

# **2024 IEEE 13th Global Conference on Consumer Electronics (GCCE 2024)**

**Kitakyushu, Japan  
29 October - 1 November 2024**

**Pages 1-695**



**IEEE Catalog Number: CFP24GCB-POD  
ISBN: 979-8-3503-5508-6**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

|                         |                   |
|-------------------------|-------------------|
| IEEE Catalog Number:    | CFP24GCB-POD      |
| ISBN (Print-On-Demand): | 979-8-3503-5508-6 |
| ISBN (Online):          | 979-8-3503-5507-9 |
| ISSN:                   | 2378-8143         |

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# TABLE OF CONTENTS

|                                                                                                                                                     |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----|
| A 3D Model Generation from a Single Snapshot in Outdoor Scene .....                                                                                 | 1  |
| <i>Luoxi Zhang, Chun Xie, Itaru Kitahara</i>                                                                                                        |    |
| Zero-Shot Composed Video Retrieval with Projection Module Bridging Modality Gap .....                                                               | 6  |
| <i>Kenta Uesugi, Naoki Saito, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>                                                                      |    |
| Structured Polyphonic Music Generation with Diffusion Transformer .....                                                                             | 8  |
| <i>Jinlong Zhu, Keigo Sakurai, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>                                                                          |    |
| Emotion-Conditional Image Generation Reflecting Semantic Alignment with Text-To-Image Models .....                                                  | 10 |
| <i>Kaede Hayakawa, Keisuke Maeda, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>                                                                       |    |
| Improving Fake News Detection Through Time-Series-Aware Structural Feature Extraction in Dynamic Graph Convolutional Networks .....                 | 12 |
| <i>Tomoki Abe, Soh Yoshida, Mitsuji Muneyasu</i>                                                                                                    |    |
| Diversified User Recommendation to Avoid Filter Bubbles in Social Media Communities .....                                                           | 16 |
| <i>Hiroki Fujiwara, Soh Yoshida, Mitsuji Muneyasu</i>                                                                                               |    |
| Single-Note Electric Guitar Picking Detection by Using Wrist-Worn Inertial Motion Sensors .....                                                     | 19 |
| <i>Soichiro Matsushita</i>                                                                                                                          |    |
| Effectiveness of Wearable Motion-Sensing Device for Daily Healthcare Monitoring by Comparing with Sense of Balance Measurement .....                | 23 |
| <i>Ayaka Takamoto, Soichiro Matsushita</i>                                                                                                          |    |
| Blind Anomalous Sound Detection Without Specifying Target Type .....                                                                                | 28 |
| <i>Yuuki Tachioka</i>                                                                                                                               |    |
| High-Density Measurement of Temperature Distributions in a Greenhouse .....                                                                         | 33 |
| <i>Mitsudo Yuichi, Moriyuki Shogo</i>                                                                                                               |    |
| Identification of Hazardous Gases in an Improvised Explosive Device with Android Technology: A Prototype .....                                      | 35 |
| <i>Ana Antoniette C. Illahi, Adrian William S. Alano, Arl Marion Josef L. Divino, David Manasseh C. Soliman</i>                                     |    |
| An Implementation of User-Interface Checking Function for Flutter Programming Learning Assistant System .....                                       | 40 |
| <i>Soe Thandar Aung, Nobuo Funabiki, Lynn Htet Aung, Safira Adine Kinari, Wen-Chung Kao</i>                                                         |    |
| A Design of UI Image Generation Method for Flutter Programming Learning Assistant System .....                                                      | 42 |
| <i>Lynn Htet Aung, Nobuo Funabiki, Soe Thandar Aung, Wen-Chung Kao</i>                                                                              |    |
| Developing a Personalized Patient Education Platform for Pre-Colonoscopy Instructions .....                                                         | 44 |
| <i>Wei-Jung Li, Pin-Hao Chen, Illich Chua, Chien-Hsu Chen, Tsung-Yu Wu, Po-Yu Cheng-Huang</i>                                                       |    |
| ThermalEye: A Low-Resolution Thermal-Imaging Based Artificial Intelligence Self-Harm Behavior Detection System in Psychiatric Seclusion Rooms ..... | 49 |
| <i>Wan-Jung Chang, Liang-Bi Chen, Ming-Che Chen, Yi-Jia Chen, Jian-Ping Su, Bo-Hao Liao, Hsin-Hus Chou, Pei-Ching Tsai</i>                          |    |

|                                                                                                                                                           |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Conjunctive Use of Two Body Parts' Kinematic Information to Estimate Dynamic Postural Stability .....                                                     | 51 |
| <i>Peng Haoyun, Shogo Okamoto, Yasuhiro Akiyama</i>                                                                                                       |    |
| Sign Language Recognition Based on Data Glove with Bending Sensor .....                                                                                   | 54 |
| <i>Yunhao Zhang, Lei Jing</i>                                                                                                                             |    |
| High Performance Hybrid mmWave Massive MIMO Mobile Transceiver Using 2-Bit Precoder and DPC .....                                                         | 59 |
| <i>Kai-Lun Chen, Hsiao-Feng Francis Lu</i>                                                                                                                |    |
| An Improvement for Detection of Wi-Fi Device Utilizing Random MAC Address by Focusing on Inter-Arrival Time and Periodicity of Probe Request Frames ..... | 61 |
| <i>Jin Qi, Akihiko Sugiura</i>                                                                                                                            |    |
| A Low Complexity Soft-Input Decoding for Overloaded MIMO Systems.....                                                                                     | 63 |
| <i>Koki Matoba, Satoshi Denno, Yafei Hou</i>                                                                                                              |    |
| Synchronized Interaction for Museum Experiences of Visually Impaired Individuals and Companions.....                                                      | 65 |
| <i>Hyeyoung An, Woojin Park, Soochang Park, Yongmi Lee, Hyeonah Cho, Eunseon Jeong</i>                                                                    |    |
| Effective Process Tracking in Horizontally Scalable CYPHONIC Cloud Services .....                                                                         | 67 |
| <i>Yoshiya Suzuki, Michiyo Suda, Guilherme Seidy Ujiie, Kazuki Miyamura, Hidekazu Suzuki, Katsuhiko Naito</i>                                             |    |
| Collaborative Amplify-And-Forward Relaying with Relay Selection Based on Doppler Shift Estimation.....                                                    | 72 |
| <i>Hiroki Nishimura, Satoshi Denno, Yafei Hou</i>                                                                                                         |    |
| Poppel: Manipulating a Mid-Air CG Character Using a Puppet and Human Body .....                                                                           | 74 |
| <i>Miyu Fukuoka, Naoya Koizumi</i>                                                                                                                        |    |
| GyroTetris: Merging Mobile Gaming and Motion Sensing to Boost Motor Skills and Enjoyment .....                                                            | 78 |
| <i>Zilu Liang, Shuma Nishida, Takeru Noguchi, Takuto Maenaka</i>                                                                                          |    |
| A Compact Tactile Feedback Device for Fingertips Based on an Eccentric Mechanism .....                                                                    | 80 |
| <i>Tomoya Shirai, Taro Shibasaki</i>                                                                                                                      |    |
| Visualization of Fighting Game Player Skills Using Imitation Learning Agents .....                                                                        | 82 |
| <i>Ueno Masayuki, Takami Tomoyuki</i>                                                                                                                     |    |
| Discussion on the Connection of Different Games Sharing Goal Awareness and Physical Actions .....                                                         | 84 |
| <i>Ayaka Maruyama, Kazutaka Kurihara</i>                                                                                                                  |    |
| Comparative Study of Performance Differences in Communication in Face-To-Face, Online, and VR .....                                                       | 87 |
| <i>Masashi Notoya, Hajime Murao</i>                                                                                                                       |    |
| Circumferential Multiple Source Separation Using a Small Microphone Array and 2-D Spectra .....                                                           | 90 |
| <i>Senta Ariizumi, Teruki Toya, Kanji Watanabe, Shuichi Sakamoto, Kenji Ozawa</i>                                                                         |    |
| Digital Maintenance of Cycle Routes by Using AI-Based Pavement Inspection Technology.....                                                                 | 92 |
| <i>Hikari Yanagisawa, Takumi Asada, Takashi Kobayashi</i>                                                                                                 |    |
| Vertical Video Cropping Considering Multiple Subjects.....                                                                                                | 94 |
| <i>Kaiki Ota, Naoki Kotani, Satoshi Sugikawa, Yuta Muraki</i>                                                                                             |    |

