

PROGRAM FOR SMART 2024

DAY 1, OCTOBER 23TH, 2024 (WED)

TIME	
10:00-10:30	Committee Meeting
11:00-12:00	Session A
12:10-13:30	Lunch
13:40-14:40	Session B

DAY 2, OCTOBER 24TH, 2024 (THU)

TIME	
09:20-09:40	Committee Meeting
10:00-11:00	Session C
11:10-12:10	Session D
12:10-13:30	Lunch
14:00~15:00	Session E
15:00~15:30	Coffee Break
15:40~17:00	Session F
17:10~	Banquet

DAY 3, OCTOBER 25TH, 2024 (FRI)

TIME	
13:00-13:30	Committee Meeting
14:00-15:00	Session G

DAY 4, OCTOBER 26TH, 2024 (SAT)

TIME	
09:00-10:00	Closing meeting by KIIT for SMART
11:00-12:00	Closing meeting by KIITI

PROGRAM SCHEDULE

DAY 1, OCTOBER 23TH, 2024 (WED)

- 10:00-10:30** **Committee Meeting organized by KIIT, KIITI**
- 10:30-11:00** **Break**
- 11:00-12:00** **Session A (Chair: Jun-Hong Shen, National United University, Taiwan)**
- **A Study on the Use of Generative AI and Secondary Education**
Wen-Pin Hu (Asia University, Taiwan)
 - **Correlation with practical improvement of practical ability of simulation-based nursing education learning after COVID-19 infection**
Ching-Ta Lu, I-Ming Wang, and Zi-Hao Tsai (Feng Chia University, Taiwan)
 - **Systematization of AI Data-Based Performance Management to Improve the Quality of University Education**
Yong-Xiang Zhang, Wen-I Chuang (National United University, Taiwan)
 - **Analysis of the effectiveness of education satisfaction using AI learning artificial intelligence assistants**
Wen-I Chuang, Jun-Hong Shen (National United University, Taiwan)
 - **Social Participation Art Education Using Generative AI: Focusing on the Improvement of Community Competency of Middle School Students**
Bo-Yu Zhan, Jun-Hong Shen (National United University, Taiwan)
 - **Multi Criteria Decision Support System with Various Factor in Smart Farm**
Hwa-Young Jeong¹, Hack-Yoon Kim², Jin-Ho Ahn³, Sang-Young Oh¹, Seong-Eon Hong¹ (¹Kyunghee University, ²Chungju University, ³Kyonggi University Korea)
- 12:10-13:30** **Lunch**
- 13:40-14:40** **Session B (Chair: Hwa-Young Jeong, Kyung Hee University, Korea)**
- **Two-Stage Fine-Tuning Method for Visual Positioning of Tank Truck Openings**
MingShou An¹, XuHang Zhao¹, Fei Xu¹, Hye-Youn Lim², and Dae-Seong Kang²
(¹Xi'an Technological University, China, ²Dong-A University, Korea)
 - **Unplugged Activities for Teaching Quantum Computing to Early Elementary Students**
Eunsun Choi¹, Namje Park² (¹Gwangju National University of Education, ²Jeju National University, Korea)

- **CRM Marketing Research with Deep Learning and DataDrift for Customer Segmentation**
Seongjin Park¹, Cheolhee Yoon², Doyeon Lee², Cheolsung Kim¹, Yunbo Shim¹,
and Joo-eun Song¹ (¹Yonsei University, ²Korean National Police University,
Korea)
- **Development of an Effective Waste Separation and Discharge Guidance System for the Visually Impaired**
Seungjae Kim, Kyunghyun Kim, Ahyeon Kim, Jinhyeong Kim, Byeong-Min So,
Yusung Lee, Seong Choi, and Jinho Ahn (Kyonggi University, Korea)
- **Development of Infographic Design Program**
I-Ming Wang (Feng Chia University, Taiwan)
- **A Study on Creative and Convergence Music Classes Using Artificial Intelligence (AI)**
Zi-Hao Tsai (Feng Chia University, Taiwan)
- **Applications of Virtual and Augmented Reality and Metaverse Technologies**
Yenjou Wang (Waseda University, Japan)

DAY 2, OCTOBER 24TH, 2024 (THU)

