Interior Structures”</i> by Zhongqing SU (The Hong Kong Polytechnic University, Hong Kong, China)			
11:45 – 12:30	Keynote 4: <i>“AI on the Space Edge”</i> by Tat-Jun Chin (Adelaide University, South Australia, Australia)			
12:30 – 13:30	Lunch at <i>Feast</i> Restaurant (the 1st Floor)			
Time	LOCATION (on the 2nd Floor)			
	Hon Mun Room	Hon Ong Room	Hon Tam Room	Hon Tre Room
13:30 – 15:10	SS - Advances in Medical Imaging and Image Processing 1 (5 papers)	PE-1 (5 papers)	SS - Distributed AI across Edge-Cloud Continuum (6 papers)	OpenRIT6G Workshop
15:10 – 15:40	Coffee Break & Poster Session 1 – Posters in Signal Processing and Applications			
15:40 – 17:20	SS - Advances in Medical Imaging and Image Processing 2 (6 papers)	PE-2 (4 papers)	SS - 6G Non-Terrestrial Network Technologies Toward Global Coverage (5 papers)	OpenRIT6G Workshop

Thursday, July 30, 2026

Time	LOCATION (on the 2nd Floor)				
	Hon Mun Room	Hon Ong Room	Hon Tam Room	Hon Tre Room	Hon Chong Room
8:30 – 9:50	ES-1 (4 papers)	PE-3 (4 papers)	SP-1 (4 papers)	CNS-1 (4 papers)	TPC Meeting (8:30 – 9:45)
9:50 – 10:20	Coffee Break & Poster Session 2 – Posters in Communication Networks and Systems				Global Educational Program for Samsung Semiconductor (G-EPSS) (10:00 - 12:00)
10:20 – 12:00	ES-2 (5 papers)	PE-4 (3 papers)	SP-2 (5 papers)	CNS-2 (5 papers)	
12:00 – 13:30	Lunch at <i>Feast</i> Restaurant (the 1st Floor)				G-EPSS Networking Lunch
13:30 – 15:10	ES-3 (5 papers)	SS-IMPCE 1: Human Perception and Cognition (4 papers)	SP-3 (5 papers)	CNS-3 (5 papers)	TPC Meeting
15:10 – 15:40	Coffee Break & Poster Session 3 – Posters in Electronic Systems, Microwave Engineering				

15:40 – 17:20	ME-1 (5 papers)	SS-IMPCE 2: Intelligent Multimodal Systems (4 papers)	SP-4 (4 papers)	CNS-4 (4 papers)	TPC Meeting
18:30 – 21:00	GALA DINNER (Thursday, July 30, 2026) Venue: TBD				
Friday, July 31, 2026					
Time	LOCATION (on the 2nd Floor)				
	Hon Mun Room	Hon Ong Room	Hon Tam Room	Hon Tre Room	
8:30 – 9:50	ME-2 (4 papers)	ME-3 (4 papers)	SP-5 (4 papers)	CNS-5 (5 papers)	
9:50 – 10:10	Coffee + Brunch				
10:10 – 11:50			SP-6 (4 papers)		

2. ORAL PRESENTATION

-SPECIAL SESSION ON ADVANCED IN MEDICAL IMAGING AND IMAGE PROCESSING

Afternoon, Wednesday, July 29, 2026

SS - Advances in Medical Imaging and Image Processing 1

Time: 13:30 – 15:10

Location: Hon Mun Room

Session chair:

Dr. Ting Feng (Fudan University, China) and

Dr. Tran Vu Hoang (Ho Chi Minh City University of Technology and Education, Vietnam)

Time	Title	Authors
13:30 – 13:50	MALA-Accelerated Bayesian Ultrasound Full-Waveform Inversion for Speed-of-Sound Reconstruction and Uncertainty Mapping	Qiang Li , Dan Li , Xue Jiang , Boyi Li , Chengcheng Liu and Dean Ta (Fudan University, China)
13:50 – 14:10	Automatic 3D Ultrasound Parametric Modeling of Lumbar Spine - a Feasibility Study	Yuchong Gao (Shanghai Tech, China); Jianhao Zhao (ShanghaiTech University, China); Tianyi Liang and Mingbo Zhang (The First Medical Center of Chinese PLA General Hospital, China); Rui Zheng (ShanghaiTech University, China)
14:10 – 14:30	Physics-Informed Input and Decomposed SSIM for Accurate Single-Shot 3D Reconstruction	Hieu Nguyen (International University, VNU-HCM, Vietnam & Neuroimaging Research Branch, NIDA IRP, NIH, USA); Khai T. Dinh (International University, VNU-HCM, Vietnam); Long TonThat (International University HCMC, Vietnam); Khang Nguyen (International University, VNU-HCM, Vietnam); Zhao Wang (The Catholic University of America, USA)
14:30 – 14:50	Automated Freehand 3D Ultrasound Reconstruction of the Midpalatal Suture Using Deep Learning	Trang H. Hoang (University of Alberta, Canada); Dari Joshua Acuña Quiñones (National University of Engineering, Peru); Jiaqing Wang , Kim Cuong T Nguyen and Paul Major (University of Alberta, Canada); Dean Ta (Fudan University, China); Edmond Lou and Lawrence H Le (University of Alberta, Canada)
14:50 – 15:10	Hybrid Quantum Federated Learning for Brain Tumor Magnetic Resonance Imaging Analysis	Quang Nhan Hoang , Minh Tri Nguyen , Duc Ngoc Minh Dang (FPT University, Vietnam)
15:10 – 15:40	Coffee Break & Poster Session 1 – Posters in Signal Processing and Applications	

SS - Advances in Medical Imaging and Image Processing 2

Time: 15:40 – 17:40

Location: Hon Mun Room

Session chair:

Dr. Rui Zheng (ShanghaiTech University, China) and

Dr. Tran Duc Tan (Phenikaa University, Vietnam)

Time	Title	Authors
15:40 –	Enhancing RT-DETR with Reinforcement Learning for Intracranial	Kangsan Lee , Hafiz Zahid Tufail , Sunghyun Park , Joon-Young Kim , Sana Ullah , Jiheon

16:00	Hemorrhage Detection and Classification in Brain CT Images	Oh, Won Hee Lee and Tae-Seong Kim (Kyung Hee University, South Korea)
16:00 – 16:20	GroundMed-SAM: Prompt-Based Zero-Shot Medical Image Segmentation	Viet Dung Nguyen , Luong Hoang Quan , Ngoc P Pham (Hanoi University of Science and Technology, Vietnam)
16:20 – 16:40	A MedViT-Inspired Hybrid CNN-Transformer Framework for Thyroid Nodule Classification	Tuvensha Jegatheeswaran (University of Vavuniya, Sri Lanka); Logiraj Kumaralingam , Anparasy Sivaanpu , Manh-Hai Hoang (University of Alberta, Canada); Dean Ta (Fudan University , China); Christopher Fung and Lawrence H Le (University of Alberta, Canada); Nagulan Ratnarajah (University of Vavuniya, Sri Lanka)
16:40 – 17:00	Improving GI Polyp Segmentation with a Balanced-Mix-Driven	Viet Dung Nguyen and Nguyen Duong Nguyen Nhat (Hanoi University of Science and Technology, Vietnam); Dung Nguyen Van Tuan (Vietnam National University, Vietnam); Thanh Nguyen-Quang (Hanoi University of Science and Technology, Vietnam)
17:00 – 17:20	Quantitative Texture Analysis of Intestinal Ultrasound for Pediatric Inflammatory Bowel Disease	Manh-Hai Hoang , Logiraj Kumaralingam , Anparasy Sivaanpu and Javaneh Alavi (University of Alberta, Canada); Rui Zheng (ShanghaiTech University, China); Alexandra Hudson , Hien Huynh , Edmond Lou and Lawrence H Le (University of Alberta, Canada)
17:20 – 17:40	Spatially Consistent Slice-Wise Intracranial Hemorrhage Segmentation in Brain CT Images	Nguyen Hoang Bach (Academy of Military Science and Technology, Vietnam); Tung Quang Pham (Academy of Military Science and Technology, Vietnam & Le Quy Don Technical Academy, Vietnam); Nguyen Sinh Huy , Thanh Nguyen Chi (AMST, Vietnam); Van Tuan Nguyen (Bach Mai Hospital, Vietnam); Thanh-Hai Tran , Vu Hai (Hanoi University of Science and Technology, Vietnam)

- TRACK ELECTRONIC SYSTEMS

Morning, Thursday, July 30, 2026

ES-1: Digital IC

Time: 8:30 – 9:50

Location: Hon Mun Room

Session chair: Dr. Nguyen Duc Minh (Hanoi Uni. of Science and Technology, Vietnam)

Time	Title	Authors
8:30 – 8:50	A High-Throughput, Low-Power SRAM-Based Spiking Neuron Network Accelerator	Linh Nguyen-Phuong , Chi Hoang Phuong , Anh Ong-Tung , Minh Nguyen-Duc (Hanoi University of Science and Technology, Vietnam)
8:50 – 9:10	A High-Efficiency, High-Accuracy Approximate Multiplier for DNN Accelerators	Hong-Linh Vo , Thien-Truong Nguyen-Ly (Ho Chi Minh City University of Technology, Vietnam)
9:10 – 9:30	A Fixed-Point CLT-Based FPGA AWGN Generator Using a Modified	Nguyen Hung Minh , Truong Quang Vinh (Ho Chi Minh City University of Technology, Vietnam)