|                                                                                                                                                    |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| High-Precision Video Seam Carving with Seam Control Based on Motion Analysis .....                                                                 | 96  |
| <i>Kyoma Fujiwara, Naoki Kotani, Satoshi Sugikawa, Yuta Muraki</i>                                                                                 |     |
| Systolic Array-Based Accelerator Architecture Combining Iterative Variable-Width Approximate Multipliers .....                                     | 98  |
| <i>Po-Ying Feng, Shih-Nung Lee, Yong-Chi Chang, Hsuan-Yu Chiang, Shu-Yen Lin</i>                                                                   |     |
| Securing SIM Toolkit-Based Mobile Money Applications Against SIM Swap Attacks Using User Location Data .....                                       | 100 |
| <i>Chepkwony Caldas Cheruyot, Robin Michel Kouame, Hiroyuki Inaba</i>                                                                              |     |
| Experimental Evaluation of Physical Unclonable Function Extracted from Contact Bounce of Mechanical Relay .....                                    | 105 |
| <i>Shunsuke Arai, Satta Jukka, Yuma Kawachi, Kousuke Nitta, Shinichiro Mito, Hyunho Kang</i>                                                       |     |
| Writer Verification Using Cluster Search Trees for e-Testing .....                                                                                 | 110 |
| <i>Taisuke Kawamata, Takako Akakura</i>                                                                                                            |     |
| Speech Enhancement for Degraded Radio Speech .....                                                                                                 | 112 |
| <i>Akio Kobayashi, Keiichi Yasu</i>                                                                                                                |     |
| Investigation of System-Driven Talking Approaches Using Depth and Color Image Information for Digital Signage with Speech User Interface .....     | 117 |
| <i>Kuuta Takahashi, Shinichi Kawamoto</i>                                                                                                          |     |
| Food Recognition Using Large-Scale Pre-Trained Speech Models .....                                                                                 | 119 |
| <i>Satoshi Naito, Masafumi Nishimura, Masafumi Nishida, Yasuo Horiuchi, Shingo Kuroiwa</i>                                                         |     |
| A Mobile Real-Time Identification System of Isomorphic Objects Using YOLO with Attention for Visually Impaired People .....                        | 121 |
| <i>Zhongtian Kong, Yuji Watanabe</i>                                                                                                               |     |
| Improvement of DeblurGAN for Low-Quality QR Codes .....                                                                                            | 123 |
| <i>Kantaro Nakamura, Masaya Ohta</i>                                                                                                               |     |
| Classification and Detection of Parking Lots that Require Turnaround on Public Roads Based on Their Geometric Structures Using Aerial Images ..... | 125 |
| <i>Shintaro Ono, Nozomu Honda, Da Li</i>                                                                                                           |     |
| Pseudo-Error Generation for Error Detection and Correction in Japanese Automatic Speech Recognition .....                                          | 129 |
| <i>Yusei Suzuki, Takashi Tsunakawa, Masafumi Nishida</i>                                                                                           |     |
| 10MHz Half-Bridge GaN Driver IC with Dual-Edge Dead-Time Control .....                                                                             | 133 |
| <i>Ming-Ching Hsu, Xuan-Fu Wu, Shang-Chien Yang, Yu-Qian Hong, Chien-Hung Tsai</i>                                                                 |     |
| Simulation Based Data Acquisition System for Object Detection in multi-LiDAR Networks .....                                                        | 136 |
| <i>Wang Xinyu, Kuon Akiyama, Ryoichi Shinkuma, Gabriele Trovato</i>                                                                                |     |
| Simultaneous Speech and Eating Behavior Recognition Using Multitask Learning .....                                                                 | 138 |
| <i>Toshihiro Tsukagoshi, Masafumi Nishida, Masafumi Nishimura</i>                                                                                  |     |
| Template-Based Speech Recognition Using Pre-Trained Large Speech Models for Voice-Activated Shower Control .....                                   | 141 |
| <i>Takumi Uehara, Shingo Kuroiwa, Yasuo Horiuchi, Masafumi Nishida, Satoru Tsuge</i>                                                               |     |

|                                                                                                                                                   |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| A Preliminary Study on Mental Workload Estimation Through Movement Analysis Using Inertial Sensors: A Case of Floor Mopping.....                  | 144 |
| <i>Moemi Shidahara, Airi Tsuji, Kaori Fujinami</i>                                                                                                |     |
| Improving Real-Time Estimation Accuracy for High-Precision BLE Indoor Positioning Method Using Bi-LSTM.....                                       | 146 |
| <i>Shu Tanaka, Kazuhiro Kondo</i>                                                                                                                 |     |
| Improving Zero-Shot Adversarial Robustness Via Integrating Image Features of Foundation Models.....                                               | 148 |
| <i>Koshiro Toishi, Keisuke Maeda, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>                                                                     |     |
| Compatibility Layer for Integrating SOME/IP Communication into ROS2 Systems .....                                                                 | 150 |
| <i>Sein Lee, Jihye Yang, Yeonho Cho, Jeonghun Cho</i>                                                                                             |     |
| PADU-Net: Parallel Attention-Based Dual U-Net for Retinal Vessel Segmentation.....                                                                | 152 |
| <i>Jing-Hung Hu, Li-Wei Kang, Pao-Chi Chang</i>                                                                                                   |     |
| A Fractional Graph Fourier Transform Method for Missing Data Recovery of Sensor Network.....                                                      | 154 |
| <i>Chien-Cheng Tseng, Su-Ling Lee</i>                                                                                                             |     |
| A Basic Study to Develop a System for Monitoring Surfer Behavior and Board Deformation During Surfing.....                                        | 156 |
| <i>Ziqi Meng, Takako Nonaka</i>                                                                                                                   |     |
| Intentional Attention Control Ability of Elderly Individuals on Multitasking.....                                                                 | 159 |
| <i>Yusaku Sannami, Yukiko Nishizaki</i>                                                                                                           |     |
| Acceleration Method for Super-Resolution Based on Diffusion Models by Intermediate Step Prediction .....                                          | 162 |
| <i>Jichen Ma, Hiroshi Watanabe</i>                                                                                                                |     |
| Controllable Color Attribute Manipulation for Example-Based Color Transfer .....                                                                  | 164 |
| <i>Chunzhi Gu, Katsuya Hotta</i>                                                                                                                  |     |
| Refining Coded Image in Human Vision Layer Using CNN-Based Post-Processing .....                                                                  | 166 |
| <i>Takahiro Shindo, Yui Tatsumi, Taiju Watanabe, Hiroshi Watanabe</i>                                                                             |     |
| Pitch and Stride Estimation Using Skeletal Data from Track and Field Video Analysis.....                                                          | 168 |
| <i>Chun Xie, Yuta Niisato, Hidehiko Shishido, Itaru Kitahara</i>                                                                                  |     |
| Classification of Oleaginous Yeast Images Based on Mixture of Experts with Micro-Spatial Attention.....                                           | 172 |
| <i>Soma Nagatsu, Ryosuke Harakawa, Akihiro Nakamura, Yosuke Shida, Wataru Ogasawara, Masahiro Iwahashi</i>                                        |     |
| EQAH: Edge-Based Quality Adaptation Heuristic for Video Streaming .....                                                                           | 174 |
| <i>Shuaibu Yau, Suphakit Awiphan, Jakramate Bootkrajang, Jeerayut Chaijaruwanich</i>                                                              |     |
| Machine-Learning-Based Re-Identification of Location Histories Using Features Considering Sparsity Obtained from Social Networking Services ..... | 176 |
| <i>Takeya Horiuchi, Ryunosuke Shimmura, Hiroshi Yoshiura, Yoichi Midorikawa, Hideki Yoshii, Masatsugu Ichino</i>                                  |     |
| Secure Information Sharing with Access Control and Tamper Detection for Drone-Based Disaster Management .....                                     | 178 |
| <i>Yuki Kawahara, Masaya Fujisawa, Ahmad Akmal Aminuddin Mohd Kamal</i>                                                                           |     |

