

**The 17th International Conference on Computer  
Science and its Applications  
(CSA 2025)**

December 17-20, 2025  
Phu Quoc, Vietnam

**Organized by**

**KCIA**

## Conferences

**The 11th World Congress on Information Technology Applications and Services  
(World IT Congress 2026)**

- February 11-13, 2026, Jeju, South Korea
- <http://www.worlditcongress.org2026/>

**The 20th International Conference on Multimedia and Ubiquitous Engineering  
(MUE 2026)**

- April 23-25 2026, Qingdao, China
- <http://www.mue-conference.org/2026/>

**The 20th International Conference on Future Information Technology  
(FutureTech 2026)**

- April 23-25 2026, Qingdao, China
- <http://www.futuretech-conference.org/2026/>

**The International Conference on Big data, IoT, and Cloud computing  
(BIC 2026)**

- August 12-14 2026

**The 18th International Conference on Computer Science and its Applications  
(CSA 2026)**

- December 27-29 2026

## Message from the CSA 2025 General Chair

International Conference on Computer Science and its Applications (CSA 2025) is the 17th event of the series of international scientific conference. This conference takes place Phu Quoc, Vietnam, December 17 - 20, 2025. CSA 2025 will be the most comprehensive conference focused on the various aspects of advances in computer science and its applications. CSA 2025 will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of CSA. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in CSA. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject. CSA 2025 is the next event in a series of highly successful International Conference on Computer Science and its Applications, previously held as CSA 2024(16th Edition: Pattaya, Thailand 2024), CSA 2023(15th Edition: Nha Trang, Vietnam, 2023), CSA 2022(14th Edition: Vientiane, Laos, 2022), CSA 2021(13th Edition: Jeju, Korea, 2021), CSA 2020 (12th Edition: Jeju, Korea, 2020), CSA 2019 (11th Edition: Macau, China), CSA 2018 (10th Edition: Kuala Lumpur, Malaysia), CSA 2017 (9th Edition: Taichung, Taiwan), CSA 2016 (8th Edition: Bangkok, Thailand, 2016), CSA 2015 (7th Edition: Cebu, December, 2015), CSA 2014 (6th Edition: Guam, December, 2014), CSA 2013 (5th Edition: Danang, December, 2013), CSA 2012 (4th Edition: Jeju, November, 2012), CSA 2011 (3rd Edition: Jeju, December, 2011), CSA 2009 (2nd Edition: Jeju, December, 2009), and CSA 2008 (1st Edition: Australia, October, 2008).

The papers included in the proceedings cover the following topics: Mobile and ubiquitous computing, Dependable, reliable and autonomic computing, Security and trust management, Multimedia systems and services, Networking and communications, Database and data mining, Game and software engineering, Grid and scalable computing, Embedded system and software, Artificial intelligence, Distributed and parallel algorithms, Web and internet computing and IT policy and business management.

Accepted and presented papers highlight new trends and challenges of Computer Science and its Applications. The presenters showed how new research could lead to novel and innovative applications. We cordially thank all the authors for their valuable contributions and the other participants of this conference. The conference would not have been possible without their support. Thanks are also due to the many experts who contributed to making the event a success.

We would like to give my special thanks to Prof. James J. (Jong Hyuk) Park, Prof. Young-Sik Jeong, Prof. Yi Pan, Prof. Vincenzo Loia, Prof. Stefanos Gritzalis, Prof. Han-Chieh Chao and Prof. Byeong-Seok Shin the Steering Committee Chairs of CSA for their strong encouragement and guidance to organize the symposium. We would like to thank CSA Program Chairs: Prof. Ji Su Park, Prof. Alireza Souri, Prof. Le Anh Ngoc and Prof. Neil Yen. We would like to express special thanks to committee members for their timely unlimited support.

CSA 2025 General Chair

Jungho Kang, Baewha Woman University, Korea  
Kim-Kwang Raymond Choo, The University of Texas at San Antonio, USA  
Changhao Piao, Chongqing University of Posts and Telecommunications, China  
David Camacho, Universidad Politécnic de Madrid Madrid, Spain

## Message from the CSA 2025 Program Chairs

Welcome to the 16th International Conference on Computer Science and its Applications (CSA 2025) which will be held Phu Quoc, Vietnam, December 17 - 20, 2025. CSA 2025 will be the most comprehensive conference focused on the various aspects of advances in computer science and its applications.