	Three-Component Combined Tausworthe Backbone	
9:30 – 9:50	Development of a Single-Pixel Camera System Using FPGA-Based Orthogonal Matching Pursuit and Dynamic Resolution Imaging Method	Quyen Van Hoang (Vietnam National University Hanoi, Vietnam); Vinh Ngoc Tran (VNU University of Engineering and Technology, Vietnam); Yoshio Hayasaki (Center for Optical Research and Education (CORE) Utsunomiya University, Japan); Quan Hoang Nguyen (VNU University of Engineering and Technology, Vietnam); Quang Duc Pham (University of Engineering and Technology & Hanoi Vietnam National University, Vietnam)
9:50 – 10:20	Coffee Break & Poster Session 2 – Posters in Communication Networks and Systems	
ES-2: Analog IC Time: 10:20 – 12:00 Location: Hon Mun Room Session chair: Dr. Pham Nguyen Thanh Loan (Hanoi Uni. of Science and Technology, Vietnam) and Dr. Sang-Gug Lee (KAIST, Korea)		
Time	Title	Authors
10:20 – 10:40	System-Level Performance Evaluation of Indoor Energy Harvesting for Low-Power IoT Applications	Thanh Tuan Phan and Hong-Hanh Tran Vu, Thao-Vy Tran (University of Information Technology, Vietnam); Le-Huy Trinh (University of Information and Technology & Vietnam National University, Vietnam); Manh-Thao Nguyen (University of Information Technology, Vietnam); Fabien Ferrero (Université Cote d'Azur, CNRS, LEAT & CREMANT, France)
10:40 – 11:00	An Architecture for Approaching the Physical Power Bound in Displacement-Constrained Vibration Energy Harvesters	Cuong Phu Le (Norwegian University of Science and Technology, Norway); Tu Duc Ho (Norwegian University of Science and Technology, Norway & The Arctic University of Norway, Norway); Zhenni Pan (Waseda University, Japan); Binh Duc Truong (University of Michigan, USA)
11:00 – 11:20	A Precision 1.44 Ppm/°C Bandgap Reference for Battery Monitoring ICs	Hoa Nguyen Quynh (Korea Advanced Institute of Science and Technology, South Korea & Hanoi University of Science and Technology, Vietnam); Huy Nguyen Quang, Sang-Gug Lee (Korea Advanced Institute of Science and Technology, South Korea); Loan Pham-Nguyen (Hanoi University of Science and Technology, Vietnam)
11:20 – 11:40	An Analysis of Type-I Sub-Sampling Phase-Locked Loops and a Ramp Based Architecture Proposal Reaching a High, Constant Gain of 115dB	Thinh Tran-Dinh (Korea Advanced Institute of Science and Technology, Korea); Bao Hoang-Nguyen, Minh Quang Nguyen, Ngoc Le Van, Quang Vu Trong and Khanh Du Doan, Thi-Nhan Pham, Quan Nguyen-Gia (Hanoi University of Science and Technology, Vietnam); Sang-Gug Lee (Korea Advanced Institute of Science and Technology, South Korea); Loan Pham-Nguyen (Hanoi University of Science and Technology, Vietnam)

11:40 – 12:00	Automated Sizing for Complementary Cross-Coupled LC-VCO Using Deep Deterministic Policy Gradient	Gia Huy Duong , Tri Pham Minh Hoang , Hoang Trang (Ho Chi Minh City University of Technology, Vietnam)
Afternoon, Thursday, July 30, 2026		
ES-3: Biomedical Circuit & Devices		
Time: 13:30 – 15:10		
Location: Hon Mun Room		
Session chair:		
Dr. Trinh Quang Kien (Le Quy Don Technical University)		
Dr. Pham Thi Nhan (Hanoi University of Science and Technology, Vietnam)		
Time	Title	Authors
13:30 – 13:50	Parametric Analysis of SAW-Driven Droplet Streaming for Biomedical Lab-on-Chip Systems	Dam Thi Huong , Nguyen Thi Hue , Nguyen Duc Thuan and Hong Hoang Si (Hanoi University of Science and Technology, Vietnam)
13:50 – 14:10	A High-Input-Impedance Low-Noise Amplifier with Four-Input OTA for Non-Contact ECG Monitoring	Anh-Tuan Nguyen and Huy Quang Thai (Hanoi University of Science and Technology, Vietnam); Truong Bui Xuan (Korea Advanced Institute of Science & Technology, South Korea); Tung Nguyen (Hanoi University of Science and Technology, Vietnam); Seokjae Lee and Kim Yeongji (The Catholic University of Korea, South Korea); Quan Nguyen-Gia (Hanoi University of Science and Technology, Vietnam); Soon-Jae Kweon (The Catholic University of Korea, South Korea); Loan Pham-Nguyen (Hanoi University of Science and Technology, Vietnam)
14:10 – 14:30	Optimizing Energy Efficiency and Signal Quality in Reflective Photoplethysmography via Adaptive Gain Control	Đặng Nam Khánh , Xuan Dung Nguyen and Chi-Dung Dang , Vinh Tran-Quang (Hanoi University of Science and Technology, Vietnam)
14:30 – 14:50	Investigation of Interference Effect for Very Thin Channel Macaroni MOSFETs	Quan Nguyen-Gia (Hanoi University of Science and Technology, Vietnam)
14:50 – 15:10	A Frequency-Response-Based Approach to Current-Cell Output Impedance Analysis for 65 nm CMOS DAC Design	Cuong-Quoc Nguyen , Huy Minh Nguyen and Cuong Huynh (Ho Chi Minh City University of Technology, Vietnam)
15:10 – 15:40	Coffee Break & Poster Session 3 – Posters in Electronic Systems, Microwave Engineering	

-TRACK MICROWAVE ENGINEERING

Afternoon, Thursday, July 30, 2026

ME-1: Radar Applications

Time: 15:40 – 17:20

Location: Hon Mun Room

Session chair: Dr. Chung-Tse Michael Wu (National Taiwan University, Taiwan)

Time	Title	Authors
15:40 – 16:00	Recent Developments in Space-Time-Coded Direct Antenna Modulation-Enabled Radar Sensing and Communications	Shuping Li (Rutgers University, USA); Chung-Tse Michael Wu (National Taiwan University, Taiwan)
16:00 – 16:20	Two-Dimensional Localization and Tracking of Target Using Nonrandom Radar Network	Viet Thuy Vu, Majid Joshani and Mats I. Pettersson (Blekinge Institute of Technology, Sweden)
16:20 – 16:40	Design of a Circular-Shaped Monopulse Slotted Cavity Waveguide Array Antenna Systems	Tuan-Anh Le Trong, Quyet Nguyen Manh; Son Van Hoang, Hieu Trong Dam, Thanh Nguyen Tien, Huan Van Dang (Viettel Aerospace Institute, Viettel Group, Vietnam)
16:40 – 17:00	Efficient Pattern Synthesis for Multiple Concentric Circular Arrays via Zernike Expansion and Stochastic Gradient Descent	Nguyen Minh Tran, Cong Minh Nguyen (VNU-University of Engineering and Technology, Vietnam); Toan Thi Nguyen (University of Hai Duong, Vietnam); Giang Truong (Vietnam National University, Hanoi, Vietnam)
17:00 – 17:20	Design of Hemispherical Phased Arrays for Fully Upper-Spherical Scan Coverage	Thai Binh Cong Nguyen, Son Van Hoang, Hai Dang Le, Nguyen Khac Kiem and Son Xuat Ta (Hanoi University of Science and Technology, Vietnam)

Morning, Friday, July 31, 2026 (Parallel to Session ME-3)

ME-2: Reconfigurable Metasurfaces

Time: 8:30 – 9:50

Location: Hon Mun Room

Session chair:

Dr. Le Huy Trinh (University of Information and Technology & VNUHCM) and

Dr. Son Xuat Ta (Hanoi University of Science and Technology, Vietnam)

Time	Title	Authors
8:30 – 8:50	A Reconfigurable Metasurface for Simultaneous Polarization Conversion and Beam Steering in Next-Generation Wireless Networks	Thinh Nguyen (Doctoral Researcher, Finland); Tung Duy Phan and Ping Jack Soh (University of Oulu, Finland)
8:50 – 9:10	A Wideband 1-Bit Guided Wave Reconfigurable Intelligent Surface for Future 6G Wireless Network	Tien Dat Dam, Thanh Long Nguyen (Hanoi University of Science and Technology, Vietnam); Nguyen Minh Tran (VNU - University of Engineering and Technology, Vietnam); Thuy Minh Le (Hanoi University of Science and Technology, Vietnam)

9:10 – 9:30	Design and Optimization of Custom NFC Antennas for Electronic Chessboard Applications	Quang Vu Pham , Minh Tien Tran , Thanh Tuan Phan , Le Huy Trinh (University of Information and Technology & Vietnam National University, Vietnam); Van-Hieu Nguyen (Ho Chi Minh City University of Technology, Vietnam); Fabien Ferrero (Université Cote d'Azur, CNRS, LEAT & CREMANT, France)
9:30 – 9:50	A Voltage-Control Architecture for 2-Bit Reconfigurable Intelligent Surfaces in the Sub-6 GHz Band	Cuong Nguyen Van (Hanoi University of Science and Technology, Vietnam); Quang Anh Nguyen (Viettel High Technology Industries Corporation, Vietnam); Nguyen Khac Kiem (Hanoi University of Science and Technology, Vietnam); Gangil Byun (Ulsan National Institute of Science and Technology, South Korea); Son Xuat Ta (Hanoi University of Science and Technology, Vietnam)
9:50 – 10:20	Coffee + Brunch	

Morning, Friday, July 31, 2026 (Parallel to Session ME-2)

ME-3: Antennas and Microwave Components

Time: 8:30 – 9:50

Location: Hon Ong Room

Session chair: Dr. Tan-Phu Vuong (Grenoble INP, France)

Time	Title	Authors
8:30 – 8:50	A High-Efficiency Class AB Power Amplifier with Second Harmonic Impedance Control	Tran Doan Dat , Tuan Le Dinh and Do Tuan Hao (Ho Chi Minh City University of Technology, Vietnam); Alfred Shiu (Rainno Holding Limited, Singapore); Cuong Huynh (Ho Chi Minh City University of Technology, Vietnam)
8:50 – 9:10	A Compact Design of High-Sensitivity Optimal-PCE Dual-Band Rectifier Using Coupled-Line Structure	Thanh-Trung Vu (Hanoi University of Science and Technology, Vietnam); Dang-An Nguyen (VinUniversity, Vietnam); Huy-Dung Han (Hanoi University of Science and Technology, Vietnam)
9:10 – 9:30	Compact Triple-Resonant UHF RFID Tag for Reliable Liquid-Container Identification	Minh-Tan Nguyen (Ho Chi Minh City University of Technology, Vietnam); Huaming Chen and Yi-Fang Lin (National Kaohsiung University of Science and Technology, Taiwan); Van-Hieu Nguyen (Ho Chi Minh City University of Technology, Vietnam); Chin-Cheng Chang (Taiwan); Hung Dinh (Ho Chi Minh City University of Technology, Vietnam)
9:30 – 9:50	Compact 2.4 GHz Meandered PIFA for IoT Applications: SNR-Based Link Evaluation	Nguyen Thanh Chien (Hanoi University of Science and Technology, Vietnam); Tam Nguyen Thanh (Le Quy Don Technical University, Vietnam); Thanh Dat Nguyen , Xuan Quang Nguyen , Quoc Cuong Nguyen , Thuy Minh Le (Hanoi University of Science and Technology, Vietnam); Tan-Phu Vuong, Sr. (Grenoble INP, France)
9:50 – 10:20	Coffee + Brunch	