|                                                                                                                                 |     |
|---------------------------------------------------------------------------------------------------------------------------------|-----|
| Secure User Authentication with Secret Sharing and Smart Contract for Permissioned Blockchain .....                             | 181 |
| <i>Masamune Okada, Ahmad Akmal Aminuddin Mohd Kamal, Masaya Fujisawa</i>                                                        |     |
| A Deployment of Ensemble-Based IDS on Raspberry Pi.....                                                                         | 184 |
| <i>Muhammad Bisri Musthafa, Samsul Huda, S. M. Shamim, Yuta Koder, Jedidah Mwaura, Shunsuke Araki, Yasuyuki Nogami</i>          |     |
| CapSight: A Social Aid System for the Visually Impaired Using Facial Recognition and Haptic Feedback.....                       | 186 |
| <i>Chun-Nan Chi, Jia-Lien Hsu, Chi-Huang Hung, Shih-Yung Huang, Cheng-Hsuan Chen, Chia-Hsun Hsu</i>                             |     |
| Towards Context-Aware Support for Color Vision Deficiency: An Approach Integrating LLM and AR .....                             | 188 |
| <i>Shogo Morita, Yan Zhang, Takuto Yamauchi, Sinan Chen, Jialong Li, Kenji Tei</i>                                              |     |
| Real-Time Monitoring Combined with Virtual Projection Technology for A-Pillar See-Through Vision Improvement Study.....         | 190 |
| <i>Chi-Hao Lung, Chih-Yu Chang, Xin-Xin Xie</i>                                                                                 |     |
| Visualization of Air Flow Around Micro-Drones for Disaster Site Inspections .....                                               | 193 |
| <i>Yiming Li, Hiroyuki Sato, Kazuyuki Kojima</i>                                                                                |     |
| Intelligent Missing Children Prevention System for High Accuracy with Machine Leing .....                                       | 195 |
| <i>Taewook Kim, Taehun Yang</i>                                                                                                 |     |
| DFT-Based Channel Estimation with Multiple Windows for ATSC 3.0 Receiver .....                                                  | 197 |
| <i>Yu-Sun Liu, Yin-Shan Li, Shingchern D. You</i>                                                                               |     |
| A Performance Study on Flash Storage in Android Smartphones .....                                                               | 199 |
| <i>Kenta Takabayashi, Takeshi Kamiyama, Masato Oguchi, Saneyasu Yamaguchi</i>                                                   |     |
| Learning Age of Information-Oriented Energy-Efficient Scheduling with Non-Orthogonal Multiple Access.....                       | 201 |
| <i>Jinhua Li, Yi Cao, Tse-Tin Chan, Haoyuan Pan</i>                                                                             |     |
| A Study of BER Performance of MmWave RIS Spatial Modulation System Using Genetic Algorithm Based Constellations Selection ..... | 203 |
| <i>Tsuyoshi Inoue, Itsusei Maesaki, Yafei Hou, Satoshi Denno</i>                                                                |     |
| Single Sign-On Function of CYPHONIC for Service Linkage .....                                                                   | 205 |
| <i>Kazuki Miyamura, Yoshiya Suzuki, Guilherme Seidy Ujiie, Hidekazu Suzuki, Katsuhiro Naito</i>                                 |     |
| A Mobile Computing-Friendly Stock Price Trend Prediction Model .....                                                            | 210 |
| <i>Zhihang Liu, Chiu-Wing Sham, Longyu Ma</i>                                                                                   |     |
| Combining Close Range UAVs and Gaussian Splatting for High-Speed Tomato Leaf Size Estimation and Counting .....                 | 215 |
| <i>Stefan Baar, Yosuke Kobayashi, Shinya Watanabe</i>                                                                           |     |
| Weed Detection from the Duck's Perspective Using Aqua-Drone in Rice Paddies.....                                                | 219 |
| <i>Soma Asuka, Kentaro Machida, Tetsuya Nakamura, Ikuko Shimizu, Taiichiro Ookawa, Hironori Nakajo</i>                          |     |
| Development of an Automatic Charging Function for UGV in Greenhouses .....                                                      | 224 |
| <i>Shoki Watanabe, Makoto Koike, Hiroshi Mineno</i>                                                                             |     |

|                                                                                                                                                                  |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Optical Braille Reader Cesarine .....                                                                                                                            | 229 |
| <i>Shoichi Ito, Mahiro Okamura, Michihiro Yamagishi, Yoshinori Fujisawa</i>                                                                                      |     |
| Semi-Automatic Performance Support Robot that Can Attach and Detach Guitars.....                                                                                 | 232 |
| <i>Kazuki Tsurumi, Ryo Marutsuka, Gou Koutaki</i>                                                                                                                |     |
| Live Demonstration : Development of Invisible Color Information and QR Code Lighting Display<br>for Novel Digital Signage.....                                   | 236 |
| <i>Tomoki Yamashita, Shunsuke Inoue, Arata Ikeda, Takeshi Kumaki</i>                                                                                             |     |
| Research on a Participant Experience Planetarium with a Pointing System .....                                                                                    | 238 |
| <i>Junnosuke Koyama, Kiri Harada, Noboru Nakamichi, Keita Watanabe, Toshiya Yamada,<br/>Takashi Yamanoue</i>                                                     |     |
| Development of a Life-Logging Application Using Facial Expressions, Voices, and Actions for the<br>Early Detection of Dementia and Caregiver Mental Fatigue..... | 242 |
| <i>Yuta Izutsu, Nobuyoshi Komuro, Natsuko Arimatsu, Aya Matsumura, Kota Toyama, Norimichi<br/>Tsumura, Yukie Tahara, Ayumi Amemiya</i>                           |     |
| AR Maze on Behavior Measurement Environment “5x5_Cuboid”.....                                                                                                    | 244 |
| <i>Motoki Tanabe, Masataka Yamanaka, Keigo Nishiyama, Junnosuke Koyama, Noboru<br/>Nakamichi</i>                                                                 |     |
| End-To-End Paper Fiber Classification Using Consumer Digital Camera: A Practical Approach for<br>Non-Destructive Analysis.....                                   | 249 |
| <i>Kosuke Ashino, Yexin Zhou, Yoichi Ohyanagi, Koji Shibasaki, Naoki Kamiya</i>                                                                                  |     |
| An Intelligent Motorcycle Safety Driving and Automated Accident Reporting System .....                                                                           | 251 |
| <i>Ming-Ying Chung, Yi-Da Lu, Cheng-Han Lee, Szu-Yu Kuo, Liang-Bi Chen</i>                                                                                       |     |
| Preliminary Measurements of Wind Noise from a Vertical Axis Wind Turbine with Helical Blades<br>Having a Wide Range of Helical Angles .....                      | 253 |
| <i>Mayu Mizumaki, Yoshinori Takahashi, Hideto Mashidori</i>                                                                                                      |     |
| Basic Study on Taste Identification Using Audio Input/Output.....                                                                                                | 255 |
| <i>Akihito Kobayashi, Shunsuke Takada, Honoka Shimura, Akira Ohta</i>                                                                                            |     |
| LLMs in Eduverse: LLM-Integrated English Educational Game in Metaverse .....                                                                                     | 257 |
| <i>Kantinan Plupattanakit, Pratch Suntichaikul, Pittawat Taveekitworachai, Ruck Thawonmas,<br/>Jeremy White, Kingkarn Sookhanaphibarn, Worawat Choensawat</i>    |     |
| An Augmented Reality-Based Chemotherapeutic Drug Dispensing Assistant System Using Deep<br>Learning Techniques.....                                              | 259 |
| <i>Ming-Che Chen, Min-Yu Lin, Chien-Yan Chien, Shang-Cian Wu, Chiu-Lan Yan</i>                                                                                   |     |
| Development of AI-Based Gesture Identification System for a Smart Key .....                                                                                      | 261 |
| <i>Yunosuke Kuwabara, Koji Makino, Hidetsugu Terada, Masakazu Kotoda</i>                                                                                         |     |
| Development of a Robotic Sixth Finger for Novel Instrument Performance .....                                                                                     | 266 |
| <i>Koki Takemoto, Shima Okada, Yusuke Sakaue, Masanobu Mannno, Masaaki Makikawa</i>                                                                              |     |
| Development of a 3D Urban Modeling and Disaster Visualization System Using Open Data .....                                                                       | 268 |
| <i>Yasuo Kawai</i>                                                                                                                                               |     |
| About an Error Correcting Method of ArUco Markers Considering Row Data for a Mobile Robot.....                                                                   | 273 |
| <i>Kosuke Nakajima, Takeru Nagashima, Yuka Komori, Shohei Yasuda, Ryota Tanabe, Wataru<br/>Uemura</i>                                                            |     |

|                                                                                                                                                                 |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Evaluation of LoRa-Based Long-Range Communication in a Fruit Theft Prevention Device.....                                                                       | 276 |
| <i>Kazuyoshi Ishida, Chee Siang Leow, Tsutomu Tanzawa, Tze Yaw Bong, Hiromitsu Nishizaki, Koji Makino</i>                                                       |     |
| Prototype of Food Hardness Measurement App Using Swept-Sine Technique.....                                                                                      | 280 |
| <i>Akihide Yoshida, Akira Ohta, Akihito Kobayashi</i>                                                                                                           |     |
| The Impact of Product and Contextual Involvement, Service Quality and Safety on Consumers' Continuance Intention of E-Commerce Platforms.....                   | 282 |
| <i>Ya-Ling Kao, I-Ching Lin</i>                                                                                                                                 |     |
| The Effect of Traffic Enforcement Camera and Proximity of Driver Residence to Accident Location on the Number of Fatalities and Injuries in Tourist Cities..... | 284 |
| <i>I-Ching Lin, Ya-Ling Kao</i>                                                                                                                                 |     |
| Blending Visitor Familiarity and Site Significance: RAG Enhanced Heritage Interpretation.....                                                                   | 286 |
| <i>August F. Y. Chao</i>                                                                                                                                        |     |
| Ship Detection of Unmanned Surface Vehicle Based on YOLOv8.....                                                                                                 | 288 |
| <i>Cheng-Han Zhou, Hsuan-Chih Ku, Shih-Hsiung Lee</i>                                                                                                           |     |
| Risk Management Strategies for Electric Vehicles in Maritime Transportation.....                                                                                | 290 |
| <i>Jhih-Qi Lin, Szu-Yu Kuo</i>                                                                                                                                  |     |
| Evaluation of a Speech Jammer Prototype Using Ultrasonic Signals .....                                                                                          | 292 |
| <i>Kazuhiro Kondo, Hayato Yamada, Noriyuki Hayasaka</i>                                                                                                         |     |
| Extension of Three-Dimensional Acoustic Playback Evaluation Method Using Ambisonics to Reflected Sounds Analysis .....                                          | 294 |
| <i>Ryuya Enomoto, Ryu Kato, Takahiro Yoshida</i>                                                                                                                |     |
| Adaptive Frequency-Dependent Regularization for Multi-Zone Sound Field Reproduction.....                                                                        | 297 |
| <i>Tong Zhou, Kazuya Yasueda, Akitoshi Kataoka</i>                                                                                                              |     |
| Effects of the Window Shaped Target Function in Beamforming-Based Binaural Reproduction.....                                                                    | 301 |
| <i>Kanji Watanabe, Ryosuke Oyashiki, Masayuki Nishiguchi, Koji Abe</i>                                                                                          |     |
| Towards Mimicking Speakers' Own Perceived Voice by Subjective Evaluation Considering Bone-Conduction Transmission Characteristics.....                          | 303 |
| <i>Teruki Toya, Taichi Kouno, Kenji Ozawa</i>                                                                                                                   |     |
| Data-Driven Estimation of Scattered Sound Field with a Small Number of Microphones .....                                                                        | 305 |
| <i>Ryosuke Onizawa, Gen Sato, Yusuke Ikeda</i>                                                                                                                  |     |
| Generating Tourist Attraction Introduction Videos Using Image Search and Short Video Analysis .....                                                             | 310 |
| <i>Takeru Fujiwara, Yuanyuan Wang, Wuyi Yue</i>                                                                                                                 |     |
| Integrating QR Code Characteristics into Super-Resolution Method.....                                                                                           | 315 |
| <i>Shoko Tanaka, Yui Tatsumi, Takahiro Shindo, Hiroshi Watanabe</i>                                                                                             |     |
| Implicit Neural Representation for Videos Based on Residual Connection .....                                                                                    | 317 |
| <i>Taiga Hayami, Hiroshi Watanabe</i>                                                                                                                           |     |
| Adversarial Level of Face Images Generated by Prompt-Based Image Coding in Face Recognition System .....                                                        | 319 |
| <i>Yurika Fujinami, Hiroshi Watanabe</i>                                                                                                                        |     |