CSA 2025 provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of Computer Science. In addition, the conference contains high quality papers which are closely related to the various theories and practical applications in Computer Science. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject. CSA 2025 is the next event in a series of highly successful International Conference on Computer Science and its Applications, previously held as CSA 2024(16th Edition: Pattaya, Thailand 2024), CSA 2023(15th Edition: Nha Trang, Vietnam, 2023), CSA 2022(14th Edition: Vientiane, Laos, 2022), CSA 2021(13th Edition: Jeju, Korea, 2021), CSA 2020 (12th Edition: Jeju, Korea, 2020), CSA 2019 (11th Edition: Macau, China), CSA 2018 (10th Edition: Kuala Lumpur, Malaysia), CSA 2017 (9th Edition: Taichung, Taiwan), CSA 2016 (8th Edition: Bangkok, Thailand, 2016), CSA 2015 (7th Edition: Cebu, December, 2015), CSA 2014 (6th Edition: Guam, December, 2014), CSA 2013 (5th Edition: Danang, December, 2013), CSA 2012 (4th Edition: Jeju, November, 2012), CSA 2011 (3rd Edition: Jeju, December, 2011), CSA 2009 (2nd Edition: Jeju, December, 2009), and CSA 2008 (1st Edition: Australia, October, 2008).

CSA 2024 contains high quality research papers submitted by researchers from all over the world. Each submitted paper was peer-reviewed by reviewers who are experts in the subject area of the paper. Based on the review results, the Program Committee accepted papers.

For organizing an International Conference, the support and help of many people is needed. First, we would like to thank all authors for submitting their papers. We also appreciate the support from program committee members and reviewers who carried out the most difficult work of carefully evaluating the submitted papers.

We would like to give my special thanks to Prof. James J. (Jong Hyuk) Park, Prof. Young-Sik Jeong, Prof. Yi Pan, Prof. Vincenzo Loia, Prof. Stefanos Gritzalis, Prof. Han-Chieh Chao and Prof. Byeong-Seok Shin the Steering Committee Chairs of CSA for their strong encouragement and guidance to organize the symposium. We would like to thank CSA 2025 General Chairs: Prof. Jung-ho Kang, Prof. Kim-Kwang Raymond Choo and Prof. Piao Changhao and Prof. David Camacho. We would like to express special thanks to committee members for their timely unlimited support.

CSA 2025 Program Chairs

Ji Su Park, Jeonju University, Korea  
Le Anh Ngoc, Swinburne University of Technology, Vietnam  
Alireza Souri, Islamic Azad University, Iran  
Neil Yen, University of Aizu, Japan

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Neil Y. Yen, The University of Aizu, Japan  
Se Dong Min, Soonchunhyang University, Korea  
Sheng Miao, Qingdao University of Technology, China

## Invited Speaker 1



### **An Efficient Edge Computing Management Mechanism for Sustainable Smart Cities**

#### **Prof. Ngoc Le**

Dean, Semiconductor & AI, Asia University, Vietnam  
Director, Swinburne Innovation Space, Swinburne Vietnam  
Director, Safe AI Foundation, Asia Pacific  
Director, Korea Computer Industry Association  
Director, International Association for Convergence Science & Technology

#### **Abstract:**

Since ancient times, humanity has envisioned a world where people and things connect and interact. The advent of generation mobile systems, the so-called 5 G in the early century, has realized this dream. 5 G can provide network services with extremely-high throughput and extremely-low delay and allows a huge device number to connect based on Internet infrastructure, forming the Internet of Things (IoT). In recent years, IoT has been applied in various fields serving humanity, such as smart cities, smart agriculture, healthcare, education, military, and IoT ecosystems. One of the main challenges of IoT applications is computing solutions to reduce service response times. This talk will introduce an efficient edge computing management mechanism for IoT applications in smart cities. Our mechanism proposes a small database (called an information map) that allows edge computing servers of smart cities to store edge service information. When the mobile end-users move to the new edge server' managed coverage, properties related to the EC service are exchanged between the edge servers. The experiment results have shown that our proposed mechanism improves service response time and energy consumption many times compared to the traditional mechanism. We hope that this mechanism will be strongly applied to sustainable smart cities in the future.