- TRACK POWER ELECTRONICS

Afternoon, Wednesday, July 29, 2026

PE-1: Power Electronics 1

Time: 13:30 – 15:10

Location: Hon Ong Room

Session chair:

**Dr. Nguyen Van Nho (Ho Chi Minh City Uni. of Technology & VNUHCM, Vietnam) and
Dr. Nguyen Trung Kien (Hanoi Uni. of Science and Technology, Vietnam)**

Time	Title	Authors
13:30 – 13:50	Improved Virtual Zero CMV SVPWM Method to Reduce Harmonic Distortion for Four-Level NNPC Inverters	Le Nam Pham, Quoc Dung Phan, Nho Nguyen (Ho Chi Minh City University of Technology & Vietnam National University HCMC, Vietnam)
13:50 – 14:10	Research on Capacitor Voltage Balancing Method in Modular Multilevel Converters Using ADALINE Adaptive Neural Networks	Cao Truong Son Nguyen, Phuong Viet Pham, Huu Nguyen Trinh and Chi Hieu Pham (Hanoi University of Science and Technology, Vietnam); Hung Cuong Tran (Phenikaa University, Vietnam); Duc Duong Nguyen (Vietnam National University Of Agriculture, Vietnam)
14:10 – 14:30	A Machine Learning-Based Method for Open-Circuit Fault Detection in Modular Multilevel Converters Using Output Current Features	Quang Thai Tran (Ho Chi Minh City University of Technology, Vietnam); Quoc Dung Phan (Ho Chi Minh City University of Technology & Vietnam National University HCMC, Vietnam)
14:30 – 14:50	A Nearest Level Modulation Method Without Capacitor Voltage Measurement for Six-Phase Modular Multilevel Converters	Hung Cuong Tran (Phenikaa University, Vietnam); Van Thai Pham, Duy Loi Bui, Thanh Thang To and Phuong Viet Pham (Hanoi University of Science and Technology, Vietnam)
14:50 – 15:10	Hybrid Space Vector PWM Control to Reduce Common-Mode Voltage for Three-Level T-NPC Inverter Under Switch-Open-Circuit Fault	Hong-phong Nguyen Le (Vietnam National University Ho Chi Minh City, Vietnam); Khoa Pham (Ho Chi Minh City University of Technology, Vietnam); Tan Luong Van (Ho Chi Minh City University of Industry and Trade, Vietnam); Nho Nguyen (Hochiminh City University of Technology, Vietnam)
15:10 – 15:40	Coffee Break & Poster Session 1 – Posters in Signal Processing and Applications	

PE-2: Power Electronics 2

Time: 15:40 – 17:00

Location: Hon Ong Room

Session chair: Dr. Phan Quoc Dung (Ho Chi Minh City University of Technology & VNUHCM, Vietnam)

Time	Title	Authors
15:40 – 16:00	A Generalized Planar Winding Arrangement Method for CM Noise Suppression in LLC Converter	Cong-Hien Diem, Nguyen Danh-Nam, Quoc-Khanh Ngo, Thanh-Vinh Tran, Quang-Trung Dao and Duy-Dinh Nguyen (Hanoi University of Science and Technology, Vietnam)

16:00 – 16:20	An Interleaved LLC Resonant Converter with Reconfigurable Output for Wide-Range EV Fast Charging	Ngo Thi Le , Dinh Hai Nam and Kien-Trung Nguyen (Hanoi University of Science and Technology, Vietnam)
16:20 – 16:40	A Reconfigurable LLC Resonant DC-DC Converter Supporting 120 V/240 V Operation in Vehicle-to-Load Applications	Hoang Dung Nguyen (Hanoi University of Science and Technology, Vietnam); Huu Phuc Kieu (Van Lang University, Vietnam); Manh Quan Dao , Quoc Cuong Pham , Tuan Anh Do , Nhat Minh Dang , Minh Long Dau (Hanoi University of Science and Technology, Vietnam); Le Xuan Khoi (Texas Instruments, Hanoi, Vietnam), Phuong Vu Hoang (Hanoi University of Science and Technology, Vietnam)
16:40 – 17:00	A Single-Stage Split-Source Inverter Wireless Power Transfer System for Wide Voltage Battery Applications	Tin Chanh Truong (University of Ulsan, South Korea); Huu-Cong Vu (Hanoi University of Civil Engineering, Vietnam); Duy Anh Dong (Hanoi University of Science and Technology, Vietnam); Quang Tan Nguyen (VinUniversity, Vietnam); Phi Long Nguyen (Hanoi University of Industry & Center for Environmental Intelligence, VinUniversity, Vietnam)

Morning, Thursday, July 30, 2026

PE-3: Power Electronics 3

Time: 8:30 – 9:50

Location: Hon Ong Room

Session chair: Dr. Nguyen Trung Kien (Hanoi Uni. of Science and Technology, Vietnam)

Time	Title	Authors
8:30 – 8:50	Look-Up Table Based PMSM Control Method Using Low Memorized Data for Electric Vehicle	Jung-Hyo Lee (Kunsan National University, South Korea)
8:50 – 9:10	Fault-Tolerant Control of Non-Sinusoidal Multiphase Machines Based on a Novel Single Transformation Matrix	Thi Hai Yen Tran and Duc Tan Vu (Thai Nguyen University of Technology, Vietnam); Ngac Ky Nguyen (Arts et Metiers Institute of Technology, France); Hai Do (Thai Nguyen University of Technology, Vietnam)
9:10 – 9:30	Applied Voltage Based Super Twisting Observer for Robust Sensorless PMSM Control Under Inverter Saturation	Pham Minh Duc , Chau Minh Nguyen , Hoang Minh Tran , Tuyen Nguyen Dinh and Vi Thanh Truong (Ho Chi Minh City University of Technology, VNU-HCM, Vietnam)
9:30 – 9:50	Novel Harmonic Suppression Method for Independently Controlled Neutral Module in Three-Phase Four-Wire Converter	Minh Nghia Nguyen , Phuong Vu Hoang and Anh Tan Nguyen (Hanoi University of Science and Technology, Vietnam)
9:50 – 10:20	Coffee Break & Poster Session 2 – Posters in Communication Networks and Systems	

PE-4: Power Electronics 4

Time: 10:20 – 11:20

Location: Hon Ong Room

Session chair: Dr. Nguyen Van Nho (Ho Chi Minh City University of Technology & VNUHCM, Vietnam)

Time	Title	Authors
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10:20 – 10:40	Angular Free-Positioning Wireless Power Transfer Using Bipolar Diagonalized Transmitting Coil Structure	Hoang Le-Huu (VinUniversity, Vietnam); Chulhun Seo (Soongsil University, South Korea); Nguyen Khac Kiem (Hanoi University of Science and Technology, Vietnam); Ngoc Ta-Quang (Vietnam Japan University, Vietnam)
10:40 – 11:00	Restoring Overcurrent Relay Coordination in Distribution Networks with Inverter-Based Distributed Generation Using an Enhanced SOS Algorithm	Tuan Khanh Dang , Nhat Huy Huynh , Khoa Hoang Truong , Huynh Quoc Viet , Ky Canh Nguyen and Ngoc Dieu Vo (Ho Chi Minh City University of Technology, Vietnam)
11:00 – 11:20	Adaptive Carrier Phase Angle Correction Strategy in Decentralized Control of Cascaded Converters Under Voltage Sag Conditions	Phu Cong Nguyen (Ho Chi Minh City University of Industry and Trade, Vietnam); Quoc Dung Phan (Ho Chi Minh City University of Technology & Vietnam National University HCMC, Vietnam)

- SPECIAL SESSION ON INTELLIGENT MULTIMODAL PERCEPTION AND COGNITIVE ENGINEERING		
Afternoon, Thursday, July 30, 2026		
SS-IMPCE 1: Human Perception and Cognition		
Time: 13:30 – 14:50		
Location: Hon Ong Room		
Session chair:		
Dr. Roberto Caldara (University of Fribourg, Switzerland) and		
Dr. Katsumi Watanabe (Waseda University, Japan)		
Time	Title	Authors
13:30 – 13:50	Investigating Cross-Modal Semantics in Large Language Models Using Concept-Color Associations	Yan Zhang , Huijing Lin and Qi Zhang (Tsinghua University, China); Chaoyi Wang (University College Dublin, Ireland); Huaize Tang (Tsinghua University, China); Pei Sun (City University of Macau, Macao); Wenbo Ding and Shiguang Ni (Tsinghua University, China)
13:50 – 14:10	Effects of Implicit Role Differentiation on Performance in Dyadic Joint Tasks	Aiko Murata (NTT, Inc, Japan); Masaki O. Abe (Hokkaido University, Japan); Katsumi Watanabe (Waseda University, Japan)
14:10 – 14:30	When Vision and Audition Compete: Trade-Offs in Bimodal Word Recognition	Hanaki Sawada and Junji Ohyama (Research Institute on Human and Societal Augmentation, AIST / University of Tsukuba)
14:30 – 14:50	Lightweight PPG-Based Drowsiness Detection: A Multi-Domain Feature Ablation and Computational Analysis	Vu Trinh Tu , Thang Manh Hoang and Nguyen Duy Huy (Hanoi University of Science and Technology, Vietnam)
14:50 – 15:40	Coffee Break & Poster Session 3 – Posters in Electronic Systems, Microwave Engineering	

SS-IMPCE 2: Intelligent Multimodal Systems		
Time: 15:40 – 17:00		
Location: Hon Ong Room		
Session chair: Dr. Montri Phothisonothai (Kasetsart University, Thailand)		
Time	Title	Authors
15:40 – 16:00	Data Fusion of Cameras Attached on Dual UAVs for Real-Time Human Detection and Localization	Tuan Do Trong, Nguyen Tat Dat, Nguyen Ba Dong and Bui Van Quyen, Nguyen Van Duc (Hanoi University of Science and Technology, Vietnam)
16:00 – 16:20	Predefined-Time Formation Control for Multiagent Systems: Application for Multi-Autonomous Vehicles	Khanh Huy Tran, Nguyen Thi Thanh Quynh, Thang Nguyen Trong and Thiem Van Pham (Phenikaa University, Vietnam)
16:20 – 16:40	ST-MAP: Spatiotemporal Multimodal Alignment for Personality-Conditioned Humanoid Motion Synthesis	Montri Phothisonothai (Kasetsart University, Thailand) and Katsumi Watanabe (Waseda University, Japan)
16:40 – 17:00	Quantum Air-Writing: Wearable Wrist EMG Sensing with a Hybrid Quantum-Classical Convolutional Neural Network	Tien Truong Vo (Pham Van Dong University, Vietnam); Dau Ngoc Mai (Visionin Inc., South Korea); Jaeyeop Choi and Junghwan Oh (Pukyong National University, South Korea)

