



Final Program

29th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD2025-Summer I)



**Busan Paradise Hotel
Busan, South Korea
June 25-27, 2025**

**Sponsored by IEEE Computer Society
& International Association for Computer & Information Science (ACIS)**

**In cooperation with Korean Society of Food & Agricultural Information Science, South Korea,
AI Based Smart Agriculture Grand ICT Research Center,
and Low-Carbon Agriculture-Based Smart Distribution Research Center**

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Program at a Glance

Wednesday, June 25, 2025

Time	Activity	Location
7:00 – 9:00	Registration	Foyer
9:00 – 9:20	Opening Ceremony	Capri Room
9:20 – 10:10	Keynote 1	Capri Room
10:10 – 10:30	Coffee Break	Foyer
10:30 – 11:20	Keynote 2	Capri Room
11:20 – 12:10	Panel Discussion	Capri Room
12:10 – 13:10	Lunch on your own	
13:10 – 15:10	Workshop 2	Sydney Room A
	Workshop 3	Sydney Room B
15:10 – 15:30	Coffee Break	Foyer
15:30 – 17:30	Workshop 2	Sydney Room A
	Workshop 3	Sydney Room B
18:00 – 19:30	Reception Dinner & Award Ceremony	Sicily Room

Thursday, June 26, 2025

Time	Activity	Location
7:00 – 13:00	Registration	Foyer
8:00 – 10:00	Special Session 1	Sydney Room A
	Special Session 4	Sydney Room B
10:00 – 10:20	Coffee Break	Foyer
10:20 – 12:20	Special Session 1	Sydney Room A
	Special Session 4	Sydney Room B
12:20 – 13:30	Luncheon (Complimentary)	Capri Room
13:30 – 15:30	Special Session 2	Sydney Room A
	Special Session 3	Sydney Room B
15:30 – 15:50	Coffee Break	Foyer
15:50 – 17:30	Special Session 2	Sydney Room A
	Special Session 3	Sydney Room B

Location Information	
Capri Room	Main Building 2 nd Floor
Sydney Room	
Sicily Room	Main Building 1 st Floor

Friday, June 27, 2025

Time	Activity	Location
7:00 – 13:00	Registration	Foyer
8:00 – 10:00	Special Session 5	Sydney Room
10:00 – 10:20	Coffee Break	Foyer
10:20 – 12:20	Special Session 5	Sydney Room
12:20 – 12:30	Closing Remark (Program Chair)	Sydney Room

Keynote 1

Cyber-Physical Event Business Systems

Tokuro Matsuo, Ph.D.

Professor, Advanced Institute of Industrial Technology

Shinagawa, Japan

tokuro@tokuro.net

Abstract

Nowadays, a lot of types of communication system to make consensus among people are provided. We can utilize these kinds of systems, such as Social network system, e-mail, and instant messenger system, to make a decision and determination through online discussion. In the next decade, we can forecast a lot of types of consensus formation systems are provided and we may find new communication systems integrating between cyber and physical environment. In this talk, I introduce our conducted experiments using cyber-physical discussion environment in the panel discussion session in the conference. In the session, facilitator asks question to panelists about issues on the discussion and attendees can also do as well by their voice. Each attendee also can post and declare his/her opinions and suggestions through the online discussion system during the session. One or two facilitators facilitate the discussion in the online system as well as real discussion. We found out a lot of interesting results of attendees survey taken in before/after the experiments. I also introduce the environment to provide useful information for attendees by the digital signage system in the conference venue. This digital signage system is connected to the attendees location capture system and conference registration system. These integrations between cyber and physical environments and data enable to make better consensus formation between all sorts of people.