#### **Biography:**

Dr. Ngoc Le (Jimmy) holds a Ph.D. in Communication and Information Technology from Kyungpook National University (KNU), South Korea. He is currently the Director of Swinburne Innovation Space and an IT Professor at Swinburne University of Technology, Vietnam, where he leads the Intelligent Systems and Networks Research Group (ICISN). Additionally, he serves as the Dean of the Semiconductor Technology at Asia University Vietnam.

His areas of expertise include embedded and intelligent systems, communication networks, the Internet of Things (IoT), image and video processing, artificial intelligence (AI), and big data analysis. His professional activities encompass research, innovation management, training, and technology transfer.

Dr. Le is also the Director of the International Association for Convergence Science & Technology (IACST), Director of the Korea Computer Industry Association (KCIA), and Director of the SafeAI Foundation. He is actively involved in the global academic community as a keynote speaker, conference chair, founder of the Global Hackathon, and journal editor for IET Smart Cities and Human-centric Computing and Information Sciences (HCIS). Additionally, he serves as a technical

program committee member, session chair, book editor, and reviewer for numerous international conferences and journals.

Over the course of nearly 30 years, Dr. Le has gained extensive experience in both academia and industry. He has held several important positions, including Director of Development Programs at the Differentiated Automotive Platform (DAP) under FPT Global Automotive & Manufacturing, Vice-Dean of the Faculty of Electronics & Telecommunications at Electric Power University (EPU), and Head of the Communication Network Group at Vinh University's IT Department. Earlier in his career, he served as a researcher at the Telecommunications Networks Laboratory (TENET Lab) at Kyungpook National University in South Korea.

Outside of academia, Dr. Le contributes as a digital transformation and IT consultant, specialist, and mentor for organizations such as the Vietnam–Korea Businessmen and Investment Association (VKBIA), the Vietnam-Korea Experts and Intellectuals Association (VKEIA), and the Vietnam Innovation Network in Korea (VINK). He can be contacted via email at [nle@swin.edu.au](mailto:nle@swin.edu.au).

# PROGRAM SCHEDULE FOR CSA 2025

Day 1, December 17, 2025		
Time	Min	HALL A
17:30-20:30	180	<b>Welcome Reception (Only for Invited Members)</b>

Day 2, December 18, 2025			
Time	Min	HALL A	HALL B
<b>09:30-10:00</b>	30	<b>Registration</b>	
<b>10:00-11:40</b>	100	<b>Session A-1 CSA 2025 Chair: Min Choi</b>	<b>Session B-1 CSA 2025 Chair: Jin Gon Shon</b>
<b>11:40-13:00</b>	80	<b>Lunch Break</b>	
<b>13:00-13:40</b>	40	<b>Keynote Speech: Prof. Ngoc Le “An Efficient Edge Computing Management Mechanism for Sustainable Smart Cities” Chair: Yeon Lee</b>	
<b>13:40-13:50</b>	10	<b>Coffee Break</b>	
<b>13:50-15:30</b>	100	<b>Session A-2 CSA 2025 Chair: Phuong ANH Nguyen</b>	<b>Session B-2 CSA 2025 &amp; CAABE Workshop Chair: Sheng Miao</b>
<b>15:30-15:40</b>	10	<b>Coffee Break</b>	
<b>15:40-17:20</b>	100	<b>Session A-3 CSA 2025 Chair: Abir EL Azzaoui</b>	<b>Session B-3 CAABE Workshop Chair: Sheng Miao</b>
<b>17:20-18:00</b>	40	<b>Break</b>	
<b>18:00-18:30</b>	30	<b>Welcome Speech &amp; Award</b>	