|                                                                                                                                                        |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| A Consideration on Applying Fine-Tuning to Subjective Evaluation Estimation of Videos to Reduce Subjects' Loads .....                                  | 321 |
| <i>Keita Izawa, Wataru Kameyama</i>                                                                                                                    |     |
| Table Tennis Stroke Recognition Based on Player Motions .....                                                                                          | 324 |
| <i>Chun Xie, Mao Fujiwara, Hidehiko Shishido, Itaru Kitahara</i>                                                                                       |     |
| Development of a VR-Based Training System for Preventing Upper Body Functional Decline .....                                                           | 329 |
| <i>Takayuki Sawada, Yuki Kaneko, Haruhiko Asada, Ryoichi Suzuki</i>                                                                                    |     |
| WristPet: Promoting Daily Physical Activity Through Nudge Theory in a Smartwatch App .....                                                             | 331 |
| <i>Kingkarn Khothasing, Nhung Huyen Hoang, Adam Saleh, Zilu Liang</i>                                                                                  |     |
| FitTech: Design Health Promotion with Mobile Apps .....                                                                                                | 333 |
| <i>Termpetch Sookhanaphibarn, Soontaree Sookhanaphibarn, Wansiri Chaotragool, Napaorn Kasemjit</i>                                                     |     |
| A Development and Evaluation of the IoT Activity Tracking System for the Daily Activity .....                                                          | 335 |
| <i>Tomochika Harada, Michio Yokoyama</i>                                                                                                               |     |
| Development of a Gap Time Detection and Exercise Support App Aimed at Improving Physical Inactivity .....                                              | 338 |
| <i>Yuuto Takahashi, Kanae Matsui, Takane Tsukumi, Eiji Mori</i>                                                                                        |     |
| Skeleton Estimation in Gymnastics Using Segmentation Masks .....                                                                                       | 343 |
| <i>Naoki Teramoto, Youji Ochi</i>                                                                                                                      |     |
| Evaluation of Accuracy and Security on Deep Learning Model by Utilizing K-Anonymization with Attribute Selection for Reducing Computational Cost ..... | 347 |
| <i>Rei Ueda, Kota Yoshida, Takeshi Fujino</i>                                                                                                          |     |
| A Sentiment-Enhanced Recommendation System for Anime Pilgrimage Tours .....                                                                            | 352 |
| <i>Weixuan Ma, Yuanyuan Wang</i>                                                                                                                       |     |
| An Application for Efficient Publicity Image Search by Public Officers Using Deep Learning .....                                                       | 357 |
| <i>Masato Kinugasa, Ryo Hori, Yunhao Tu, Mayu Urata, Mamoru Endo, Takami Yasuda</i>                                                                    |     |
| Physical Activity Assessment for Daycare Teachers Reflecting Childcare Contents .....                                                                  | 362 |
| <i>Masao Uemura, Masahiro Kuroda</i>                                                                                                                   |     |
| Wildlife Intrusion Detection System for Agriculture Protection Based on Image Recognition .....                                                        | 366 |
| <i>Yong Kit Som Kiat, Abd Kadir Mahamad, Sharifah Saon, Maisara Othman, Herdawatie Binti Abdul Kadir, Mohd Anuaruddin Ahmadon, Shingo Yamaguchi</i>    |     |
| A* Algorithm-Based Indoor Navigation System for Multi-Story Building .....                                                                             | 371 |
| <i>Muhammad Shazmin Sariman, Maisara Othman, Sharifah Saon, Abd Kadir Mahamad, Herdawatie Abdul Kadir, Mohd Anuaruddin Ahmadon, Shingo Yamaguchi</i>   |     |
| A Note on LSTM-Based Prediction of Road Surface Condition Using Spatial Direction Series Data .....                                                    | 375 |
| <i>Sho Takahashi, Kota Uenishi, Masahiro Yagi, Toru Hagiwara, Toshio Yoshii</i>                                                                        |     |
| Time Series Lag Analysis of Indicators in Sewage Treatment Process .....                                                                               | 377 |
| <i>Jiaming Zheng, Hao Li, Genki Suzuki, Hiroyuki Shioya</i>                                                                                            |     |
| Study on Road Geometry of Horizontal Curves for Driving Difficulty Index Creation .....                                                                | 379 |
| <i>Shuhei Wada, Takeshi Torii, Noeru Sato, Yuki Mizuhara</i>                                                                                           |     |

|                                                                                                                                                 |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Measurement Method for Lap Times Using 1500m Track Video .....                                                                                  | 381 |
| <i>Kenzaburo Yamazaki, Hidehiko Shishido</i>                                                                                                    |     |
| Power Consumption Analysis of an Educational Building Using Rough Set Theory .....                                                              | 385 |
| <i>Stanley Glenn E. Brucal, Aaron Don M. Africa, Luigi Carlo M. De Jesus</i>                                                                    |     |
| Basketball Player Action Recognition and Tracking Using R(2+1)D CNN with Spatial-Temporal Features .....                                        | 388 |
| <i>Hao-Hsiang Chang, Yu-Hua Chang, Yi-Lung Shih, Cheng-Hsun Lin, Huang-Chia Shih</i>                                                            |     |
| Automatic Underwater Scene Classification Using Augmented Vision Transformer .....                                                              | 390 |
| <i>Nay Chi Lynn, Tetsuya Shimamura</i>                                                                                                          |     |
| Data Augmentation Using Foundation Model for Fine-Grained Fish Species Identification .....                                                     | 392 |
| <i>Tatsuhito Hasegawa, Yuta Nakano</i>                                                                                                          |     |
| Background and Visual Feature-Aware Data Augmentation for FGIR Via Image Generation .....                                                       | 394 |
| <i>Takuya Kato, Shion Serizawa, Mitsuki Okayama, Yuta Nakano, Tatsuhito Hasegawa</i>                                                            |     |
| An Architecture of Network Intrusion Detection and Prevention Systems for More Seamless Deployments .....                                       | 396 |
| <i>Shotaro Usuzaki, Ryo Saito</i>                                                                                                               |     |
| Improving Disease Forecast on Different Farms Using Sensing Agricultural Robot with XAI .....                                                   | 398 |
| <i>Kenji Terada, Kaori Fujinami</i>                                                                                                             |     |
| Fast Object Tracking Using Jetson-Tricore Hybrid Integration with Look-Ahead Movement Estimator .....                                           | 403 |
| <i>Jaehun Kim, Daejin Park</i>                                                                                                                  |     |
| F0 Controllable General-Purpose Vocoder Enhanced Using Speaker Vectors .....                                                                    | 405 |
| <i>Shingo Akiyoshi, Ken'Ichi Furuya, Hideyuki Mizuno</i>                                                                                        |     |
| Speech-Leakage Reduction for Pin-Spot Audio Based on Multiple Sideband Waves Using Comb Filters .....                                           | 407 |
| <i>Mizuki Iwagami, Yuting Geng, Masato Nakayama, Takanobu Nishiura</i>                                                                          |     |
| Construction Method of Acoustic Metadata on an Object-Based Audio Utilizing Coordinate Estimation of a Moving Sound Source .....                | 411 |
| <i>Subaru Kato, Kenta Iwai, Takanobu Nishiura, Yoshiharu Soeta</i>                                                                              |     |
| Reduction of Noise in Reverberant Environments of Multichannel Feedforward Active Noise Control System with Optical Laser Microphone .....      | 415 |
| <i>Maoto Mizutani, Kenta Iwai, Takanobu Nishiura, Yoshiharu Soeta</i>                                                                           |     |
| Speech Recognition for a Person with Cerebral Palsy Using Whisper Fine-Tuned on Japanese and English Dysarthric Speech .....                    | 419 |
| <i>Kirito Haze, Ryoichi Takashima, Tetsuya Takiguchi</i>                                                                                        |     |
| Training of VITS Model Reflecting the Duration of a Physically Unimpaired Speaker for a Text-To-Speech System for a Person with a Stutter ..... | 421 |
| <i>Ryo Nagakubo, Haruki Yamashita, Ryoichi Takashima, Misuzu Yasui, Tetsuya Takiguchi</i>                                                       |     |
| Comparison of 3D Speech Directivity and Loudspeaker Directivities with Different Shapes .....                                                   | 423 |
| <i>Kosuke Yokota, Yoichi Haneda</i>                                                                                                             |     |