Bio

Dr. Tokuro Matsuo is currently Full Professor at Advanced Institute of Industrial Technology (AIIT) in Tokyo Public University Corporation from 2012. Also, he is currently Visiting Professor at Sam Houston State University, USA; Director of Research Center for Artificial Intelligence and Service Science at AIIT; Executive Director of International Institute of Applied Informatics (IIAI); Executive Director of International Accreditation Association for Higher Education; Guest Professor at Bina Nusantara University, Indonesia; Japan MICE Ambassador; and Kumamoto City MICE Ambassador. He was Associate Professor at Yamagata University, Japan (2006-2012); Adjunct Professor at Asian University, Taiwan (2019-2021); Invited Professor at City University of Macau, Macau (2018-2020); Visiting Professor at University of Nevada, Las Vegas, USA (2016-2017); Vice-President, International Association for Computer and Information Science, USA (2015-2017); Vice-President, Software Engineering Research Foundation, USA (2013-2018); Visiting Researcher at University of California at Irvine, USA (2010-2011); Research Fellow at Shanghai University, China (2010-2013); and Project Professor of Green Computing Research Center at Nagoya Institute of Technology, Japan (2011-2014); Guest Professor at Nagoya Institute of Technology, Japan (2021-2023); and Research Fellow of SEITI in Central Michigan University, USA (2010-2018). He received his Ph.D. in computer science from Nagoya Institute of Technology in 2006. His current research interests include agent-based electronic commerce, qualitative reasoning and simulation, material informatics, IT and business management, and IoT. Also, he is a professional event planner and event producer. He delivered 200 keynotes and invited talk at international conferences, symposia, and seminars. He also received over 10 awards on research and over 30 research grants from government, research foundations, and company. He has ever presented over 120 papers in journals and over 220 papers in international conference and including top/highranked international journals and conferences, such as, SN Applied Sciences, Data in Brief, Marine Systems & Ocean Technology, International Journal of Neural Systems, International Journal of Business Information Systems, Logic Journal of IGPL, IEEE Access, Heliyon, Applied Artificial Intelligence, Emerging Science Journal, AAAI, IEEE CEC, AAMAS, IEEE WCCI, and WWW. Also, he has published 14 edited books from Springer, IGI-Global, and WIT Press. He has been over 90 international conference organizing chairs (conference chair/ program chair / finance chair / publication chair) of IEEE PRIWEC(2006), IEEE/ACIS SNPD (2009 2012, 2013, 2014, 2015, 2017, 2018, 2019), PRIMA (2009, 2020, 2024), PRICAI (2024), IEEE/ACIS ICIS (2010, 2013, 2015, 2016), IIAI AAI (2012-2024), AAMAS (2013), IEEE/ACIS SERA (2014, 2015), IEEE SOCA (2014, 2017), IEEE TENSYP (2016), IEEE ICA (2016, 2017, 2023), IEEE SC2 (2017), ASEAN-AI (2018), and other 50 international conferences and workshops.

Keynote 2

From Data to Development: Empirical Approaches in Software Engineering

Simon Xu, Ph.D.

Dean and Professor

Faculty of Computer Science and Technology

Algoma University, Canada

simon.xu@algomau.ca

Abstract

Empirical research plays a critical role in advancing software engineering by collecting and analyzing both quantitative and qualitative data to enhance software products, development processes, and project management. Core empirical methods, which includes controlled experiments, case studies, and surveys, offer distinct ways to investigate real-world challenges. These studies typically follow a structured process involving the design of the research setting, data collection, and data analysis. This keynote will provide an overview of key empirical research methods used in software engineering, highlighting their respective strengths and limitations. In particular, the talk introduces a novel method, dialog-based protocol analysis, as an extension to traditional approaches such as introspective, retrospective, and think-aloud techniques. A case study is presented to evaluate the effectiveness of this new method. The presentation concludes with a discussion on the current challenges and future opportunities for empirical research in the evolving landscape of software engineering.