<b>18:30-20:00</b>	90	<b>Banquet (Only for Invited Members)</b>
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<b>Day 3, December 19, 2025</b>		
<b>Time</b>	<b>Min</b>	<b>HALL A</b>
<b>08:40-09:00</b>	20	<b>Registration</b>
<b>09:00-10:30</b>	90	<b>Session A-1 CSA 2025 Chair: Yeon Lee</b>
<b>10:30-10:40</b>	10	<b>Coffee Break</b>
<b>10:40-12:10</b>	90	<b>Session A-2 CAABE Workshop Chair: Sheng Miao</b>
<b>12:10-13:30</b>	70	<b>Lunch Break</b>
<b>13:30-15:30</b>	120	<b>Local Arrangement Committee Meeting I</b>
<b>15:30-17:30</b>	120	<b>Organizing Committee Meeting I</b>

<b>Day 3, December 20, 2025</b>		
<b>Time</b>	<b>Min</b>	<b>HALL A</b>
<b>09:30-11:00</b>	90	<b>Arrangement Committee Meeting II</b>
<b>11:00-12:30</b>	90	<b>Organizing Committee Meeting II Local</b>

- 1. A paper presentation should be made by one of authors of the paper for 15 minutes (10 minutes for the presentation itself and 5 minutes for Q/A).**
- 2. All speakers of each session should meet the session chair at their room 10 minutes before the session begins.**
- 3. Windows 7/10 laptops running the Adobe Reader and Microsoft Office for paper presentations will be prepared. Please prepare for your presentation.**
- 4. For Q&A in the online section, please email the author.**
- 5. Committee Meeting Only invited members may attend.**

**DETAILED SCHEDULE FOR  
THE 14TH INTERNATIONAL CONFERENCE ON  
COMPUTER SCIENCE AND ITS APPLICATIONS (CSA 2025)**

**Day 1, December 17, 2025 (Wednesday)**

**17:30-20:30**     **Welcome Reception**  
(Only for Invited Members)

**Day 2, December 18, 2025 (Thursday)**

**09:30-10:00**     **Registration**

**10:00-11:40**     **On/Off Session A-1: CSA**  
(HALL A)  
(Chair: Min Choi)

1. **DiffDesign – An SE(3)-Equivariant Diffusion Model for Molecule Linker Generation**  
*Thanh Hien Truong, Jin Hee Lee, Min Sun Yeom*
2. **Machine Learning Approaches to Predict Shareholder Returns in the Hotel Industry**  
*Le Duc Thinh, Tran Chau Nhi*
3. **FoodNet-CNN: A Deep Learning Model for Multi-Class Food Image Classification**  
*Phuong-Thao Nguyen, Thanh Tien Do, Ngoc Thanh Pham, Dong Doan Nguyen, Thai Kim Dinh, Van-Tinh Nguyen, Xuan-Quynh Pham-Thi, Duc-Kien Nguyen, Tien-Dat Do*
4. **Towards Sustainable Smart Transportation: Lightweight YOLO-based Traffic Sign and Light Recognition with CLAHE-aided OCR**  
*Thu-Trang Cao-Thi, Thanh-Tien Do, Van Tinh Nguyen, Hai Yen Pham, Thai Kim Dinh, Ha-Trang Le, Hoang-Anh Luong-Vu, Gia-Bao Vu, Thu-Thuy Do- Thi, Tien-Dat Do*
4. **Towards Sustainable Smart Transportation: Lightweight YOLO-based Traffic Sign and Light Recognition with CLAHE-aided OCR**  
*Thu-Trang Cao-Thi, Thanh-Tien Do, Van Tinh Nguyen, Hai Yen Pham, Thai Kim Dinh, Ha-Trang Le, Hoang-Anh Luong-Vu, Gia-Bao Vu, Thu-Thuy Do- Thi, Tien-Dat Do*
5. **VR-TSD: A Real-World Dataset and a Lightweight YOLOv8n Model for Traffic Sign Recognition in Vietnam**  
*Dinh Nguyen Ngoc, Linh Nguyen Hong Nhat, Quy Hoang Van, Ham Nguyen, Huong Bui, Phuong Anh Nguyen*