-SPECIAL SESSION ON DISTRIBUTED AI ACROSS EDGE-CLOUD CONTINUUM		
Afternoon, Wednesday, July 29, 2026		
SS - Distributed AI across Edge-Cloud Continuum		
Time: 13:30 – 15:00		
Location: Hon Tam Room		
Session chair: Dr. Truong Thu Huong (Hanoi Univ. of Science and Technology, Vietnam)		
Time	Title	Authors
13:30 – 13:50	ChronoSC: Task-Oriented Semantic Communication via Temporal-to-Color Encoding	Phuc Hong Nguyen, Trung Thanh Nguyen and Quy Nghiep Duong (VinUniversity, Vietnam); Van-Dinh Nguyen (Trinity College Dublin, Ireland)
13:50 – 14:10	A Stay Cable Safety Predictor Enabling Edge Computing for IoT Systems	Quoc Minh V. Nguyen (University of Science - VNUHCM, Vietnam); Thai-Tuan Huynh, Minh-Chan Vo, Trong-Tu Bui, Duc-Hung Le and Trung-Khanh Le (University of Science, VNU-HCM, Vietnam)
14:10 – 14:30	Cross-Modalities Contrastive Learning for UAV-Based Waterfowl Monitoring	Nguyen Xuan Truong (Hung Yen University of Technology and Education, Vietnam); Minh-Anh Nguyen and Nguyen Duc Quang Anh (International School, Vietnam National University, Hanoi, Vietnam); Vu Xuan Thang (Hung Yen University of Technology and Education, Vietnam); Nguyen Van Thang (VNU - University of Engineering and Technology, Vietnam); Duc-Tan Tran (Phenikaa University, Vietnam); Khoa Dang Nguyen (International School, Vietnam National University, Hanoi, Vietnam)

14:30 – 14:50	ECS-Guard: Online Logit-Geometry Monitoring for Backdoor Defense in Split Learning	Duc Viet Ma, Thuong Bich Dao, Dung Tuan Tran, Dat Le Minh Nguyen, Nguyen Huu Thanh, Xuan Dung Nguyen and Huong Thu Truong (Hanoi University of Science and Technology, Vietnam)
14:50 – 15:10	Adversarial Attacks on Deep Learning Models in SDN-IoT Networks	Maxime Bossant, Tharindu Lakshan Yasarithna and Nhien-An Le-Khac (University College Dublin, Ireland)
15:10 – 15:20	LiDAR-Assisted Beamforming Strategies for mmWave-Based 6G Vehicle-to-Infrastructure Links	Thang Van Pham (Hanoi University of Science and Technology, Vietnam); Huy T. Nguyen (Van Lang University, Vietnam); Nguyen Tien Hoa (Hanoi University of Science and Technology, Vietnam); Thi My Chinh Chu (Blekinge Institute of Technology, Sweden); Hans-Jürgen Zepernick (BTH, Sweden)
15:20 –	Coffee Break & Poster Session 1 – Posters in Signal Processing and Applications	

- SPECIAL SESSION ON 6G NON-TERRESTRIAL NETWORK TECHNOLOGIES TOWARD GLOBAL COVERAGE		
Afternoon, Wednesday, July 29, 2026		
SS - 6G Non-Terrestrial network Technologies toward Global Coverage		
Time: 15:40 – 17:20		
Location: Hon Tam Room		
Session chair: Dr. Hans-Jürgen Zepernick (Blekinge Institute of Technology, Sweden)		
15:40 – 16:00	Joint Task Offloading and Resource Orchestration in 6G SAGINs: A Hybrid Quantum-Inspired Meta-Heuristic Approach	Phuc Hao Do (Danang Architecture University, Vietnam); Truong Duy Dinh (Posts and Telecommunications Institute of Technology, Vietnam)
16:00 – 16:20	Energy Minimization for UAV-Assisted Wireless Sensor Networks: A Novel Learning-Based Framework of Spiking Neural Network	Le Thanh Can (Da Nang University of Science and Technology, Vietnam); Hieu V. Nguyen, Mai T. P. Le and Vien Nguyen-Duy-Nhat (Danang University of Science and Technology, Vietnam)
16:20 – 16:40	Secrecy Energy Efficiency Maximization for UAV Swarm-Assisted Secure Communication Against an Aerial Eavesdropper via Deep Reinforcement Learning	Chunjia Tang (Shanghai University, China); Zhihong Lu (Yangzhou Marine Electronic Instrument Research Institute, China); Zhiyu Huang, Hongwen Yu and Zhichao Sheng (Shanghai University, China)
16:40 – 17:00	Urgency-Aware QoE-Driven UAV Trajectory Planning for Multi-Priority Post-Disaster Networks via Deep Reinforcement Learning	Zalita Phetxomphou, Hoang Le, Anh T. Pham (The University of Aizu, Japan)
17:00 – 17:20	Mobility-Aware UEP Scheme for Video Streaming on Helicopters and UAVs	Shu Sum Law and Francis C Lau (The Hong Kong Polytechnic University, Hong Kong)

- TRACK SIGNAL PROCESSING AND APPLICATIONS

Morning, Thursday, July 30, 2026

SP-1: AI-Driven Medical Diagnostics and Healthcare Applications

Time: 8:30 – 9:50

Location: Hon Tam Room

Session chair: Dr. Rui Zheng (ShanghaiTech University, China)

Time	Title	Authors
8:30 – 8:50	Study on Photoacoustic Signal Power Spectrum Slope for Classification of Prostate Inflammation Section Samples	Tao Feng (Fudan University, China); Yunkai Zhu (Xinhua Hospital Affiliated to Shanghai Jiaotong University School of Medicine, China); Ying Li , Boyi Li and Dan Li (Fudan University, China); Yaqing Chen (Xinhua Hospital Affiliated to Shanghai Jiaotong University School of Medicine, China); Dean Ta (Fudan University, China)
8:50 – 9:10	Machine Learning Based 6-DoF Electromagnetic Localization for Wireless Capsule Endoscopy	Xuan Mai Nguyen , Van Luong Tran (Korea Institute of Science and Technology, South Korea); Trung Kien Nguyen , Nam Hoang Nguyen , Hong Hoang Si and Cuong Manh Hoang (Hanoi University of Science and Technology, Vietnam)
9:10 – 9:30	Cardiovascular Risk Assessment Based on Vascular Age Gap Using Stacking Ensemble Learning	Kim Phuong Tran and Duy Nguyen Tuan (Hanoi University of Science and Technology, Vietnam); Ha My Nguyen Ngoc (Hanoi-Amsterdam High-school for the Gifted, Vietnam); Phuong Nguyen (Hwa Chong Institution, Singapore); Viet Dung Nguyen (Hanoi University of Science and Technology, Vietnam)
9:30 – 9:50	Edge AI-Based ECG Arrhythmia Detection Using CWT Scalograms and Optimized EfficientNet for Real-Time Inference	Thanh Huong Nguyen (Hanoi University of Science and Technology & MICA, Vietnam); Xuan Thanh Ho , The Bach Nguyen , Minh An Luong and Minh-Hoang Le (Hanoi University of Science and Technology, Vietnam)
9:50 – 10:20	Coffee Break & Poster Session 1 – Posters in Communication Networks and Systems	

SP-2: Biomedical Signal Analytics

Time: 10:20 – 12:00

Location: Hon Tam Room

Session chair: Dr. Ting Feng (Fudan University, China)

Time	Title	Authors
10:20 – 10:40	Spatio-Temporal Feature Fusion via Lightweight Hybrid CNN-Transformers for Atrial Fibrillation Detection	Thi Minh Tuyen Huynh , Ha Thi Viet Nguyen (University of Electro-Communications, Japan); Huu-Thuan Huynh (Ho Chi Minh City - University of Science, Vietnam); Duc-Hung Le (University of Science, VNU-HCM, Vietnam); Cong-Kha Pham (University of Electro-Communications, Japan)

10:40 – 11:00	A Systematic Comparison of Dimensionality Reduction for Multi-Class Sleep Disorder Classification	Huy Quang Bui , Loc Quoc Tran , Minh Quang Tran (Hanoi University of Science and Technology, Vietnam); Tuan Hai Nguyen (DMED Medical Equipment Co., Ltd, Vietnam); Linh Chi Nguyen (Hanoi – Amsterdam High School for the Gifted, Hanoi, Vietnam); Cao Anh Luong (HUS High School for Gifted Students, Hanoi, Vietnam); Viet Dung Nguyen (Hanoi University of Science and Technology, Vietnam)
11:00 – 11:20	Enhancing Deep Wavelet ECG Denoising with Squeeze-and-Excitation Blocks	Ngoc-Son Nguyen , Thai-Duy Nguyen Huy , Minh-Tien Le and Huy-Dung Han (Hanoi University of Science and Technology, Vietnam); Tai Le (University of California Irvine, USA); Hung Cao (University of California, Irvine, USA)
11:20 – 11:40	LiWave: A Lightweight 1D Wavelet-Residual U-Net for ECG Signal Denoising	Ngoc-Son Nguyen , Duc Nguyen-Minh , Phi-Thuc Vo , Huy-Dung Han , Loan Pham-Nguyen (Hanoi University of Science and Technology, Vietnam); Tai Le (University of California Irvine, USA); Hung Cao (University of California, Irvine, USA)
11:40 – 12:00	A Peak-Aware Envelope-Guided Loss for Fetal ECG Detection and R-Peak Localization	Ngoc-Son Nguyen and Trung-Kien Le (Hanoi University of Science and Technology, Vietnam); Tai Le (University of California Irvine, USA); Huy-Dung Han , Loan Pham-Nguyen (Hanoi University of Science and Technology, Vietnam); Hung Cao (University of California, Irvine, USA)

Afternoon, Thursday, July 30, 2026

SP-3: Intelligent UAV Systems and Autonomous Navigation

Time: 13:30 – 15:10

Location: Hon Tam Room

Session chair: Dr. Tat-Jun Chin (Adelaide University, Australia)