|                                                                                                                                                     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Subjective Evaluation of Interactive 3D Space Virtual Sound Source with Hand Tracking.....                                                          | 425 |
| <i>Kota Sawajiri, Yoichi Haneda</i>                                                                                                                 |     |
| Representation of Spreading Source Width in 3D Space Using Higher-Order Ambisonics.....                                                             | 427 |
| <i>Nao Komuro, Yoichi Haneda</i>                                                                                                                    |     |
| Study on the Automatic Extraction of Acoustic Features on Anomaly Detection in Daily Sounds.....                                                    | 429 |
| <i>Koji Abe, Ryota Aoishi, Masayuki Nishiguchi, Kanji Watanabe</i>                                                                                  |     |
| Discrepancy in Sound Source Direction Perceived Through Bone-Conduction Headphones in<br>Audio Frequency Band.....                                  | 431 |
| <i>Mamoru Iwaki, Haruya Sugihara</i>                                                                                                                |     |
| Implementation of In-Room Voice Push Notification Client for Sustainable Use.....                                                                   | 433 |
| <i>Yoshifumi Chisaki, Ryo Takahashi</i>                                                                                                             |     |
| Design of Underwater Acoustic Positioning System Using Delay-And-Sum Beamforming .....                                                              | 438 |
| <i>Taiga Saito, Atsushi Tsuchiya, Tadashi Ebihara, Naoto Wakatsuki, Keiichi Zempo</i>                                                               |     |
| Simultaneous Underwater Acoustic Communication and Positioning Using Orthogonal Signal<br>Division Multiplexing in Coastal Area.....                | 442 |
| <i>Ryoichi Ishijima, Atsushi Tsuchiya, Tadashi Ebihara, Naoto Wakatsuki, Yuka Maeda</i>                                                             |     |
| Relationship Between the Resolution of Echo Images Obtained from an Acoustic Ranging Sensor<br>and the Accuracy of Self-Position Estimation .....   | 447 |
| <i>Atsushi Tsuchiya, Naoto Wakatsuki, Tadashi Ebihara, Keiichi Zempo, Koichi Mizutani</i>                                                           |     |
| Virtual Traffic Regulation Using Digital-Twin System for Autonomous Vehicles.....                                                                   | 452 |
| <i>Haziq Luqman Wan, Kazufumi Suzuki, Ryoichi Shinkuma, Gabriele Trovato</i>                                                                        |     |
| Enhancing Mask2Former for Real-Time Universal Human Image Segmentation .....                                                                        | 454 |
| <i>Jun-Han Huang, Chih-Yuan Yao, Hung-Kuo Chu, Kuo-Wei Chen, Wei Chen</i>                                                                           |     |
| Lung Cancer Classification Using Masked Autoencoder Pretrained on J-MID Database.....                                                               | 456 |
| <i>Ren Tasai, Guang Li, Ren Togo, Minghui Tang, Takaaki Yoshimura, Hiroyuki Sugimori, Kenji Hirata, Takahiro Ogawa, Kohsuke Kudo, Miki Haseyama</i> |     |
| Generative Dataset Distillation Based on Large Model Pool .....                                                                                     | 458 |
| <i>Longzhen Li, Guang Li, Ren Togo, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>                                                                |     |
| Lung Disease Classification with Limited Training Data Based on Weight Selection Technique.....                                                     | 460 |
| <i>Ayaka Tsutsumi, Guang Li, Ren Togo, Takahiro Ogawa, Satoshi Kondo, Miki Haseyama</i>                                                             |     |
| Online Pre-Training with Long-Form Videos.....                                                                                                      | 462 |
| <i>Itsuki Kato, Kodai Kamiya, Toru Tamaki</i>                                                                                                       |     |
| Labeling-And-DUDE-Based Denoising Method for Binary Image .....                                                                                     | 464 |
| <i>Masato Tada, Ayaka Fujita, Noriaki Suetake</i>                                                                                                   |     |
| Combining Digital Ultrasound Images and Individual Information for Beef Marbling Standard<br>Estimation of Live Cattle.....                         | 469 |
| <i>Yuito Higuchi, Yoshio Iwai, Kota Aoki</i>                                                                                                        |     |
| An Edge-Computing-Based Machine Learning Method for Detecting Goggle-Lens Defects .....                                                             | 473 |
| <i>You-Sheng Lin, Rui-Jie Jiang, Muhammad Fajar, Jing-Wein Wang, Chih-Chiang Wang</i>                                                               |     |

|                                                                                                                                  |     |
|----------------------------------------------------------------------------------------------------------------------------------|-----|
| StyleGAN in Paper Fiber Analysis: Evaluating Image Generation with Consumer-Grade Digital Camera .....                           | 475 |
| <i>Kosuke Ashino, Yexin Zhou, Yoichi Ohyanagi, Koji Shibazaki, Naoki Kamiya</i>                                                  |     |
| Automatic Position Correction Using Center Estimation for Cereal Images .....                                                    | 479 |
| <i>Kotarou Saku, Takumi Ozaki, Shun Sakuma, Michiko Inoue, Masashi Nishiyama</i>                                                 |     |
| A 6GHz Sub-Sampling Phase-Locked Loop Using a Lock Detector Controller.....                                                      | 483 |
| <i>Shi-Yue Lan, Chih-Hsiang Chang, Tung-Sheng Chan, Po-Kai Huang, Yue-Fang Kuo</i>                                               |     |
| Simulated Annealing Hardware Architecture for Max-Cut Combinatorial Optimization .....                                           | 485 |
| <i>Szu-Wei Chien, Yuan-Ho Chen</i>                                                                                               |     |
| Some Use Cases of Security Constrained Economic Dispatch Problem for Outage Work Planning Collaboration System .....             | 488 |
| <i>Ichiro Toyoshima, Takashi Tatekoji, Ryota Mizutani, Hiroaki Sato</i>                                                          |     |
| Application of Supervisory Control to Arbitration for Multi-Robot Systems with Learning Robots.....                              | 490 |
| <i>Tatsushi Yamasaki, Toshimitsu Ushio</i>                                                                                       |     |
| Privacy-Preserving Platoon Velocity Control Considering Inter-Vehicle Distance .....                                             | 492 |
| <i>Takeshi Hyodo, Kenji Sawada</i>                                                                                               |     |
| Introducing Event-Based Communication in Asynchronous Advantage Actor-Critic Algorithm .....                                     | 494 |
| <i>Hiroki Sunai, Koichi Kobayashi, Yuh Yamashita</i>                                                                             |     |
| Supply Chain Management Using Distributed Optimization Algorithm.....                                                            | 496 |
| <i>Taichi Nakatsukasa, Ryosuke Adachi, Yuji Wakasa</i>                                                                           |     |
| Interval-Aware Scheduling of a Surveillance Drone .....                                                                          | 498 |
| <i>Kaito Mori, Hiroki Nishikawa, Hiroyuki Tomiyama</i>                                                                           |     |
| A Method of Traffic Flow Forecasting Using Spatio-Temporal Graph Convolutional Networks .....                                    | 500 |
| <i>Renya Fukuda, Haruka Tanaka, Daisuke Kasamatsu</i>                                                                            |     |
| Deep-Learning-Based Risk Prediction with Urban Sensing Data for Consumer Driving Safety.....                                     | 502 |
| <i>Kun-Yu Lin, Pei-Yi Liu, Chih-Lin Hu, Sheng-Zhi Huang, Yung-Hui Chen, Lin Hui</i>                                              |     |
| Data Management Scheme Using LwM2M in Optical Fiber Network Monitoring System.....                                               | 504 |
| <i>Kengo Shimizu, Jun Yamaguchi, Hidekazu Suzuki</i>                                                                             |     |
| Estimating City Microclimate Using a Combination of Fixed and Mobile Sensors.....                                                | 506 |
| <i>Wataru Kunimi, Yuki Ito, Shunsuke Tomii, Toru Abe, Takuo Suganuma</i>                                                         |     |
| Kinmen Wind Lion Face Generation Based on the Deep Convolutional Generative Adversarial Network.....                             | 508 |
| <i>Chia-Huan Wu, Yu-Xiang Zhao, Cheng-Hou Chou, Yi-Zeng Hsieh</i>                                                                |     |
| Weighted Autocorrelation with Convolutional Neural Network for Noisy Speech Pitch Estimation.....                                | 510 |
| <i>Theint Theint Nway, Tetsuya Shimamura</i>                                                                                     |     |
| An Audio Watermarking Method Based on Arrange Technique Using Tension Chords .....                                               | 512 |
| <i>Harumi Murata, Kaho Yamamoto, Akio Ogihara</i>                                                                                |     |
| Study of Directional Loudspeaker System Using a Small Linear Array Consisting of a Horn Loudspeaker and Small Loudspeakers ..... | 516 |
| <i>Manabu Okamoto, Mio Shibata</i>                                                                                               |     |