**10:00-11:40**     **On/Off Session B-1: CSA**  
(HALL B)  
(Chair: Shon Jin Gon)

- 1. O2O Data and Contract Management platform for Bidding Agent Selection**  
*Min Choi, Geunho Ryu, Pham Van Huy*
- 2. Advancing Vietnamese Speech Emotion Recognition: The OrionNet Architecture and VESC Corpus**  
*Ha Nguyen Manh, Quy Hoang Van, Ham Nguyen, Huong Bui, Ngoc Le*
- 3. Improving the performance of detection and classification of maize plant diseases using Deep neural networks on large image datasets**  
*Bui Hai Phong, Le Anh Ngoc, Nguyen Thi Hong Thuy*
- 4. Optimized caching strategy based on mutual dependency of content and space size**  
*Quang Khac Nguyen, Nhung VuongThi, Thanh Trinh*
- 5. Quantum Machine Learning-Based Portfolio Optimization Framework for Secure Digital Financial Services**  
*Zhaoxiang, Byung Hyun Jo, Jong Hyuk Park, Junjie He*
- 6. Lightweight Face Recognition System for Automated Attendance Tracking Under Data-Constrained Environments**  
*Quang Dang, An Nguyen, Tung Vu, Phuong Anh Nguyen, Ngoc Le*

**11:40-13:00 Lunch Break**

**13:00-13:40 Keynote Speech**  
**(HALL A)**  
**(Chair: Yeon Lee)**

**“An Efficient Edge Computing Management Mechanism for Sustainable Smart Cities”**  
**Prof. Ngoc Le**

**13:40-13:50 Coffee Break**

**13:50-15:30 Session A-2: CSA**  
**(HALL A)**  
**(Chair: Phuong ANH Ngyuen)**

- 1. FIT-ConferenceHub: From Design to Real-World Application of an LLM-Based System for Academic Conference Discovery in the ICT Domain**  
*Ho Thi Hoang Vy, Le Lam Loi, Nguyen Van Sieu, Nguyen Huu Thang, Le Ho Thanh Tung, Hoang Thi Khon, Nguyen Trong Tri, Nguyen Van Duc, Tiet Gia Hong, Thi My Hang Vu, Cuong Pham-Nguyen, Le Nguyen Hoai Nam*
- 2. Deep Learning for Multimodal Medical Image Fusion: A Concise Review**  
*Cuong Do Oanh, Giang Son Tran, Thi Phuong Nghiem, Tran Hong Diep, Chi Mai Luong*
- 3. Complementary Deep Features for COVID-19 Screening: Combining Hierarchical Vision Transformers and Convolutional Networks**  
*Cuong Do Oanh, Giang Son Tran, Thi Phuong Nghiem, Chi Mai Luong*
- 4. Smart and Sustainable Agriculture: Offline Reinforcement Learning for Intelligent Handover in Hybrid VLC/RF Agricultural IoT Networks**  
*Kien Trung Ngo, Nhung Vuong Thi, Le Anh Ngoc*

5. **Leveraging 3D Facial Reconstruction to Enhance Micro-Expression Recognition**  
*Diep Nguyen Hoang, Quang Nguyen Viet, Le Cong Thuong, Thanh Ha Le*
6. **AQLB: Lightweight Adaptive Queue-Aware Load Balancer Microservice Chains**  
*Van Long Nguyen Huu, Duy-An Ha*
7. **Enhancing Sequential Recommendation with Knowledge Graph-based Intent Network**  
*Thanh-Tu Luong, Quoc-Anh Tran, Duy-Hoang Tran, Ngoc Minh Chau Nguyen*