Time	Title	Authors
13:30 – 13:50	Real-Time Flight Control Firmware for Quadcopter UAVs Based on FreeRTOS with EKF-Based Attitude Estimation	Bao Nguyen Quoc , Duong Nguyen Canh , Dung Hoang Tuan , Manh Hoang Tran , Tan Nghia Duong and Phat Huu Nguyen (Hanoi University of Science and Technology, Vietnam); Takumi Miyoshi (Shibaura Institute of Technology, Japan)
13:50 – 14:10	Statistics-Aware Adaptive MPC Using Mahalanobis Distance for Path Tracking	Thanh-Tan Nguyen , Yu-Chen Lin (Feng Chia University, Taiwan)
14:10 – 14:30	Fault Diagnosis of Rotor Blades in Multirotor UAVs Using Fusion Multi-Domain Feature Extraction and Deep Neural Networks for Tabular Data (TabNet)	Duy Tan Le (International University VNU-HCM, Vietnam); Tuan Minh Le (RMIT, Vietnam); Van Binh Nguyen (International University, Vietnam); Long TonThat (International University HCMC, Vietnam); Son Vu Trung Dao (RMIT University Vietnam, Vietnam)
14:30 – 14:50	Navigation Methods for UAVs in GNSS-Denied Environments Using Artificial Intelligence	Nga Vu Quynh , Phat Huu Nguyen and Trong-Thanh Han (Hanoi University of Science and Technology, Vietnam)
14:50 – 15:10	Secure and Efficient UAV-Based Face Detection via Homomorphic Encryption and Edge Computing	Duc Van Nguyen (National Chung Cheng University, Taiwan); Manh Duc Bui (University of Technology Sydney, Australia); Quang-Trung Luu (CentraleSupélec, Université Paris-Saclay,

		France); Hoang Thai Dinh (University of Technology Sydney (UTS), Australia); Van-Linh Ngu- yen (National Chung Cheng University & College of Engineering, Taiwan); Diep N. Nguyen (University of Technology Sydney, Australia)
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15:10 – 15:40	Coffee Break & Poster Session 3 – Posters in Electronic Systems, Microwave Engineering	
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SP-4: Human Interaction and Intelligent Perception

Time: 15:40 – 17:00

Location: Hon Tam Room

Session chair: Dr. Yan Zhang (Tsinghua University, China)

Time	Title	Authors
15:40 – 16:00	Short-Form Video Viewing Behavior Analysis and Multi-Step Viewing Time Prediction	Vu Thi Hai Yen (Hanoi University of Science and Technology, Vietnam); Duc V. Nguyen (Tohoku Institute of Technology, Japan); Huy Cao Anh Minh and Huong Thu Truong (Hanoi University of Science and Technology, Vietnam)
16:00 – 16:20	A Novel Dataset and Practical Deployment for Gesture-Based Human-Collaborative Robot Interaction	Ha-Anh Nguyen , An Thong Nguyen , Duy-Anh Doan , Viet Tung Nguyen , Thi-Lan Le (Hanoi University of Science and Technology, Vietnam)
16:20 – 16:40	Real-Time Depth-Aware Metadata Structuring for Robust Long-Range Traffic Perception in Low-Angle Surveillance Using SNR-Guided Geometric Gating	Nguyen Thi Thu Hien , Nguyen Viet Hung , Pham Hung Dung and Dzung Nguyen Tien (Hanoi University of Science and Technology, Vietnam)
16:40 – 17:00	Hybrid Spatial-Kinematic Learning for Robust Hand Gesture Recognition Under Transition Ambiguity	Tu Duong Vo , Minh An Luong , Thanh Huong Nguyen (Hanoi University of Science and Technology & MICA, Vietnam); Minh-Hoang Le (Hanoi University of Science and Technology, Vietnam)

Morning, Friday, July 31, 2026

SP-5: AI for Environmental and Industrial Monitoring

Time: 8:30 – 9:50

Location: Hon Tam Room

Session chair: Dr. Tran Duc Tan (Phenikaa University, Vietnam)

Time	Title	Authors
8:30 – 8:50	Prior Knowledge-Driven Subdomain Adaptation Neural Network for Cross-Condition Pipeline Leak Size Prediction	Nguyen Duc Thuan (Hanoi University of Science and Technology, Vietnam); Jaeyoung Kim (Prognosis and Diagnostics Technologies Co., Ltd., Ulsan, South Korea); Jongmyon Kim (University of Ulsan, South Korea)
8:50 – 9:10	MP-MoE: Matrix Profile-Guided Mixture of Experts for Precipitation Forecasting	Huyen Ngoc Tran (Hanoi University of Science and Technology, Vietnam); Dung Trung Tran (VinUniversity, Vietnam); Hong Ngu- yen (University of Southern California, USA); Xuan Vu Phan and Nam-Phong Ngu- yen (Hanoi University of Science and Technol- ogy, Vietnam); Ngoc Vu (WeatherPlus Solution JSC, Vietnam)
9:10 – 9:30	MambaFloodLite: A Low-Parameter Mamba-Based Network for Flood Area Segmentation	Trong Thai Doan , Duc Thanh Dao , Thi Lan Hu- ong Nguyen , Tuan Ninh Nguyen , Nguyen Thi Hue , Nam Hoang Nguyen , Hong Hoang Si , Ngu-

		yen Duc Thuan and Cuong Manh Hoang (Hanoi University of Science and Technology, Vietnam)
9:30 – 9:50	GLAFT-Net: A Global-Local Adaptive Fusion Network for Dynamic Canopy Height Mapping	Hai Lam Hoang , Chuc Man Duc and Thanh TN Nguyen (VNU University of Engineering and Technology, Vietnam)
9:50 – 10:10	Coffee + Brunch	
SP-6: Advanced Signal Processing and Secure Communications Time: 10:10 – 11:30 Location: Hon Tam Room Session chair: Dr. Thi My Chinh Chu (Blekinge Institute of Technology, Sweden)		
Time	Title	Authors
10:10 – 10:30	Data Acquisition Method for Compressive Sensing-Based Dynamic Resolution Single Pixel Camera	Vinh Ngoc Tran (VNU University of Engineering and Technology, Vietnam); Quyen Van Hoang (Vietnam National University Hanoi, Vietnam); Yoshio Hayasaki (Center for Optical Research and Education (CORE) Utsunomiya University, Japan); Hoang Quan Nguyen and Quang Duc Pham (University of Engineering and Technology & Hanoi Vietnam National University, Vietnam)
10:30 – 10:50	An Observer-Based Approach for Secure Image Transmission Using Block Compressed Sensing and High-Order Chaotic System	Ngan Thi Thu Nhu (International University, Vietnam); Duc-Tan Tran (Phenikaa University, Vietnam); Uyen Lap Phuong Nguyen and Lap Luat Nguyen (International University, Vietnam); Long TonThat (International University HCMC, Vietnam)
10:50 – 11:10	Toward Data-Efficient Partial Discharge Diagnosis: Scalogram-Driven Few-Shot Learning for Pulse Classification	Chi Duc Nguyen , Quoc Anh Pham , Duc Thinh Dao , Hong Hoang Si , Thi Lan Huong Nguyen and Cuong Manh Hoang (Hanoi University of Science and Technology, Vietnam)
11:10 – 11:30	Deep Reinforcement Learning-Optimized Reconfigurable Intelligent Surfaces (RIS) for Joint Radar Sensing and Communication in USV Swarms	Minseok Han (Dept of Electronics and Control Engineering, South Korea); Nam Ha-Huu and Cuong Vo-Le (Hanoi University of Science and Technology, Vietnam)

- OpenRIT6G WORKSHOP - AI-NATIVE 6G RESEARCH

Afternoon, Wednesday, July 29, 2026

Time: 13:30 – 17:00

Location: Hon Tre Room

Time	Title	Authors
13:30 – 13:45	Welcome and Introduction From 5G to AI-Native 6G: Why Open Experimental Research Matters	Nguyen Huu Thanh (Hanoi University and Science and Technology, Vietnam) and Serge Fdida (Sorbonne Université, France)
13:45 – 14:15	6G Challenges and Opportunities Towards AI-Native 6G Networks	Thomas Magedanz (Technical University Berlin, Germany)

14:15 – 14:45	Understanding the Role of AI for network automation in emerging Low-Cost Open Source 5G/6G networks	Joyce Mwangama (University of Cape Town)
14:45 – 15:15	Coffee Break	
15:15 – 15:45	MLOps and AI Experimentation Pipelines, From Data Acquisition to Continuous AI Deployment	Serge Fdida (Sorbonne Université, France)
15:45 – 16:15	Agentic AI for 6G, Beyond Automation: Towards Autonomous Networks	Manu Gosain (Northeastern University, USA)
16:15 – 17:00	Panel Discussion: Open Source, Sovereignty and International Cooperation for AI-Native 6G	Serge Fdida (Sorbonne Université, France)

- TRACK COMMUNICATION NETWORKS AND SYSTEMS

Morning, Thursday, July 30, 2026

CNS-1: Optical Wireless, FSO and Quantum-Secure Communications

Time: 8:30 – 9:40

Location: Hon Tre Room

Session chair: Dr. Ha Duyen Trung (Hanoi University of Science and Technology, Vietnam)

Time	Title	Authors
8:30 – 8:50	Real-Time FPGA-Based Adaptive Control for Robust FSO Quantum Key Distribution	Duong Nam Khanh , Ngoc Minh Han , Dao Dang Minh Hoang , Nguyen Anh Quan , Nguyen Thi Ngoc Linh and Huy-Dung Han , Phuong Xuan Quang (Hanoi University of Science and Technology, Vietnam); Yalçın Ata (OSTIM Technical University, Turkey); Ha Duyen Trung (Hanoi University of Science and Technology, Vietnam)
8:50 – 9:10	A Generalized Irradiance PDF for Optical Beam Propagation Through Multilayered Turbulent Media	Khac-Tuan Nguyen (University of Ulsan, South Korea); Sunghwan Kim (Sejong University, South Korea)
9:10 – 9:30	Centralized Turbulence-Induced Group Secret-Key Distribution for FSO-Based Multi-UAV Networks	Nguyễn Thị Lê Quỳnh and Dang Van Tuyen (Academy of Security Engineering and Technology, Vietnam); Luan Van Doan (The University of Aizu, Japan); Hoang Le (University of Aizu, Japan)
9:30 – 9:40	Performance of Higher Order Ratio Modulation for Robust Molecular Communication Systems	Muskan Ahuja (South Asian University, New Delhi, India); Abhishek K Gupta (Indian Institute of Technology Kanpur, India); Reshma Rastogi (South Asian University, New Delhi, India)