09:20-09:40 **Committee Meeting organized by KIIT**

09:40-10:00 **Break**

10:00-11:00 **Poster Session C (Chair: Sangook Moon, Mokwon University, Korea)**

- **Data Augmentation Techniques and Learning Algorithms for Improving the Defect Detection Accuracy of AI-Based Vision Inspection Systems in Missile-Manufacturing Processes**
Sung-Hun Lee, Sang-Bong Byun, Yong-An Jung, Dong-Cheul Han, and Soo-Hyun Cho (Gumi Electronics & Information Technology Research Institute, Korea)
- **A Study on Network Traffic Management and Failure Recognition System for Industrial 5G Private Networks**
Sung-Hun Lee, Sang-Bong Byun, Yong-An Jung, Dong-Cheul Han, and Soo-Hyun Cho (Gumi Electronics & Information Technology Research Institute, Korea)
- **Fine RCFO Tracking Method for 5G Sidelink System**
Yong-An Jung¹, Sang-bong Byun¹, Dong-Cheul Han¹, Sung-Hun Lee¹, Chang-Yong Lee², So-Young Kwon², and Soo-Hyun Cho¹ (¹Gumi Electronics & Information Technology Research Institute, ²Kumoh National Institute of Technology, Korea)

- **New Reversible Data Hiding Technique Using CNN Predictor**
Yong-Yeol Bae, Geon-Pyo Gwon, and Dae-Jea Cho (Andong National University, Korea)
- **Development of a Web Solution for Providing Customized Public Information**
Lee, I. G., Lee, W. C., Yoon, M. Y., Kim, E. S., Hwang, J. Y., Jeong, Y. J., and Kim, H. K. (Andong National University, Korea)
- **Inspecting Battery Separator Defects using Image Processing**
So young Kwon¹, Sang Bong Byun², Sung Jin An¹, and Yong Hwan Lee¹
(¹Kumoh National Institute of Technology, ²Gumi Electronics & information technology Research Institute, Korea)
- **Proposal for a Content Trading Mechanism Based on Authentication Information Verification in a Distributed Data Environment**
Jinsu Kim, Yeonsoo Joo, Mijin Kim, and Namje Park (Jeju National University, Korea)

11:10-12:10 Session D (Chair: In-Sik Choi, Hannam University, Korea)

- **Application of Super Resolution in Defect Detection for Industrial Products with Reconstruction Model**
Jongwook Si, Daemin Kim, Heejin Lee, and Sungyoung Kim (Kumoh National Institute of Technology, Korea)
- **Research on the fabrication and characterization of gallium oxide devices for fire detection and ultraviolet C light measurement**
Hyung Man Lee, Sun Ha Lee, Jae Eun Han, and Hae Chan Kim (Korea Electronics Technology Institute, Korea)
- **Enhancing Communication Security with Advanced Encryption**
Sangook Moon (Mokwon University, Korea)
- **Optimization of plate heat exchanger design to improve smart hydrogen vehicle cooling system performance**
Hyuckju Kwon¹, Yoonsik Kwak, and Sangmin Lee² (¹ONEGENE Co.,Ltd, ²Korea National University of Transportation, Korea)
- **A Qualitative Study of Teacher Community Activities for Digital Media Literature Education**
Jia-Qi Yang, I-Ming Wang, Zi-Hao Tsai (Feng Chia University, Taiwan)
- **Convergence education using AI**
Qiu-Yu Chen, I-Ming Wang (Feng Chia University, Taiwan)
- **A Study on Artificial Intelligence and Learning**
Jun-Hong Shen (National United University, Taiwan)

12:10-13:30 Lunch (Restaurant: Vientiane Plaza Hotel)

14:00-15:00 Poster Session E (Chair: Yung-Cheol Byun, Jeju National University, Korea)