**13:50-15:30    On/Off Session B-2: CSA 2025 & CCABE Workshop**

**(HALL B)**

**(Chair: Sheng Miao)**

1. **AI-Based Load Prediction and Routing Optimization for Load Imbalance in MySQL Replication Structures**  
*Yeon Lee, Yeonwoo Shin, Byeong-Seok Shin*
2. **Research on the Impact of Greening and Location Morphology on Thermal Comfort of Pocket Parks Based on Ladybug Tools Simulation**  
*Zhuqing Xin, Xuechuan Geng*
3. **Using Eye-Tracking to Unfold the Visual Preferences of Older Adults with Diverse Functional and Social Profiles in Historic Urban Community Spaces**  
*Ren Ran, Nie Tong, Sun Chengpeng*
4. **Spatial Visibility Analysis of Underground Railway Stations Based on CPTED Principles**  
*Sangpil Jung, Jin-wook Kim*
5. **Technology, Innovation, and Scale: Deconstructing the Core Drivers of SME Digital Transformation in the Post-Pandemic Era**  
*YUTIAN HE, ook lee*
6. **3D Rhythmic Flow Modeling for Emotion Recognition from Handwriting**  
*Jeong Eun Park, Ji Su Park, Jin Gon Shon*
7. **Legato: Articulation and Dynamic-Aware Dance Generation via VQ-VAE**  
*Sun Young Park, Ji Su Park, Jin Gon Shon*
8. **CBI-GNN: Copula–Birnbaum Importance Gated Spatiotemporal Neural Network for Crime Hotspot Forecasting**  
*Soojung Hong, Ji Su Park, Jin Gon Shon*

**15:30-15:40    Coffee Break**

**15:40-17:20    Session A-3: CSA**

**(HALL A)**

**(Chair: Abir EL Azzaoui)**

1. **An Analytical Survey on Sniffing-Based Cyber Attacks and Artificial Intelligence Countermeasures Across Mobile and Air-Gapped Environments**  
*Na Yeong Kim, Jong Hyuk Park*
2. **Lattice-Based Post-Quantum Cryptography for Smart Contracts: A Comprehensive Survey for Secure Maritime Blockchain Systems**

*Byung Hyun Jo, Jungho Kang, Jong Hyuk Park*

3. **Real-time Anomaly Detection in CCTV Surveillance Systems: Trends, Challenges, and Future Directions**  
*Sekione Reward Jeremiah, Azhar Abbas, Jong Hyuk Park*
4. **ShadowLink: Real-Time Face Anonymization for Persistent Identity Tracking in Surveillance Networks**  
*Azhar Abbas, Jong Hyuk Park*
5. **AutoMask-Sec: Budget-Aware Orchestration of CCTV based Face De-Identification**  
*Tae Hwan Lee, Jong Hyuk Park*
6. **Hybrid Autoscaling Approach for Continuous Video Stream Processing on Serverless Computing**  
*Minsuk Jung, Byeonghui Jeong, Seungyeon Baek, Young-Sik Jeong*
7. **Proactive Multi-Autoscaler with Anomaly Detection for Real-Time Streaming Environments**  
*Subin Jeong, Byeonghui Jeong, Seungyeon Baek, Young-Sik Jeong*
8. **Post-Quantum Cryptography-Based Authentication and Key Management Framework for Financial Platforms**  
*Byung Hyun Jo, Junjie He, Jong Hyuk Park*
9. **Toward Sustainable AI in Agriculture: An Efficient VQA Pipeline for Rice Leaf Disease Analysis**  
*Faheem Shehzad, Abdul Haseeb, Ciro Mennella, Massimo Esposito, Aniello Minutolo*

**15:40-17:20**    **Session B-3: CAABE Workshop**  
**(HALL B)**  
**(Chair: Sheng Miao)**

1. **Tobacco strand structure segmentation method based on Encoder-only Mask Transformer deep model**  
*Xu Zhaochen, Zhang Zhiliang*
2. **An Intelligent Tobacco Sensory Evaluation Terminal and Management System**  
*Shishuan Guan, Xinlong Zhang, Erge Lin, Cunfeng Yu, Lei Jiao*
3. **Dual-Profile Modeling for Tobacco Sensory Evaluation via Graph Algorithms and Deep Learning**  
*Shishuan Guan, Xinlong Zhang, Erge Lin, Cunfeng Yu, Lei Jiao*
4. **Research on online detection technology and application of leaf cutting width based on image algorithm**  
*Wenchao Huang, Fengcang Xu, Leting Zhou, Kun Zhu, Shuaishuai Cheng, Xuechao Tang, Shourun Wang*
5. **A Study on Home Integrated Energy System Optimization Based on Deep Reinforcement Learning**  
*Jing Li, Weijun Gao, Yang Xu*