Coffee Break & Poster Session 2 – Posters in Communication Networks and Systems

CNS-2: UAV Communications and Intelligent Aerial Networks

Time: 10:20 – 12:00

Location: Hon Tre Room

Session chair: Dr. Do Hong Tuan (Ho Chi Minh City Uni. of Technology, VNU-HCM, Vietnam)		
Time	Title	Authors
10:20 – 10:40	Hierarchical Deep Reinforcement Learning with Reward Shaping for Fixed-Wing Multi-UAV Trajectory Tracking and Collision Avoidance	Phuoc-Bao-Duy Nguyen and Luy Nguyen Tan (Ho Chi Minh City University of Technology, VNU-HCM, Vietnam)
10:40 – 11:00	Performance of Transmit SNR Weighted K-Means Clustering in NOMA-Based FANETS	Thi My Chinh Chu and Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden); Alexander Westerhagen (Saabgroup, Sweden)
11:00 – 11:20	Queueing-Based Priority Delay Analysis for UAV-HAP Emergency Backhaul in NTN-Enabled 5G/6G Systems	Hung Tran (National Economics University, Vietnam & DATCOM Lab, Vietnam); Anh Nguyen Thi Mai (National Economics University, Vietnam); Hans-Juergen Zepernick (Blekinge Institute of Technology, Sweden); Tu Dac Ho (Norwegian University of Science and Technology, Norway & The Arctic University of Norway, Norway); Dinh-Hieu Tran (Universite Du Luxembourg, Luxembourg & SnT, Luxembourg)
11:20 – 11:40	Semantic-Aware Observation Optimization for Multi-UAV Traffic Monitoring with IDM-Based Behavior Modeling	Nguyen Anh, Nguyen Phu Cuong and Ha Duyen Trung (Hanoi University of Science and Technology, Vietnam); Zuxing Li and Chao Wang (Tongji University, China); Nguyen Huu Trung (Hanoi University of Science and Technology, Vietnam)
11:40 – 12:00	Joint Fragment Dissemination and Edge Fusion for Fast Target Detection in UAV-Assisted Urban IoT	An D Vu and Khanh-Van Nguyen (Hanoi University of Science and Technology, Vietnam)
Afternoon, Thursday, July 30, 2026		
CNS-3: Advanced Wireless, Massive MIMO and 6G Systems		
Time: 13:30 – 15:10		
Location: Hon Tre Room		
Session chair: Dr. Nguyen Tien Hoa (Hanoi University of Science and Technology, Vietnam)		
Time	Title	Authors
13:30 – 13:50	SNN-TTFS-Based Channel Estimation for OFDM Systems in Low-SNR and Highly Dynamic Channels	Khuc Bang (Peter the Great St. Petersburg Polytechnic University, Russia); Thi-Hong-Tham Tran , Khoa-Sang Nguyen and Quang-Kien Trinh (Le Quy Don Technical University, Vietnam)
13:50 – 14:10	Joint Tx/Rx Antenna Selection and Beamforming Optimization for Multi-User Full-Duplex mMIMO	Yuanzhe Gong (McGill University, Canada); Cheng-Jie Zhao (The University of Hong Kong, Hong Kong); Tho Le-Ngoc (McGill University, Canada)
14:10 – 14:30	Curve-Fitting and DNN-Based Prediction of Near-Field Focal Depth and Gain Variation in Extra-Large Antenna Arrays	Yuanzhe Gong , Mohammadhossein Karimi and Tho Le-Ngoc (McGill University, Canada)
14:30 – 14:50	Asymmetric Spatial Modulation for Multiple Access in Near-Field MIMO Systems	Quynh Nhu Nguyen and Anh Hoang Do (Hanoi University of Science and Technology, Vietnam); Thai-Hoc Vu (VSB-Technical University of Ostrava, Czech Republic); Nguyen Tien Hoa (Hanoi University of Science and Technology, Vietnam)

14:50 – 15:10	DRL-Based Joint Beamforming and Surface Morphing for FIM-Enabled ISAC Systems	Hung T. Hoang and Nguyen Huy (Hanoi University of Science and Technology, Vietnam); Huy T. Nguyen (Van Lang University, Vietnam); Nguyen Tien Hoa (Hanoi University of Science and Technology, Vietnam); Thi My Chinh Chu (Blekinge Institute of Technology, Sweden); Hans-Jürgen Zepernick (BTH, Sweden)
15:10 – 15:40	Coffee Break & Poster Session 3 (30 minutes)–Posters in Electronic Systems, Microwave Engineering	
CNS-4: Emerging Wireless, IoT and Programmable Communication Systems Time: 15:40 – 17:00 Location: Hon Tre Room Session chair: Dr. Do Hong Tuan (Ho Chi Minh City Uni. of Technology, VNU-HCM, Vietnam)		
Time	Title	Authors
15:40 – 16:00	From Concept to Prototype: Implementation and Analysis of a Low-Power AoA-Capable LoRaWAN Relay	Manh-Thao Nguyen, Vo Nguyen Thien Phuc, Thanh Tuan Phan (University of Information Technology, Vietnam); Van-Hieu Nguyen (Ho Chi Minh City University of Technology, Vietnam); Le Huy Trinh (University of Information and Technology & Vietnam National University, Vietnam); Fabien Ferrero (Université Cote d'Azur, CNRS, LEAT & CREMANT, France)
16:00 – 16:20	Maximizing the Downlink Sum Rate in Rotatable-Surface 6DMA-Assisted Multi-User Systems	Yiyi Chen, Hongwen Yu and Zhiyu Huang (Shanghai University, China); Zhen Sun (State Nuclear Power Plant Service Co., Ltd., China)
16:20 – 16:40	A Priority-Aware Medium Access Control with Adaptive Overlapping Backoff for IoT Sensor Networks	Nguyen Thi Thu-Hang, Pham Kim Kha and Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam)
16:40 – 17:00	When HTTP/3 Falls Behind: A System-Level Study of Tile-Based 360° Video Streaming	Huy Hoang Bui, Thanh Cong Tran, Thao Anh Tran, Mau Hoang Tung Le and Huong Thu Truong (Hanoi University of Science and Technology, Vietnam); Nguyen Viet Hung (East Asia University of Technology, Vietnam); Nam Pham Ngoc (VinUniversity, Vietnam)
Morning, Friday, July 31, 2026		
CNS-5: AI-Driven Networking, Cybersecurity and Edge Intelligence Time: 8:30 – 9:45 Location: Hon Tre Room Session chair: Dr. Nguyen Tai Hung (Hanoi University of Science and Technology, Vietnam)		
Time	Title	Authors
8:30 – 8:45	Active Digital Twin Verification for Robust Federated Learning in IoT Intrusion Detection	Pham Hoang Hao, Phan The Duy and Van-Hau Pham (University of Information Technology, VNU-HCM, Vietnam)
8:45 – 9:00	SPDAE: A Structured Perturbation Denoising Autoencoder for Intrusion Detection	Cuong Nguyen and Quang Uy Nguyen (Le Quy Don Technical University, Vietnam)
9:00 – 9:15	A Hybrid WOA-GWO Approach for Robust Consensus Under DDoS Attacks in Clustered P2P Networks	Yifu Liu (Kyushu University, Japan); Dinh Hoa Nguyen (Hanoi University of Science and Technology, Vietnam & Kyushu University, Japan)

9:15 – 9:30	LP-WRR: Towards Adaptive Performance-Aware Load Balancing	Hai Thanh Pham and Dang Hoang Nguyen (Hanoi University of Science and Technology, Vietnam); Nguyen Tuan Anh (Ha Noi University of Science and Technology, FPT Telecom International, Vietnam); Nguyen Tai Hung and Nguyen Huu Thanh (Hanoi University of Science and Technology, Vietnam)
9:30 – 9:45	Design, Implementation and Evaluation of an Edge-AI Cluster Architecture for Performance-Optimized AI Workloads	Huy An Tran , Huy Quang Tran and Cuong Truong (University of Information Technology & UIT, Vietnam)
9:45 – 10:20	Coffee + Brunch	

-GLOBAL EDUCATIONAL PROGRAM FOR SAMSUNG SEMI-CONDUCTOR (G-EPSS)		
Morning, Thursday, July 30, 2026		
Time: 10:00 – 12:00		
Location: Hon Chong Room		
Chair: Dr. Sang-Gug Lee (KAIST, Korea)		
Time	Title	Authors
10:00 – 10:05	Welcome Remarks	Sang-Gug Lee (Professor at KAIST, Korea)
10:05 – 10:20	Introduction to the International Student Admission Process	Insu Han (Assistant Professor at KAIST, Korea)
10:20 – 10:40	Introduction to the G-EPSS Program	Iksung Kang (Assistant Professor at KAIST, Korea)
10:40 – 10:55	Introduction to the School of Electrical Engineering, KAIST	Youngik Sohn (Associate Professor at KAIST, Korea)
10:55 – 11:15	Student Experience at KAIST as a G-EPSS Scholarship Recipient and Samsung Electronics Internship Admission Experience	Hong Anh (Graduate Student at KAIST, Korea)
11:15 – 11:35	Introduction to Samsung Electronics	Ngoc Minh Le Tu (Graduate Student at KAIST, Korea)
11:35 – 11:55	Graduate Student Life at the School of Electrical Engineering, KAIST	Nguyen Quynh Hoa (Graduate Student at KAIST, Korea)
11:55 – 12:00	Closing Remarks	Sang-Gug Lee (Professor at KAIST, Korea)
9:45 – 10:20	Coffee + Brunch	

-G-EPSS NETWORKING LUNCH

Time: 12:00 – 12:30

Location: Feast Restaurant (the 1st Floor)

Chair: Graduate Student Representative of KAIST, Korea

12:00 – 12:05	Welcome Remarks	Chan-Hyun Youn (Professor at KAIST, Korea)
12:05 – 13:25	Introduction to KAIST's Under-graduate Program in Electrical Engineering	Jooseok Kim , Deokyun Kang (Graduate Student Representative at KAIST, Korea)
	G-EPSS Networking Lunch and Event for Vietnamese Students	Saewoong Park , Seyeon Bong (Graduate Student Representative at KAIST, Korea)
13:25 – 13:30	Closing Remarks	Chan-Hyun Youn (Professor at KAIST, Korea)