- **Optimization of Synchronous Condenser Placement and Voltage Setting for Power System Stability Enhancement**
Juseong Lee, Soobae Kim (Kyungpook National University, Korea)
- **Parameter Estimation for Simplifying Power Electronics Models Using the Frequency scanning method**
Hyeong-Jun Jo, Soobae Kim (Kyungpook National University, Korea)
- **Automatic Modulation Recognition Using Moments and Transformer-Based Models**
Youngjin Seo¹, Wansu Lim² (¹Kumoh National Institute of Technology, ²Sungkyunkwan University, Korea)
- **A Study on Dynamic Object Detection for Autonomous Driving under Adverse Conditions**
ByeongJu Park, Il-Young Moon (Korea University of Technology and Education, Korea)
- **High-gain Phased Array Antenna Design for mm-wave Wireless Private Network**
Myeong-Jun Oh¹, Jung-Ick Moon², Jung-Nam Lee² and Young-Bae Jung¹
(¹Hanbat National University, ²ETRI, Korea)
- **A study on the application of modular VMS for ground control system of unmanned ground vehicles**
Ji-Hoon Choi¹, Ok-Kyoon Ha² (¹Atoz Co. & Kumoh National Institute of Technology, ²Kyungwoon University, Korea)
- **CONTINUOUS OBSERVATION OF STRUCTURAL DEFORMATION IN HIGH-SPEED RAILWAY USING RADAR SATELLITE**
Winter Kim¹, Ilwha Lee¹, and Kihwan Seo² (¹Korea Railroad Research Institute, ²Korea Research Institute for Human Settlements, Korea)

15:00-15:30 Coffee Break

15:40-17:00 Session F (Chair: Heejin Lee, Kumoh National Institute of Technology, Korea)

- **Analysis on Generation Flexibility in a Power System with High Penetration of Variable Inverter-Based Resources**
Hee-Jin Lee¹, Hounkun Joung², and DongHee CHOI² (¹Kumoh National Institute of Technology, ²Choengju University, Korea)

- **Comparative Analysis of Data Balancing Techniques for Wind Turbine Anomaly Detection: Traditional Resampling and GAN-based Augmentation on SCADA Data**
Subhajit Chatterjee, Yung-Cheol Byun, Joon-Min Gil, Ho-Young Kwak, and Sang-Joon Lee (Jeju National University, Korea)
- **Context-based Automated Image Segmentation Method using LLM**
Chae-byeol Lee, Kwon-taeg Choi (Kangnam University, Korea)
- **Research on Optimization of Service Anomaly Detection Based on Traffic Monitoring**
Jun-hee Choi, Hwa-Kyu Lee, and Hyun-Sug Cho (Daejeon University, Korea)
- **Multi-Sensor Data Fusion Method for Cooperative Autonomous Driving Based on C-ITS**
Jiwon Kwak¹, Hayoung Jun², and Seokil Song² (¹Korea University, ²Korea National University of Transportation, Korea)
- **Research on AI-based drone anomaly detection method**
Song-Hee Park¹, Young-Gwang Hwang², and Young-Hyung Kim¹ (¹Kumoh National Institute of Technology, ²NAVOROS, Korea)
- **Research Trends on Artificial Intelligence and Learning**
Jun-Hong Shen, Bo-Yu Zhan (National United University, Taiwan)
- **A Case Study on Artificial Intelligence Education**
Wen-Pin Hu (Asia University, Taiwan)

17:30-19:00 Banquet (Vientiane Plaza Hotel)

DAY 3, OCTOBER 25TH, 2024 (FRI)

13:00-13:30 Committee Meeting organized by KIIT

13:30-14:00 Break

14:00-15:00 Session G (Chair: Jun-Hong Shen, National United University, Taiwan)

- **A method to Use Artificial Intelligence and Machine Learning in Healthcare**
Wen-Pin Hu (Asia University, Taiwan)
- **Application of Educational Technology Using Virtual Reality Production Platform**
Jun-Hong Shen, Bo-Yu Zhan (National United University, Taiwan)
- **Optimizing Waiting Time with Internet of Things-based Hospital Outpatient Recognition System**
Yen-Yu Lu, Wen-I Chuang (National Chengchi University, Taiwan)

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- **Language anxiety and overcoming in second language learning**
Yi-Ru Lu, Wen-I Chuang (National Taipei University of Technology, Taiwan)
- **A method to use convergence education using smart farms for artificial intelligence education**
Jun-Hong Shen (National United University, Taiwan)

DAY 4, OCTOBER 26TH, 2024 (SAT)

09:00-10:00 **Committee Meeting organized by KIIT for SMART**

10:30-11:00 **Break**

11:00-12:00 **Committee Meeting organized by KIITI**