Bio

Dr. Simon Xu is the Dean and Professor in the Faculty of Computer Science and Technology at Algoma University, where he has been a faculty member since 2002. Prior to his tenure at Algoma University, he was working in the School of Computer Science of University of Windsor, Canada. Additionally, he serves as a guest professor at Wuhan University and the adjunct professor at China University of Mining and Technology, China. Dr. Xu earned his Ph.D. degrees from Wayne State University, in the United States, and the University of Liege in Belgium. His research focuses on software evolution, program comprehension, big data, and cognitive process during software development. Dr. Xu has published more than 90 articles in referred journals and conference proceedings and a few authored/co-authored books. He has chaired seven IEEE international conferences and has been invited to deliver keynotes at various IEEE conferences. He is a senior member of IEEE and a member of ACM.

Program in Detail

Wednesday, June 25, 2025

7:00am-9:00am – Registration	Foyer
9:00am-9:20am – Opening Ceremony	Capri Room
9:20-10:10am – Keynote 1 from ACIS	Capri Room
10:10am-10:30am – Coffee Break	Foyer
10:30am-11:20am – Keynote 2 from ACIS	Capri Room
11:20am-12:10pm – Panel Discussion	Capri Room
12:10pm-13:10pm – Lunch on your own	

13:10pm-17:30pm – Workshop 2 **Sydney Room A**

Workshop Title: Cyber Security: Digital Forensics, Malware Analysis and AI Application

Chair: *Rzayeva L.G (Astana IT University)*

15:10pm-15:30pm – Coffee Break

Improving the Efficiency of Attack Detection in Cellular Networks Through the Combination of Statistical Feature Selection Methods and Machine Learning Algorithms

Dina Satybaldina, Nazerke Bisenbaeva, Yerzhan Seitkulov, Tolegen Aidynov, Aliya Issainova, Mamyr Altaibek

A Mathematical Model for Device Authentication in Trusted Interaction in Decentralized Internet of Things Environments

Iliya Andreev, Vyacheslav Petrenko, Fariza Tebueva, Dina Satybaldina, Tolegen Aidynov, Kakim Sagindykov

Modern Methods for Ensuring Data Integrity in Radio Channels

Valery Zolotarev, Gennady Ovechkin, Dina Satybaldina, Eldor Egamberdiyev, Zhuldyz Sailaukyzy, Kozhanov Murat

Leveraging Multimodal Large Language Models for Digital Forensics in Military Personnel Detection in Mobile Device Images

Taras Fedynyshyn, Olha Partyka, Ivan Opirskyy, Olzhas Konakbayev

Vulnerability Analysis of IoT Protocols Based on CVE Glossary and Penetration Testing Techniques

*Dina Satybaldina, Tolegen Aidynov, Fariza Tebueva, Saken Tleuberdin**

User Adoption and Implementation of AI Assisted Accounting Systems Among Businesses in Kazakhstan

Ha Jin Hwang, Monowar Mahmood, Mahadi Hasan Miraz, Mikkay Wong Ei Leen, Mergen Dyussenov

The Effect of TRIM Function on Data Recovery from SSD Solid-State Drives

Aliya Zhetpisbayeva, Ibraheem Shayea, Azamat Baibussinov

Support Vector Machines: An Inclusive Survey in Financial Fraud Detection

Ermir Balliu, Bilal Saoud, Ibraheem Shayea, Timur Grigoryev, Ibraheem Shayea

Towards 6G: Understanding Handover Strategies and Protocols for Future Mobile Communication Systems
Enea Osmeni, Ibraheem Shayea, Bilal Saoud, Olzhas Konakbayev, Nurzhan Bazhayev, Aigul Shaikhanova

Vulnerability Analysis of Wi-Fi and LTE Networks for Secure Smartphone Design
Shaikhanova Aigul, Jilkibayev Yerbolsyn, Atanbayev Yernat, Ayapbergenov Kamil, Konstantin Malakhov, Tokkuliyeve Aizhan

Optimizing Discovery Protocol for Enhanced Network Capacity and Mitigating Broadcast Storms in Software-Defined Networks
Omar Masoud, Ibraheem Shayea, Bilal Saoud, Dina Satybaldina, Murat Kozhanov, Zhuldyz Sailaukyzy