3. POSTER PRESENTATION

Afternoon, Wednesday, July 29, 2026

- POSTER SESSION - 1: Signal Processing and Applications

Time: 15:10 – 15:40

Location: Pre-function

Session chair: Dr. Hoang Manh Thang (Hanoi Uni. of Science and Technology, Vietnam)

#	Title	Authors
1	A Trajectory-Based Learning-from-Demonstration Method for Collaborative Robots Using Hand-Wrist Tracking	Anh Tuan Nguyen and Quang-Vinh Pham (SigM, SEEE, HUST, Vietnam); Viet-Duc Le and Viet Tung Nguyen (Hanoi University of Science and Technology, Vietnam); Thi-Lan Le (School of Electrical and Electronic Engineering (SEEE) HUST, Vietnam)
2	A Comprehensive Feature Engineering Method for Vessel Classification Using AIS Data	Huyen Tran and Quang Uy Nguyen (Le Quy Don Technical University, Vietnam)
3	A Hybrid Content-Based Movie Recommendation System via Tag Genome Refinement and LLM-Augmented Descriptions on MovieLens 20M	Nguyen Duc Manh, Vu Nguyen Bao Son, Ha Hai Van Le and Minh Tuyen Pham (Hanoi University of Science and Technology, Vietnam); Thi Thu Trang Pham (Hanoi Open University, Vietnam); Tan Nghia Duong (Hanoi University of Science and Technology, Vietnam)
4	Edge-AI Based Rice Disease Detection Using an Optimized YOLOv9 Model for Real-Time Mobile Applications	Thanh Huong Nguyen (Hanoi University of Science and Technology & MICA, Vietnam); Nguyen Duc Dung Ta, Dong Cong Trinh, Thanh Dang Bui, Minh An Luong and Minh-Hoang Le (Hanoi University of Science and Technology, Vietnam)
5	ConvMixer Meets Mel Spectrogram: A Lightweight Framework for Vietnamese Speech Command Recognition	Thanh Huong Nguyen (Hanoi University of Science and Technology & MICA, Vietnam); Ba Tuan Anh Chu, Minh An Luong, Minh-Hoang Le and Phuong C. Nguyen (Hanoi University of Science and Technology, Vietnam)
6	Automated Detection of Ovarian Papillary Projections in Ultrasound Images	Thu-Ha Nguyen and Hanh-Trang Bui (School of Electrical and Electronic Engineering, HUST, Vietnam); Thi-Loan Pham (Hai Duong University, Vietnam); Hong-Thien Dang (National Hospital of Obstetrics and Gynecology, Vietnam); Vu Hai (Ha Noi University of Science and Technology, Vietnam); Thanh-Hai Tran (Hanoi University of Science and Technology, Vietnam)
7	Enhanced Transcranial Photoacoustic Imaging Using a Viscoelastic Wave Propagation Model	Hongyu Liu (Fudan University, China); Shijie Liang (Nanjing University of Science and Technology, China); Boyi Li, Chengcheng Liu, Ting Feng and Dean Ta (Fudan University, China)
8	Classification of Lumbar Multifidus Fatty Infiltration Using Learning-Based Ultrasound Image Feature Fusion Method	Chen Yiting (Shanghai Tech, China); Chao Zhang (The First Medical Center, General Hospital of Chinese PLA, China); Yuchong Gao (Shanghai Tech, China); Yi Mao (The First Medical Center, General Hospital of Chinese PLA,

		China); Tianyi Liang and Mingbo Zhang (The First Medical Center of Chinese PLA General Hospital, China); Rui Zheng (ShanghaiTech University, China)
9	Avatars as Reflections, Extensions, and Reconstructions of the Self: A Qualitative Study in Social VR	Yuki Shogaki (Research Institute on Human and Societal Augmentation, AIST / University of Tsukuba); Junji Ohyama (Research Institute on Human and Societal Augmentation, AIST & University of Tsukuba, Japan)
10	Hybrid Optimization-Based CNN-Transformer for Structural Health Monitoring	Jinlong Yang , Kwang Ho Yu , Sangsu Eom , Eun Sang Lee (Department of Mechanical Engineering, Inha University), Dae Young Shin (GUBI-META Co., Republic of Korea), Chul-Hee Lee (Department of Mechanical Engineering, Inha University, Korea)

Morning, Thursday, July 30, 2026

- POSTER SESSION - 2: Communication Networks and Systems

Time: 9:50 – 10:20

Location: Pre-function

Session chair: Dr. Hoang Manh Thang (Hanoi Uni. of Science and Technology, Vietnam)

Time	Title	Authors
1	A Hierarchical DTW-Based Clustering Framework for Efficient WiFi Fingerprinting Indoor Localization	Trung Vu-Thanh (Hunan University, China & School of Interdisciplinary Sciences and Arts, Vietnam National University, Hanoi, Vietnam); Jing He (Hunan University, China); Xuan Quang Truong (VNU School of Interdisciplinary Sciences and Arts, Vietnam National University, Vietnam); Lan Thi Chau Huynh , Ninh Duong-Bao and Khanh Nguyen-Huu (Ho Chi Minh City University of Industry and Trade, Vietnam)
2	VM Migration Control Considering Various Quality Requirements in Multi-Stage Information Processing System	Hayato Umeki (Nagoya, Japan); Yukinobu Fukushima (Okayama University, Japan); Celimuge Wu (The University of Electro-Communications, Japan); Yusheng Ji (National Institute of Informatics, Japan & Graduate University for Advanced Studies, Japan); Tutomu Murase (Nagoya University, Japan)
3	Evaluation of Nonlinear Distortion of RF Amplifiers for Full Duplex Networks	Moses Kasule , Djuradj Budimir (University of Westminster, UK)
4	Improving the 3-Dimension Visible Light Positioning System Between LED and Camera	Hieu Trung Do , Cuong Manh Hoang , Hong Hoang Si , Thi Lan Huong Nguyen , Dinh-Quan Nguyen , Nam Hoang Nguyen (Hanoi University of Science and Technology, Vietnam, Vietnam)
5	Hybrid 5G-IoT Communication Architectures for Large-Scale Precision Poultry Farming	Wai Yie Leong (INTI International University, Malaysia)
6	LoRaWAN-Based Distributed Sensor Networks for Real-Time Poul-	Wai Yie Leong (INTI International University, Malaysia)

	try House Environmental Monitoring	
7	Hybrid Machine Learning Model for Infrared Thermography Fault Diagnosis of Induction Motor	Bao Tran Quach (International University, Vietnam); Tuan Minh Le (RMIT, Vietnam); Duy Tan Le , Long TonThat (International University VNU-HCM, Vietnam); Pavel Potemkin (RMIT University, Australia); Son Vu Truong Dao (RMIT University Vietnam, Vietnam)
8	CAKE: Real-Time Action Detection via Motion Distillation and Background-Aware Contrastive Learning	Hieu Hoang (Hanoi University of Science and Technology, Vietnam); Dung Trung Tran (VinUniversity, Vietnam); Hong Nguyen (University of Southern California, USA); Nam-Phong Nguyen (Hanoi University of Science and Technology, Vietnam)
9	Optimized Split Federated Learning for YOLO11 Model on Resource-Constrained Edge Devices	Quy Huong Cao , Vu Hai (Hanoi University of Science and Technology, Vietnam)

Afternoon, Thursday, July 30, 2026

- POSTER SESSION - 3: Electronic Systems, Microwave Engineering

Time: 15:10 – 15: 40

Location: Pre-function

Session chair: Dr. Hoang Manh Thang (Hanoi Uni. of Science and Technology, Vietnam)

#	Title	Authors
1	Learning Feature-Based Adaptive GPS Weighting for LiDAR-IMU-GPS SLAM	Nguyen The Bao Danh , Hai Chi Ha , Thanh Huy Phung (Ho Chi Minh City University of Technology & VNU Ho Chi Minh City, Vietnam)
2	A Comparative Study of Feature Selection Paradigms for Machine Learning-Based Sepsis Diagnosis Using Immune-Related Gene Expression Profiles	Thanh-Thuy Tran , Nguyen Trinh , Hai-Chau Le (Posts and Telecommunications Institute of Technology, Vietnam)
3	A Non-Contact Ballistocardiogram-Based System with on-Chip Machine Learning for in-Home Patient Monitoring	Tien Truong Vo (Pham Van Dong University, Vietnam); Phuong Quy Le , Jaeyeop Choi and Junghwan Oh (Pukyong National University, South Korea)
4	A High-Gain 2.4 GHz Dual-Beam Antenna Array Using a Hadamard Matrix Beamforming Network	Quang Chinh Chu , Thanh Long Nguyen , Quoc Cuong Nguyen , Thuy Minh Le (Hanoi University of Science and Technology, Vietnam)
5	An Edge-Based Real-Time Individual Tracking System Using Networked mmWave Radar Nodes	Nguyen Vu Thanh Lam , Le Phan Gia Nghiem and Ho Khanh Linh , Tuan Do-Hong (Ho Chi Minh City University of Technology, Vietnam)
6	A Broadband Printed Dipole Antenna with Stable Flat-Top Radiation for Microwave Power Transmission	Danh Manh Nguyen (VinUniversity, Vietnam); The-Anh Le-Xuan (Soongsil University, South Korea); An Minh Tran , Dang-An Nguyen and Cuong Do (VinUniversity, Vietnam); Huy-Dung Han (Hanoi University of Science and Technology, Vietnam); Van-Dinh Nguyen (Trinity College Dublin, Ireland)
7	Design of a Novel Wideband Magic Tee and Monopulse Com-	Tuan-Anh Le Trong , Huan Van Tran , Quyet Nguyen Manh , Tung Duong Thanh , Son Van Ho-

	parator Using a Stepped Impedance Matching Structure for Tracking Systems	ang, Huan Van Dang (Viettel Group, Vietnam & Viettel Aerospace Institute, Vietnam)
8	A Robust Adaptive Integral Sliding Mode Control Strategy for Load Frequency Control in Wind-Integrated Multi-Area Power Systems	Phong Thanh Tran (Physics and Engineering Physics, Vietnam & University of Science, Vietnam); Tuan Van Huynh (VNUHCM - University of Science, Vietnam); Phuc Thien Nguyen (University of Science, Vietnam); Dieu Vo (Ho Chi Minh City University of Technology, Vietnam)
9	A Sensorless Predictive Torque Control Strategy for Induction Motor Drives	Van Quang Binh Ngo (Hue University of Education, Vietnam); Khanh-Quang Nguyen and Kim-Anh Nguyen (University of Science and Technology, Vietnam); Pham Viet Tuan (Hue University & University of Education, Vietnam)

4. KEYNOTE SESSIONS

Keynote Session 1

Session Chair: Professor Thomas Magedanz (Fraunhofer FOKUS Berlin, Germany)

Time: 9:00 – 9:45

- Keynote 1: “6G Values and Technologies”

by Takehiro Nakamura
NTT DOCOMO, Inc., Japan

Abstract

Research on technologies and services for 6G is accelerating worldwide. From 2025, 6G standardization activities have been started in 3GPP. NTT DOCOMO is actively engaged in the study, standardization and development of technologies for 6G, including RIS, NTN, sub-Tera Hz, AI-native networks, and ISAC. This presentation will explain our 6G vision and the latest technical activities mainly on AI-native networks.