**17:20-18:00**    **Break**

**18:00-18:30**    **Welcome Speech & Award**

**18:30-20:00**    **Banquet**

## Day 3, December 19, 2025 (Friday)

**08:40-09:00**    **Registration**

**09:00-10:30**    **On/Off Session A-1: CSA**  
**(HALL A)**  
**(Chair: Yeon Lee)**

- 1. Efficient Vision-Based Framework for Real-Time Classroom Engagement Assessment**  
*Anh Nguyen, Duong Do, Thuan Bui, An Nguyen, Phuong Anh Nguyen, Thanh Le, Ngoc Le*
- 2. Blockchain-empowered Intelligent Architecture for Cyber Authentication in Social Networks**  
*Archana Kurde, Sushil Kumar Singh*
- 3. An On-Device AI Based Video Compression Model Optimization for Efficient Bandwidth Usage and Image Quality in Constrained AIoT Environments**  
*Ngoc Le, Phuong Anh Nguyen, Dai Nguyen*
- 4. Intelligent Visual Analytics Framework for Real-time School Safety Monitoring Using Computer Vision and Machine Learning: Intelligent Visual Analytics for School Safety**  
*Tung Vu, Phuong Anh Nguyen, Minh Le, Quan Le, Tuan Nguyen, Long Nguyen, Duy Nguyen, Ngoc Le*
- 5. HSHKD A-Mark : An Audio Classification Model with Hard-Soft Hybrid Knowledge Distillation**  
*Su Jin Ahn, Young Min Jeon, Jea Pil Ko, Ji Su Park*
- 6. PrivEdge-Sec: Adaptive Privacy Intelligence for Real-Time Face Anonymization in Edge-Cloud Systems**  
*Minji Kim, Jong Hyuk Park*
- 7. System Design for Reliable Wired and Wireless Communication Network Services**  
*Min-woo Seong, Ji Su Park*

**10:30-10:40**    **Coffee Break**

**10:40-12:10**    **On/Off Session A-2: CAABE Workshop**  
**(HALL A)**  
**(Chair: Sheng Miao)**

- 1. Measuring the Coordination of the Urban Landscape with the Historical District Renewal Process**  
*Zhengliang Jiang, Jie Yang*
- 2. Old Residential Building Defect Inspection Based on Hierarchical Labeling Metric Learning**  
*Kun Zhao, Wenbin He, Man Zhang, Lijian Zhou, Helei Ren, Jinming Jiang, Tianyi Chen, Qichao Ban*

3. **Design and Test of Pile Foundation Borehole Debris Cleaning Robot System**  
*Yang Liu, Gang He, Gang Li, Ke Deng, Tianze Li, Xingguo Song*
4. **Perception Evaluation of Coastal Landscapes Based on Multi-Source Fusion Strategy**  
*Kaiwen Liu, Yansu Qi*
5. **Utilizing Improved YOLOv8 to Identify Soil Erosion Based on Aerial Imagery**  
*Zishun Song, Han Li, Chuanlong Wang, Chao Liu, Sheng Miao*
6. **A Mixture-of-Experts and Contrastive Learning-Based Method for Open-Set Diagnosis and Incremental Learning of Air Conditioner Fault Sound Signals**  
*Jingxuan Zhang, Ziheng Liu, Tao Zhang, Xiaoping Xiao, Keyong Hu*

**12:10-13:30 Lunch Break**

**13:30-15:30 Local Arrangement Committee Meeting I**

**15:30-17:30 Organizing Committee Meeting I**

### **Day 3, December 20, 2025 (Saturday)**

**09:30-11:00 Local Arrangement Committee Meeting II**

**11:00-12:30 Organizing Committee Meeting II**

## Conference Venue

### Seashells Phu Quoc Hotel

- Site: <https://www.seashellshotel.vn/ko/>
- Address: 01 Võ Thị Sáu, Dương Đông, Phú Quốc, Kiên Giang, 92500, Vietnam
- Tel: +84 297 7300 999
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