Improved Data Extraction and Recovery from HDDs Using a New Chip-Off Method
Yerassyl Yermekov, Aigerim Alibek

AI-Based Offline Speech Recognition for Kazakh, Russian and English Languages
Nursultan Nyssanov, Zuleikha Syzdykova, Kuandyk Niyazaliyev, Ibraheem Shayea

13:10pm-17:30pm – Workshop 3

Sydney Room B

Workshop Title: The 16th International Workshop on Intelligent Computational Science (ICS 2025)

Chair: Wenqian Shang (*Communication University of China*)

15:10pm-15:30pm – Coffee Break

The Impact of Multimodal Design in Virtual Reality on Mindfulness Experiences
Liyan Sheng, Yan Zhang, Xin Lyu

A Comparative Analysis of Chinese and English Media Discourse on Paris Olympics: Leveraging LDA and LLM Prompt Engineering
Yinglong Yu, Zhaopu Yao, Fang Yuan

Fuzzy-LLM: Multi-Agent Task Planning with Large Language Models
Keming Wang, Hui Tian, Jiawei Wang and Ju Hou

Application and Optimization of Large Models Based on Prompt Tuning for Fact-Check-Worthiness Estimation
Yinglong Yu, Hao Shen, Zhengyi Lyu and Qi He

Towards Faithful and Explainable Large Language Models: A Knowledge Graph-Guided Framework for Reasoning Enhancement and Hallucination Mitigation
Chongwen Wang, Zhi Cao, and Keqin Zhou

Enhanced Contrastive Learning for Prediction in Medical Temporal Knowledge Graph
Hongji Bai, Zhou Sun, ZhaoHui Bai, Yuhang Wang, Runshun Zhang, Xiaoping Zhang

18:00pm-19:30pm – Reception Dinner & Award Ceremony

Sicily Room

Thursday, June 26, 2025

7:00am-13:00pm – Registration

Foyer

8:00am-12:20pm – Special Session 1

Sydney Room A

Session Title: Digital Transformation/Sustainable Business/AI Strategies

Chair: *Ha Jin Hwang (Astana IT University)*

10:00am-10:20am – Coffee Break

Foyer

Investigating the Role of AI-Driven Learning in Engineering Management Students' Learning

Mahadi Hasan Miraz, Ha Jin Hwang, Narishah Salle, Rohana Bt Sham, Samuel Folorunso Adeyinka-Ojo, Mohamad Ibrahim

Strategic AI Governance (SAIG): Adapting Algorithmic Systems to Regulatory and Competitive Pressures

Jamilya Junussova

Development of Auto-Completion and Correction Tools for Kazakh Language using Natural Language Processing

Serzhan Ossenov, Ali Umirserikov, Aidana Zhalgas

Machine Learning Based on Handover Decision in 5G/6G Cellular Networks: Survey

Sejma Hasak, Bilal Saoud, Leila Rzayeva, Dina Satybaldina, Konstantin Malakhov, Gulsipat Abisheva

Environmental Sound Recognition (ESR) with Python

Yusuf Sarachoglu, Bilal Saoud, Ibraheem Shayea, Geum Yong Pil, Leila Rzayeva

AI-Driven Urban Analytics: Enhancing Sustainability and Citizen Happiness through Digital Transformation

Didar Yedilkhan, Sabina Salesnova, Gulden Ormanova, Batyrzhan Akhmetzhanov, Zhibek Sarsenova, Beibut Amirgaliyev

Comparative Analysis of Machine Learning Models for Urban Sound Classification to Aid Hearing Impairment

Akbala Tleugaliyeva, Ibraheem Shayea, Abdulraqeb Alhammadi, Ahn Yeong-Hwi

Machine Learning-Based Sales Forecasting for Pharmacy Assortments

Alisher Onggar, Ibraheem Shayea, Abdulraqeb Alhammadi, Kim Eun Sung

Stock Market Predictions Using Machine Learning Models

Altay Kaan Yesilyurt, Bilal Saoud, Ibraheem Shayea, Ahn Yeong-Hwi, Leila Rzayeva

Audio Data Analysis and Music Genre Classification with Various Machine Learning Techniques