|                                                                                                                                                  |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Immersive Applause Playback System Using Flat-Panel Loudspeakers .....                                                                           | 518 |
| <i>Shotaro Inoue, Kazuhiko Kawahara, Takashi G. Sato, Kenji Ishikawa, Yutaka Kamamoto</i>                                                        |     |
| A Computationally Efficient Online Algorithm for Tracking Single Moving Source Using Geometrically Constrained Independent Vector Analysis ..... | 522 |
| <i>Jiahui Hu, Tetsuya Ueda, Bo He, Shoji Makino</i>                                                                                              |     |
| Using Forehead Accelerometer Data to Estimate Bone-Conduction Hearing Thresholds: Feasibility and Initial Findings.....                          | 524 |
| <i>Irwansyah, Sho Otsuka, Seiji Nakagawa</i>                                                                                                     |     |
| Image Quality Improvement of Denoising Method Based on DRUNet for Real Noise.....                                                                | 528 |
| <i>Sho Yasue, Tomio Goto</i>                                                                                                                     |     |
| A Study on Performance Improvement of Degraded Image Processing Using Learning Method .....                                                      | 530 |
| <i>Iori Kojima, Tomio Goto</i>                                                                                                                   |     |
| Three-Dimensional Objects Super-Resolution Based on Series Structure Using Transformer .....                                                     | 532 |
| <i>Mizuki Ishikawa, Masataka Seo</i>                                                                                                             |     |
| A Cycle-GAN-Based Method for Real-World Image Super-Resolution .....                                                                             | 534 |
| <i>Ryusei Imamura, Yinhao Li, Hiroshi Taga, Koki Iwasa, Ryuichi Shichikawa, Makoto Suganami, Kazuhiro Nakamoto, Yen-Wei Chen</i>                 |     |
| Partial Attention for Data-Driven Image Super Resolution Under Low Computing Cost.....                                                           | 538 |
| <i>Kuntoro Adi Nugroho, Yudi Eko Windarto</i>                                                                                                    |     |
| EMG-Based Control of Multi-DOF Supernumerary Robotic Finger Based on Anomaly Detection Model .....                                               | 540 |
| <i>Taro Shibanoki, Akira Kirioka</i>                                                                                                             |     |
| Brain Computer Interface Based on Amplitude Modulation of Alpha Wave During Performing Cognitive Tasks .....                                     | 542 |
| <i>Kaito Yamami, Shota Nakashima, Seiji Nishifuji</i>                                                                                            |     |
| Time-Of-Flight Sensor-Based Wearable System for Trip-Hazard Environment Detection.....                                                           | 547 |
| <i>Chi-Yuan Chan, Cheng-Yi Huang, Yuan-Hao Ho, Pi-Shan Sung, Chien-Hsu Chen, Chih-Lung Lin</i>                                                   |     |
| Swallowing Parameters in Neck Ultrasound Video for Quantitative Evaluation of Jelly Beverages .....                                              | 550 |
| <i>Hideaki Muramatsu, Yutaka Suzuki, Takao Kubo, Masayuki Morisawa</i>                                                                           |     |
| Comparison of Finger Motion Classifiers with Respect to Number and Location of Tactile Sensors.....                                              | 553 |
| <i>Rinya Toyama, Hayato Iwai, Feng Wang</i>                                                                                                      |     |
| sEMG for Heart Rate Monitoring in Home Exercise: A Comparative Analysis with ECG.....                                                            | 558 |
| <i>Wei Wang, Shing-Sheng Guan, Bo-Yan Huang, Wang-Yu Lee, Poh Thong Tan, Che-Ming Chang, Yang-Cheng Lin, Chien-Hsu Chen</i>                      |     |
| Online Rubric-Based Collaborative Assessment Among One- And Two-Year-Olds Caregivers .....                                                       | 563 |
| <i>Saori Tanaka, Masahiro Kuroda</i>                                                                                                             |     |
| Construction of a Municipal ECO Filter for Waste Classification .....                                                                            | 567 |
| <i>Siyun Huang, Ken Tsutsuguchi</i>                                                                                                              |     |
| Enhancing Running Performance: A Federated Learning Approach with Wearable Devices .....                                                         | 569 |
| <i>Kyoshiro Takanashi, Norihiko Shinomiya</i>                                                                                                    |     |

|                                                                                                                                                               |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Applying Text Analysis to Explore the Influencer Marketing Transformation with AI-Generated Content Applications .....                                        | 574 |
| <i>Tzu-Hsuan Feng, Sheng-Ming Wang</i>                                                                                                                        |     |
| An Algorithm for Estimating Perfect Preferences Under Subjective Evaluations in a Laboratory Assignment Problem .....                                         | 576 |
| <i>Ryo Ishigami, Isamu Okada, Norihiko Shinomiya</i>                                                                                                          |     |
| Estimation of Meal Residues Using Foundation Models .....                                                                                                     | 580 |
| <i>Hideaki Masumoto, Tatsuhito Hasegawa, Atsuharu Horiuchi, Yuta Nakano, Kaisei Wada, Junko Yotsuya</i>                                                       |     |
| Improvement of Traffic Measurement AI by Utilizing Digital Twin.....                                                                                          | 582 |
| <i>Kengo Satsuki, Hideki Yaginuma, Shintaro Terabe</i>                                                                                                        |     |
| A Note on Issues for Implementation of Visibility Level Recognition Using In-Vehicle Camera Videos.....                                                       | 584 |
| <i>Masahiro Yagi, Yuto Sasaeda, Sho Takahashi, Toru Hagiwara, Toshio Yoshii</i>                                                                               |     |
| Two-Wheeled Vehicle Recognition Based on 3D Pose Estimation and Object Recognition .....                                                                      | 586 |
| <i>Aki Shigesawa, Sho Takahashi, Masahiro Yagi, Toshio Yoshii, Toru Hagiwara</i>                                                                              |     |
| Domain Adaptation Based on Quantitative Evaluation of Dataset Distribution for Traffic Measurement AI .....                                                   | 588 |
| <i>Kentaro Obara, Hideki Yaginuma, Shintaro Terabe</i>                                                                                                        |     |
| Analyzing and Visualizing Regional Preferences Using News Articles and Soccer Player Data.....                                                                | 590 |
| <i>Tatsuki Matsuba, Yuanyuan Wang</i>                                                                                                                         |     |
| Examination of Edge AI Technology for Real-Time Road Monitoring in Hokkaido .....                                                                             | 595 |
| <i>Kazuki Matsumoto, Masanori Matsuda, Sho Takahashi, Takumi Asada</i>                                                                                        |     |
| Accelerating Homomorphic Encryption-Based Facial Recognition Systems Through Clustering .....                                                                 | 597 |
| <i>Sei Nakanishi, Yoshiaki Narusue, Hiroyuki Morikawa</i>                                                                                                     |     |
| Utilizing Edge Device and Streamlit for Comparative Evaluation of CLAHE-Based Underwater Image Enhancement Techniques .....                                   | 599 |
| <i>Nurul Asmi Amalia, Aida Afira, Maria Ulfa, Kahlil Muchtar</i>                                                                                              |     |
| Development of a Localized Tomato Leaf Disease Detection Using YoloV9 Model Via RoboFlow 3.0.....                                                             | 601 |
| <i>Stanley Glenn E. Brucal, Luigi Carlo M. De Jesus, Leonardo A. Samaniego</i>                                                                                |     |
| Robustness of Biometric Authentication Method Using Image of External Auditory Canal .....                                                                    | 604 |
| <i>Takeshi Hamasaki, Jo Kawabata, Hironori Uchida, Yujie Li, Yoshihisa Nakatoh</i>                                                                            |     |
| Quantitative Image Analysis of Facial Changes Due to Daily Practice of Singing.....                                                                           | 606 |
| <i>Tsuyoshi Moriyama, Yusei Dosaka</i>                                                                                                                        |     |
| Metabolic Rate Estimation Using YOLOv8.....                                                                                                                   | 610 |
| <i>Stanley Glenn Brucal, Carlos Miguel Galido, Draniel Kaye Lugtu, Darwin Mararac, Charlize Alessandra Palmiano, Luigi Carlo De Jesus, Leonardo Samaniego</i> |     |
| High-Accuracy 3D Bounding Box Detection for Stereo Image .....                                                                                                | 613 |
| <i>Kazuto Nakai, Naoki Kotani, Satoshi Sugikawa, Yuta Muraki</i>                                                                                              |     |