Biography

Mr. Takehiro Nakamura currently serves as Chief Standardization Officer and Corporation Evangelist at NTT DOCOMO, Inc. With extensive experience in R&D and standardization, he has played a pivotal role in advancing radio and network technologies for next generation systems. Mr. Nakamura has actively contributed to standardization activities in ARIB, ITU, and 3GPP, serving as Vice Chair and Chair of 3GPP TSG-RAN from 2005 to 2013. Currently, he leads several projects on Local 5G, millimeter-wave, and 6G within the XG Mobile Promotion Forum(XGMF). He also serves as a board member of 5G-ACIA and as a sub-leader of the Human Augmentation Consortium.

Time: 9:45 – 10:30

- Keynote 2: Advances in Millimeter-Wave Circuit Design for Future Communications

by Kenichi Okada

Institute of Science Tokyo, Tokyo, Japan

Abstract

Millimeter-wave circuit technologies are advancing rapidly to meet the growing demand for high-speed, high-capacity, and long-distance wireless communication. Two major directions are driving this progress: the use of higher frequencies such as sub-terahertz (Sub-THz) to achieve ultra-fast data transmission even over longer distances, and the deployment of massive MIMO using mmWave to dramatically increase communication capacity. This keynote will first introduce a theoretical outlook on future trends in mmWave wireless communication for next-generation communication systems including 5G, beyond 5G, 6G, and satellite applications. Following this perspective, the talk will highlight recent developments in **ultra**-fast Sub-THz radios, focusing on their potential to support higher data rates and extended coverage. The presentation will then explore mmWave massive MIMO technologies, with a particular emphasis on the emerging role of discrete-time operation in mmWave circuit design. This approach enables scalable phased-array architectures realizing TD-MIMO (Time Division MIMO), supporting the development of energy-efficient, high-capacity wireless systems with enhanced flexibility and integration potential. The talk aims to provide insights into the evolving landscape of mmWave circuit design and its impact on future wireless communication.



Biography

Kenichi Okada (PhD) received the B.E., M.E., and Ph.D. degrees in Communications and Computer Engineering from Kyoto **University**, Kyoto, Japan, in 1998, 2000, and 2003, respectively. From 2000 to 2003, he was a Research Fellow of the Japan Society for the Promotion of Science in Kyoto University. In 2003, he joined Tokyo Institute of Technology as an

Assistant Professor, where he is currently a Professor of Electrical and Electronic Engineering in Institute of Science Tokyo. He has authored or co-authored more than 500 journal and conference papers. His current research interests include millimeter-wave and terahertz CMOS wireless transceivers for 20/28/39/60/77/79/100/300GHz for 5G, WiGig, satellite and future wireless systems, digital PLL, synthesizable PLL, atomic clock, and ultra-low-power wireless transceivers for Bluetooth Low-Energy, and sub-GHz applications.

Prof. Okada is a member of the Institute of Electrical and Electronics Engineers (IEEE), the Institute of Electronics, Information and Communication Engineers (IEICE), the Information Processing Society of Japan (IPSJ), and the Japan Society of Applied Physics (JSAP). He was a recipient or co-recipient of the Ericsson Young Scientist Award in 2004, the A-SSCC Outstanding Design Award in 2006 and 2011, the ASP-DAC Special Feature Award in 2011 and Best Design Award in 2014 and 2015, the MEXT Young Scientists' Prize in 2011, the JSPS Prize in 2014, the Suematsu Yasuharu Award in 2015, the MEXT Prizes for Science and Technology in 2017, the RFIT Best Paper Award in 2017, the IEICE Best Paper Award in 2018, the RFIC Symposium Best Student Paper Award in 2019, the IEICE Achievement Award in 2019, the DOCOMO Mobile Science Award in 2019, the IEEE/ACM ASP-DAC Prolific Author Award in 2020, the Kenjiro Takayanagi Achievement Award in 2020, the

KDDI Foundation Award in 2020, the IEEE CICC, Best Paper Award in 2020, the IEEE ISSCC Author-Recognition Award in 2023, the IEEE A-SSCC Top-11 Contributor Award, IEEE MWCL Tatsuo Itoh Best Paper Award, and more than 50 other international and domestic awards. He is a Fellow of IEEE. He is/was a member of the technical program committees of IEEE International Solid-State Circuits Conference (ISSCC), VLSI Circuits Symposium, European Solid-State Circuits Conference (ESSCIRC), Radio Frequency Integrated Circuits Symposium (RFIC), Asian Solid-State Circuits Conference (A-SSCC), and he is/was also Guest Editors and an Associate Editor of IEEE Journal of Solid-State Circuits (JSSC), an Associate Editor of IEEE Transactions on Microwave Theory and Techniques (T-MTT), a Distinguished Lecturer and AdCom member of the IEEE Solid-State Circuits Society (SSCS).

More details about Prof. Kenichi Okada can be found at <https://www.ssc.p.isct.ac.jp/en/okada/>

Keynote Session 2

Session Chair: Professor Serge Fdida (Sorbonne
Université, France)

Time: 11:00 – 11:45

- Keynote 3: Ultrafast Laser-enabled High-resolution Ultrasonic Characterization of Semiconductor Interior Structures

by Zhongqing Su

The Hong Kong Polytechnic University, Hong Kong, China

Abstract

Path-breaking advances in ultrafast laser technology have shed new light on optical–acoustic coupling and opened up intriguing application prospects. In this talk, we will report on a new nondestructive evaluation framework based on ultrafast laser ultrasonics, from fundamental theory to implementation details. Making use of the ultrashort acoustic wavelength of laser-generated ultrasound, the femtosecond-laser-enabled ultrasonics techniques have **enabled** super high-resolution material characterization at the nanoscale. The approach has been experimentally demonstrated by characterizing the monocrystalline semiconductor wafers which are of a high degree of anisotropy, and imaging interior features of an opaque, stacked micro-system, three-dimensionally and contactlessly.



Biography

Zhongqing Su (PhD) is the Chair Professor of Intelligent Structures and Systems and Head of the Department of Mechanical Engineering at The Hong Kong Polytechnic University, Hong Kong. He is the current Editor-in-Chief of the journal *Ultrasonics* (Elsevier) and holds the Changjiang Chair Professorship. He is also the current President of The Hong Kong Society of

Theoretical and Applied Mechanics. His research interests span the area of ultrasonics, structural health monitoring (SHM), wave propagation, smart materials, intelligent systems, and advanced composites. Prof. Su earned his **PhD** in 2004 from the School of Aerospace, Mechanical and Mechatronic Engineering at The University of Sydney, Australia. Prof. Su was the Chair of a number of key international conferences in his field, including the 7th Asia-Pacific Workshop on SHM (Hong Kong, 2018), the SPIE Conference on Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2023 (Long Beach, the United States, 2023), and the SPIE Conference on Health Monitoring of Structural and Biological Systems XVIII (Long Beach, the United States, 2024; Vancouver, Canada, 2025). He is an elected Distinguished Fellow of the International Institute of Acoustics and Vibration (IIAV).

More details about Prof. Zhongqing Su can be found at <https://www.polyu.edu.hk/me/people/academic-teaching-staff/su-zhong-qing-prof/>

Time: 11:45 – 12:30

- Keynote 4: AI on the Space Edge

by Tat-Jun Chin

Adelaide University, South Australia, Australia

Abstract

The space sector is experiencing significant growth, due to renewed momentum in state-led space programs, sustained scientific interest in space, and explosive growth in commercial space ventures. As space utilization models grow in scope, ambition and complexity, the need for autonomy in space systems also rapidly increases. In addition to serving more conventional roles (e.g., Earth observation, communication), future satellites will have to conduct more advanced tasks, such as on-orbit servicing, in-space construction and space debris removal, where real-time sensing and decision making are crucial to enable safe interactions between spacecraft. Moreover, as space exploration reaches further into space, the longer delays in roundtrip communication necessitates intelligent spacecraft and space robots that can make decisions autonomously based on in situ sensor measurements. While AI has been instrumental to the development of autonomous systems on Earth, endowing space systems with AI requires surmounting non-trivial challenges, such as little training data from the operating domain and limitations on compute resources due to the harshness of the space environment. This talk explores recent progress towards realizing AI on spaceborne edge devices. Through this talk, it is also hoped that the significant difficulty posed by space motivates alternative approaches to the current dominant AI paradigm towards building autonomous systems.



Biography

Tat-Jun Chin (PhD) is Professor of Computer Science at Adelaide University, where he leads the AI for Space Group. He received his PhD in Computer Systems Engineering from Monash University in **2007**, which was partly supported by the Endeavour Australia-Asia Award, and a

Bachelor in Mechatronics Engineering from Universiti Teknologi Malaysia in 2004, where he won the Vice Chancellor's Award. Tat-Jun's research interest lies in optimisation for computer vision and machine learning, and their application to intelligent satellites and space robotics. He has published more than 150 research articles on the subject, and has received multiple accolades for his research, including a CVPR award (2015), a BMVC award (2018), Best of ECCV (2018), three DST Awards (2015, 2017, 2021), an IAPR Award (2019), an RAL Best Paper Award (2021), and a nomination for ECCV Best Paper Award (2024). He was a Finalist in the Academic of the Year Category at Australian Space Awards 2021. Tat-Jun is currently Visiting Professor at the European Space Agency's Philab and was a SmartSat CRC Professorial Chair in 2020-2025.

More details about Prof. Tat-Jun Chin can be found at <https://re-searchers.adelaide.edu.au/profile/tat-jun.chin>