Arda Deniz, Bilal Saoud, Ibraheem Shayea, Shambulov Ulykbek, Abilkair Imanberdi, Fuad Abdulgaleel Abdoh Ghaleb

Integrating Exploration into Case-Based Reasoning: A Strategy for Enhanced Knowledge Acquisition

Boulmaiz Fateh, Patrick Reigner and Stephane Ploix

Probability-Driven Hedge Ratio Optimization Using Machine Learning: An Adaptive Approach to Financial Risk Management

Yuan-Long Peng

MetaCropX: A Blockchain-based Architecture for Dynamic Tokenization and Smart Crop Lifecycle Management

Gopi Krishna Akella, Santoso Wibowo, Srimannarayana Grandhi, Fariza Sabrina and Sameera Mubarak

Tourist Driving Route Optimization Incorporating Congestion-Based Travel Time Variations

Hiroki Fukushima, Kazuaki Yamaguchi and Masahide Nakamura

A New Metaheuristic Inspired by Acoustic Communication in Ant Colonies

Samia Sammoud, Ines Alaya and Moncef Tagina

Combating Information Uncertainty: SIR-Based Diffusion Analysis and Neural Semantic Search for Social Networks and Darknet Monitoring

Assel Khassanova, Leila Rzayeva, Perizat Tazhibayeva, Yusuf Hassan

8:00am-12:20pm - Special Session 4

Sydney Room B

Session Title: Advanced Software - Theory and Application

Chair: *Takaaki Goto (Toyo University)*

10:00am-10:20am – Coffee Break

Foyer

CureCast: A Personalized Health Monitoring Model Utilizing Machine Learning Algorithms
Siuli Sarkar, Trisa Maity, Elisha Mitra, Takaaki Goto, Ankur Bhattacharjee, Partha Ghosh

Mood-Based Personalized Tourism Recommendation System Using Sentiment Analysis
Partha Ghosh, Ankit Kumar, Prateek Sinha, Shreechandra Neogy, Sujal Das, Tamal Tapas Ghosh, Takaaki Goto, Soumya Sen

Closing the AI Ethics Gap: A Tripartite Framework for Accountability, Implementation, and Governance
Masafumi Nakano

N-CATS: A Neural Network Classification Automatic Taxonomy System
Rich White Jr., Josue Ochoa, Thomas Braun, Lukas Lac, Chase Carthen, Alireza Tavakkoli, Frederick C. Harris Jr

The Evolution of AI-Driven Temperature and Moisture Sensing Systems (2010-2025): A Systematic Review
Hossein Jamali, Sergiu M. Dascalu and Frederick C. Harris, Jr.

Evaluating Data Presentation Tools for Effective Communication
Nikhil N. Sharma, Kaden Nesch, Sergiu Dascalu and Frederick C. Harris Jr.

Fulcrum: A User Study Support Approach for HCI Research Studies
Vinh Le, Levi Scully, Brandon Rowell, Nicholas Jarvis, Heather Zechter

Vibe Coding: A Multivocal Systematic Mapping Study
Nicole Beaulieu, Sergiu Dascalu, Emily Hand

MS-CUP: A Multi-Source Code Comment Updating Method
Jinong, Li, Chunyan Ma, Wei Lin, Zhe Zhang

Development of a Data Decryption Method for the Raw Disk Image of Mobile Phone
Abilkair Imanberdi, Assel Khassanova, Yerassyl Yermekov, Madi Shayakhmetov, Perizat Tazhibayeva and Olzhas Konakbayev

12:20pm-13:30pm – Luncheon (Complimentary)

Capri Room

13:30pm-17:30pm – Special Session 2

Sydney Room A

Session Title: The Role of Artificial Intelligence in the Information and Knowledge Technologies