|                                                                                                             |     |
|-------------------------------------------------------------------------------------------------------------|-----|
| Semantic Segmentation for Intersection Images with Domain Adaptation .....                                  | 615 |
| <i>Shota Suzuki, Takafumi Katayama, Tian Song, Takashi Shimamoto</i>                                        |     |
| Text Detection and Style Classification from Images Using Vision Transformer and Transformer Decoder .....  | 619 |
| <i>Hideaki Yajima, Chee Siang Leow, Hiromitsu Nishizaki</i>                                                 |     |
| Bitrate Control for VVC Based on RD-Cost Estimation with YOLOv8 .....                                       | 624 |
| <i>Kaito Goto, Takafumi Katayama, Tian Song, Takashi Shimamoto</i>                                          |     |
| ROI Selection to Improve Prediction Performance of CNN for Cirrhosis Detection Using Ultrasound Images..... | 628 |
| <i>Kazuma Nakata, Yusuke Fujita, Yoshihiro Mitani, Yoshihiko Hamamoto, Makoto Segawa, Shuji Terai</i>       |     |
| Hue-And-Luminance-Preserving Saturation Enhancement Based on Gamma Correction.....                          | 633 |
| <i>Keita Higuchi, Ayaka Fujita, Mashiho Mukaida, Noriaki Suetake</i>                                        |     |
| A Method for Detecting Human-Object Interaction Using RGB-D Video .....                                     | 637 |
| <i>Taichi Uchimura, Toru Abe, Takuo Suganuma</i>                                                            |     |
| Investigating Knee Torsion in Karate Low Kick Using Low-Cost Motion Capture.....                            | 639 |
| <i>Xiangbo Kong, Ken'Ichi Koyanagi</i>                                                                      |     |
| Color Correction Method Using Monocular Depth Estimation Model for Underwater Images.....                   | 641 |
| <i>Hirotaka Tamaki, Takafumi Katayama, Tian Song, Takashi Shimamoto</i>                                     |     |
| 3D Fusion W-Net and HoloLens-Based Interactive Visualization for Lung Airway Segmentation .....             | 644 |
| <i>Liang Lyu, Jiaqing Liu, Shurong Chai, Fang Wang, Tomoko Tateyama, Xu Qiao, Yen-Wei Chen</i>              |     |
| Evaluating YOLOv8 Model with Out-Of-Distribution Dataset and Shape Bias .....                               | 648 |
| <i>Shinji Eto, Yasuhiro Wada, Chikamune Wada</i>                                                            |     |
| Multiple Reversible Data Hiding with Module Shape Adjustments of Quick Response Codes.....                  | 650 |
| <i>Hsiang-Cheh Huang, Jui-Ching Ho, Feng-Cheng Chang</i>                                                    |     |
| Experimental Development of Operational Amplifier Using Photon Transport Transistor .....                   | 654 |
| <i>Shimon Hattori, Osamu Matoba, Daisuke Satoh, Toshiki Tanaka, Yusuke Kawakami, Tetsuo Hattori</i>         |     |
| A Study on a Research Grant Matching System Using a Sentence Embedded Model.....                            | 659 |
| <i>Seishiro Yamasaki, Toshiyuki Hamasaki, Zou Ziang, Kazuki Fukae, Toru Kobayashi</i>                       |     |
| Implementation of Multi-Fields Real-Time Image Detection of Small Hazardous Objects.....                    | 661 |
| <i>Teh-Lu Liao, Chien-Chun Liu, Chia-Ming Lu, Ying-Chih Lai, Yi-You Hou, Yang-Tin Lou</i>                   |     |
| Evaluation of Table Structure Recognition Performance for Open Data in ChatGPT.....                         | 663 |
| <i>Yukia Yoshikawa, Masaya Ohta</i>                                                                         |     |
| Proposal for a 4-Dimensional Learning Style Model to Optimize Learning Support Systems .....                | 665 |
| <i>Takako Akakura</i>                                                                                       |     |
| Impression Estimation System for Videos from Dynamic Features .....                                         | 668 |
| <i>Wataru Sano, Ryoichi Shinkuma, Gabriele Trovato</i>                                                      |     |

|                                                                                                                                   |     |
|-----------------------------------------------------------------------------------------------------------------------------------|-----|
| The Implementation and Preliminary Verification of an Optimized VR Games Recommendation System .....                              | 670 |
| <i>Chinlun Lai</i>                                                                                                                |     |
| A Study on Fingerspelling Word Recognition .....                                                                                  | 674 |
| <i>Akinori Yamaguchi, Jun Shibata, Hiroaki Sawano</i>                                                                             |     |
| Uh-Huh Duck: Self-Problem-Solving Support During Programming Through Interaction with a Doll Duck .....                           | 676 |
| <i>Kandai Kurata, Airi Tsuji, Kaori Fujinami</i>                                                                                  |     |
| Semantic Segmentation of River Video for Smart River Monitoring System .....                                                      | 678 |
| <i>Haruki Inoue, Takafumi Katayama, Tian Song, Takashi Shimamoto</i>                                                              |     |
| Implementation of a Non-Contact Driver Monitoring System with Enhanced Object Detection and Pose Estimation .....                 | 682 |
| <i>Hsuan-Yu Lin, Yu-Cheng Yang, Xi-Liang Zhao, Jiun-In Guo, Yin-Tsung Hwang, Chih-Peng Fan</i>                                    |     |
| Development and Application Examples of General-Purpose/Small Water Level Gauges .....                                            | 684 |
| <i>Takuma Ogasawara, Kazuki Ashida, Koichi Karasawa, Yutaka Fujita, Mizuki Sakai</i>                                              |     |
| Development of English-Compatible Braille Learning Device .....                                                                   | 689 |
| <i>Michihiro Yamagishi, Mahiro Okamura, Yoshinori Fujisawa</i>                                                                    |     |
| Nighttime Dehazing Method Based on Adaptive Ambient Light Estimation Considering the Effects of Multiple Light Sources .....      | 691 |
| <i>Yuto Namba, Mashiho Mukaida, Noriaki Suetake</i>                                                                               |     |
| Analysis of Impact on Attract Visitors Event to Nearby Areas Using Wi-Fi Sensing Technology .....                                 | 696 |
| <i>Ryoma Toyomi, Atsuo Ozaki</i>                                                                                                  |     |
| Consideration of Effectively Training Method and System for Control System Operators in OT and it .....                           | 698 |
| <i>Masatoshi Enomoto, Shu Hosokawa, Yuki Meguro, Kenji Sawada</i>                                                                 |     |
| Temporal Logic MPC of Spatially Distributed Systems Considering Feasibility .....                                                 | 700 |
| <i>Ikkei Komizu, Koichi Kobayashi, Yuh Yamashita</i>                                                                              |     |
| State-Flipped Control for Probabilistic Boolean Networks Using Reinforcement Learning .....                                       | 702 |
| <i>Tatsuya Hasegawa, Fuma Motoyama, Koichi Kobayashi, Yuh Yamashita</i>                                                           |     |
| Implementation of MERN Stack-Based Web Application to Visualize Garbage Collection Status .....                                   | 704 |
| <i>Yuki Kunieda, Tatsuya Abe, Hidekazu Suzuki</i>                                                                                 |     |
| A Taxonomy of Pedestrian Count Data Analyses for Tourism Town Development Discussions .....                                       | 706 |
| <i>Ryo Hori, Mayu Urata, Mamoru Endo, Takami Yasuda</i>                                                                           |     |
| Fundamental Validation of Detecting Methods for Abandoned Garbage Using IoT Technologies .....                                    | 711 |
| <i>Tatsuya Abe, Yuki Kunieda, Hidekazu Suzuki</i>                                                                                 |     |
| A Deep Learning-Based Deraining Approach Using Frequency Domain Loss .....                                                        | 713 |
| <i>Yusuke Yamamoto, Yinhao Li, Hiroshi Taga, Koki Iwasa, Ryuichi Shichikawa, Makoto Suganami, Kazuhiro Nakamoto, Yen-Wei Chen</i> |     |
| MC-pDM: A Eye Gaze Correction Using Multi-Conditional Patch-Diffusion Model .....                                                 | 717 |
| <i>Hu Haoyang, Seo Masataka, Yen-Wei Chen</i>                                                                                     |     |