Chair: *Eun-Seok Lee (Gangneung-Wonju National University)*

15:30pm-15:50pm – Coffee Break

Foyer

Functional Communication for ALS Patients Eye Tracking-Based Korean Keyboard with TTS Feedback
Won-il Kim, Young-Chul Kim

Sentimax – AI Analysis of Slang and Emoji for Enhanced Informal Text Understanding
Nicholas Chung, Mira Kim

Decentralized Behavior Scheduling Using the Actor Model for Massive NPC Populations
Sun Young Kim, Yoon-Yim Lee, Yeongjin Jo, Shin Jin Kang

Preventing TTF Theft via Server-Side Rendering
Ki-Won Ku, Sun Young Kim, Beomjoo Seo, Shinjin Kang

Mesh, Voxel, and Point-Structure Analysis for Artificial Intelligence Convergence
Sukhyun Lim

Integrating Personal Calendar Streams into LLM-Based Collaborative Scheduling
Juyoung Park, Donghwan Kim, Eun-Seok Lee

Efficient Rendering Optimization Using Distance-Based Gaussian Size Limitation
Eun-Seok Lee, Koojoo Kwon

CogniSphere – AI-Driven Platform for Personalized Cognitive Exercise for Elderly
Juan Aguiere, Nathaniel Kamal, Brenda Pham, Mira Kim

Coagulation Using MPM-Based Simulation
Su-Kyung Sung

Bug Report Classification and Prediction of Priority and Severity Using BERT
Yoon-Yim Lee, Sun Young Kim, Eun-Seok Lee

Advancing Vision-Language Models with Generative AI
Rahul Raja, Arpita Vats

Personalized Energy-Saving Behavior Promotion System Based on User Utterance Analysis and LLM
Shun Hirai, Sinan Chen, Sachio Saiki and Masahide Nakamura

Physics-Informed Neural Networks Enhanced Model Predictive Control for Flexible Spacecraft Attitude Stabilization
Guoliang Lyu, Yuhan Liu, Guangfu Ma and Pengyu Wang

Integration of Machine Learning and Artificial Intelligence into IoT Systems for Intelligent Resource Management
Hana Majed, Hela Zorgati and Raoudha Ben Djemaa

Towards Faithful and Explainable Large Language Models: A Knowledge Graph-Guided Framework for Reasoning

13:30pm-17:30pm – Special Session 3

Sydney Room B

Session Title: The Convergence of Knowledge, Information, and Technology Through Computing

Chair: *Hyokyung Chang (Hannam University)*

15:30pm-15:50pm – Coffee Break

Foyer

A Methodology for Selecting the Target Countries for Technological Cooperation Based on LDA Model
Sangkyu Jeon, Heehyeong Na, Jeongmin Oh

A Study on Measuring the Technological Lifetime in Quantum Technology Based on Logistic Diffusion Model
Giho Ryu, Taehoon Kim, Sangkyu Jeon

The Design and Development of the Therapeutic Machine System applied the Laser LED and High Frequency
O-Byoung Kwon, Mee-Kyeong Park

Switch Unit System Implementing Automatic Connection Matrix
O-Byoung Kwon, Mee-Kyeong Park

A Study on the Analysis of the Convergence of MaaS Technology Using Patent Big Data
Ju Hyun Bong, Taewon Kyung

Analysis of Technology Trends in the Digital Asset Sector Using Patent Big Data
Taewon Kyung

Current Status of No-Code AI
Minsu Kim, Hyokyung Chang

A Study on the Development of Mathematics Education Intervention Program for Visually Impaired Students
SunYoung Bae, JeaSuk Song, Hoekyung Jung

Semantic Search in a Document Management System Using Retrieval Augmented Generation
Srikant Krishnan and Nary Subramanian

Design and Evaluation of a Lightweight Encryption Architecture Based on LEA-CBD
Juhoon Kim

Adversarially Resilient Multi-Label Object Detection: An Ensemble of ViT, EfficientNetV2-L, and YOLO12 for Forensic Imagery
Alisher Batkuldin, Perizat Tazhibayeva, Dauren Izdibay, Yonghao Wang

Development of an Advanced Correspondence and Call Analyser for Digital Forensics Using Neural Networks and Vector Database
Daniil Pogolovkin, Assel Khassanova, Ali Myrzatay, Yonghao Wang

Password Vulnerability Detection Based on Social Media and Personal Information
Zhaksylyk Kozhakhmet, Yonghao Wang, Alissa Ryzhova, Merei Zhaparkhanova

Proposal of a Memory Support System Utilizing First-Person Perspective Snapshots for Older Adults
Keiko Kodama, Takuya Nakata, Sinan Chen, Sachio Saiki, Masahide Nakamura and Kiyoshi Yasuda

Friday, June 27, 2025

7:00am-9:00am – Registration

Foyer

8:00am-12:20pm – Special Session 5

Sydney Room

Session Title: Smart Agriculture

Chair: *Meonghun Lee (Sunchon National University)*

10:00am-10:20am – Coffee Break

Foyer

Study on Improving Energy Efficiency and Reducing Production Costs in Smart Vertical Farms
Gwang Hoon Jung, Meong Hun Lee and Hyun Yoe

Comparative Study of Machine Learning Algorithms for Anomaly Detection in Sensor Data in Korean Smart Farm Systems
Hyeono Choe, Hyun Yoe and Meonghun Lee

Irrigation Scheduling for Tomato Cultivation Using ROCKET-Based Time Series Analysis
Hyeonmu Seo, Jeongki Kim, Hyunjun Jeong and Meonghun Lee

Utilizing PID Control to Balance Temperature and Performance Analysis

Hyunjun Kim and Meonghun Lee

Research on Multimodal Data Fusion for Crop Disease Prediction
Daehan Park and Meonghun Lee

Designing an Automated Control Algorithm to Regulate CO2 Concentration in Greenhouses Using Xgboost
Hyeonwoo Kim and Meonghun Lee

Smart Farm Environment Control System Based on Safety Reinforcement Learning
Sangmin Lim, Hyun Yoe and Meonghun Lee

Growing Vertical Farm Leafy Greens with LED Spectrum Analysis by Growth Stage and Energy Efficiency Optimization
Research
Joowon Jeong and Meonghun Lee

Design of a Hybrid Heating System Utilizing Low-Temperature Waste Heat Recovery for Energy Saving in Greenhouse
Facilities
Hyeonchang Jeong and Meonghun Lee

Design and Implementation of a GPT-4o-Based Agricultural Chatbot System with Multi-API Integration for Future Smart Farm
Integration
Kiwoung Song and Myeonghun Lee

A Study on the Development of a Classification Code-Based Processing System for Smart Farm Horticultural Waste
Hyun Tae Shin and Meonghun Lee

Design of a Smart Home Aquaponics System and Correlation Analysis of Growth Factors
Kwangho Yang, Hyun Yoe, Meong Hun Lee and Kyeongmin Jang

Predicting Cucumber Growth Using Root-Zone Conditions and Growth Observations in Smart Greenhouses
Jieun Lee, Hyun Yoe and Meonghun Lee

Research on Precise Management of Garlic Growth Using AI-Based Image-Environment Convergence Decision-Making System
Seungjae Kim, Hyun Yoe and Meonghun Lee

Designing an AWS Cloud-Based Rice Cultivation Irrigation System for Water Temperature and DO Control
Jinhyo Jeon and Meonghun Lee

Development of Multi-Input Model for Forecasting Field Crop Yields
Kyeong Il Ko, Hyun Yoe and Meonghun Lee

DETR-Based Object Detection for Pest and Disease Recognition in Agricultural Settings
Uhyeok Jung, Hyun Yoe and Meong Hun Lee

12:20pm-12:30pm Closing Remark (Program Chair)

Sydney Room