|                                                                                                                                                             |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Scaled Weight-Sharing Convolutional Network for Memory-Efficient Video Frame Prediction .....                                                               | 721 |
| <i>Jiaqian Xie, Shunichi Sekiguchi, Wataru Kameyama</i>                                                                                                     |     |
| Efficient Compression Method in Video Reconstruction Using Video Vision Transformer.....                                                                    | 724 |
| <i>Takumi Kobayashi, Masataka Seo</i>                                                                                                                       |     |
| Improving Facial Video Conversion Using Optical Flow and Edge Feature.....                                                                                  | 726 |
| <i>Youhei Ueno, Masataka Seo</i>                                                                                                                            |     |
| Enhanced Perception of Speed in Textured VR Environments with Unchanged Sensitivity .....                                                                   | 729 |
| <i>Yuki Kosuge, Shogo Okamoto</i>                                                                                                                           |     |
| Asura Hands: Having Two Independently Controlled Left Hands in Virtual Reality Environment.....                                                             | 732 |
| <i>Asaki Kawaguchi, Shogo Okamoto, Yuta Goto, Yutaro Abe, Masayuki Hara</i>                                                                                 |     |
| Drone Rider: Enhancing VR Flying Experiences Via Directed Wind Stimuli.....                                                                                 | 735 |
| <i>Kazuya Shimato, Yuta Goto, Shogo Okamoto</i>                                                                                                             |     |
| Soft Feel Presentation on Touch Panels Using Low-Frequency Friction Stimuli.....                                                                            | 738 |
| <i>Ami Chihara, Mirai Azechi, Ai Kurita, Shogo Okamoto</i>                                                                                                  |     |
| Minimally Allowable Inconsistency Between Visual and Synthetic Tactile Grating Textures for<br>Surface Tactile Displays .....                               | 741 |
| <i>Ai Kurita, Mirai Azechi, Ami Chihara, Shogo Okamoto</i>                                                                                                  |     |
| Influence of User Interface Layout on Usability: A Comparison Between Japanese and European<br>Users – Pilot Test.....                                      | 744 |
| <i>Helmut Michael Luu, She Wan-Jou, Shogo Kajimura, Yu Shibuya</i>                                                                                          |     |
| A Method of Destination Prediction Using Historical Individual Movement .....                                                                               | 749 |
| <i>Kentaro Kameoka, Syeda Sadia Hassan, Haruka Tanaka, Daisuke Kasamatsu</i>                                                                                |     |
| Simulation of IoT-Based Pool Water Quality Monitoring System with Node-RED.....                                                                             | 751 |
| <i>Lim Wei Hang, Sharifah Saon, Abd Kadir Mahamad, Herdawatie Binti Abdul Kadir, Mohd<br/>Anuaruddin Ahmadon, Shingo Yamaguchi</i>                          |     |
| Smart Water Level River Monitoring System with IoT.....                                                                                                     | 756 |
| <i>Iffan Darwis Bin Mohd Ibrahim, Herdawatie Abdul Kadir, Sharifah Saon, Abdul Kadir<br/>Mahamad, Khalid Isa, Mohd Anuaruddin Ahmadon, Shingo Yamaguchi</i> |     |
| Mobile Phone Detector in Restricted Area .....                                                                                                              | 761 |
| <i>Abdurrahman Ismail, Asmarashid Ponniran, Chew Chang Choon, Chessda Uttraphan A-L Eh<br/>Kan, Mohd Anuaruddin Ahmadon, Shingo Yamaguchi</i>               |     |
| Privacy Enhancing Technique with Numerical Operation in Smart Service Provision and Its<br>Evaluation.....                                                  | 766 |
| <i>Tomoya Fukada, Shingo Yamaguchi, Mohd Anuaruddin Bin Ahmadon</i>                                                                                         |     |
| Performance Evaluation of Apache TVM's MetaSchedule for Image Classification Models on Edge<br>Device.....                                                  | 770 |
| <i>Masahiro Hiramori, Shingo Oidate</i>                                                                                                                     |     |
| Scalable Steering Sub-System for xEV Autonomous Vehicle Using Wireless Data Communication.....                                                              | 772 |
| <i>Dorotea Ruth G. Blanco, Jocelyn F. Villaverde</i>                                                                                                        |     |
| A Contactless LSI Test Method Utilizing Direct Emission from On-Chip Interconnects .....                                                                    | 777 |
| <i>Hiroshi Kamiya, Yamato Ishida, Satoru Honda, Hiroyuki Sato, Toshiki Kanamoto</i>                                                                         |     |

|                                                                                                           |     |
|-----------------------------------------------------------------------------------------------------------|-----|
| Frequency Response Deterioration Due to Surface Ridge Abrasion of Tactile Sensors.....                    | 782 |
| <i>Muhammad Irwan Yanwari, Shogo Okamoto</i>                                                              |     |
| An Edge AI-Powered Defect Coffee Detector Using Streamlit Web App .....                                   | 785 |
| <i>Rauzatul Jannah, Akbar Maulana Putra, Kahlil Muchtar, Safrizal Razali, Rika Sri Utami</i>              |     |
| Gait Recognition Robust to Clothing Differences Using 2D Human Pose Estimation .....                      | 787 |
| <i>Takeshi Konno, Shuji Awai, Takahiro Yoshioka</i>                                                       |     |
| Implement of Dual Recognition Processes for Comprehensive Object Recognition and Checking .....           | 789 |
| <i>Yi-Chong Zeng, Jing-Ming Guo</i>                                                                       |     |
| Anomaly Detection Using Reconstruction Error and GradCAM .....                                            | 793 |
| <i>Yuusuke Chirikiri, Masataka Seo</i>                                                                    |     |
| Sports Motion Correction Based on Domain Adaptation Using Conditional VAE and LIME .....                  | 796 |
| <i>Keigo Shimada, Masataka Seo</i>                                                                        |     |
| Gaming Group Formation in Social Networks of Video Game Distribution Platforms .....                      | 799 |
| <i>Keng-Pei Lin, Tzu-Lin Chang, Shih-Hung Tsai, Chih-Ya Shen</i>                                          |     |
| Development of a Limestone Discrimination Method Using Deep Metric Learning.....                          | 801 |
| <i>Tsuneo Kagawa, Ryoichi Nagata</i>                                                                      |     |
| Emotion-Dependent Speaker Verification Based on Score Integration .....                                   | 805 |
| <i>Hibiki Takayama, Masafumi Nishida, Satoru Tsuge, Shingo Kuroiwa</i>                                    |     |
| Text-Dependent Speaker Verification Using SSI-DNN Trained on Short Utterance.....                         | 808 |
| <i>Kentaro Kameda, Satoru Tsuge, Shingo Kuroiwa, Yasuo Horiuchi, Masafumi Nishida</i>                     |     |
| Comparison of Large Pre-Trained Models and Adaptation Methods for Japanese Dialects ASR.....              | 811 |
| <i>Naoki Takahashi, Shogo Miwa, Yuta Kamiya, Takumi Toyama, Raufun Nahar, Atsuhiko Kai</i>                |     |
| Evaluation of Speech Translation Subtitles Generated by ASR with Unnecessary Word Detection.....          | 815 |
| <i>Makoto Hotta, Chee Siang Leow, Norihide Kitaoka, Hiromitsu Nishizaki</i>                               |     |
| End-To-End Neural Formant Synthesis Using Low-Dimensional Acoustic Parameters .....                       | 820 |
| <i>Sumiharu Kobayashi, Tetsuo Kosaka, Takashi Nose</i>                                                    |     |
| Elderly Speech Recognition Using Whisper and Speaker Adaptation.....                                      | 824 |
| <i>Kazumasa Yamamoto, Kosei Fukuhara, Seiichi Nakagawa</i>                                                |     |
| Relationship Between RSSI and Human Posture in Wireless Body Area Network.....                            | 826 |
| <i>Masato Yoshimi, Takumi Seike, Takahiro Ito, Hidetomo Shibamura, Hirokazu Tanaka</i>                    |     |
| Numerical Phantoms with Different Structures for Evaluating Implantable Human Body<br>Communication ..... | 828 |
| <i>Miyu Kodama, Dairoku Muramatsu</i>                                                                     |     |
| Food Bolus Segmentation in Ultrasound Imaging for Dysphagia Rehabilitation.....                           | 830 |
| <i>Qibo Gao, Katsuya Hotta, Tomoya Izumo, Makoto Sasaki, Yoshitaka Endo, Yoshihiro Hagihara</i>           |     |
| Evaluating the Feasibility of Affordable Auditory BCIs for Communication in ALS Patients .....            | 832 |
| <i>Mikito Ogino</i>                                                                                       |     |

|                                                                                                                                                          |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Generic Feature Extraction from Multiple Biological Data Using Self-Supervised Contrastive Learning .....                                                | 834 |
| <i>Ryota Nakamura, Chika Sugimoto</i>                                                                                                                    |     |
| Review on Digital Stethoscopes in Chest Auscultation for Personal Use .....                                                                              | 836 |
| <i>Hinna Nayab, Muhammad Salman Khan</i>                                                                                                                 |     |
| Enhancing COVID-19 Data Analysis Through HCI-Driven AI and IoT Integration .....                                                                         | 840 |
| <i>Farhad Mehdipour, Ari Aharari</i>                                                                                                                     |     |
| Inventory Control in Food Industry Using an AI-Driven Precision Counting.....                                                                            | 844 |
| <i>Ari Aharari, Farhad Mehdipour</i>                                                                                                                     |     |
| LoRa Technology for GHG Monitoring in Mangrove Ecosystem.....                                                                                            | 848 |
| <i>Phawit Boonrat, Pawita Boonrat, Ari Aharari</i>                                                                                                       |     |
| Prediction of COVID-19 Hospital Bed Occupancy Using Long Short-Term Memory (LSTM) Neural Networks.....                                                   | 852 |
| <i>Ryota Goto, Ari Aharari</i>                                                                                                                           |     |
| The Influence of UI on Decision-Making in E-Commerce Services.....                                                                                       | 856 |
| <i>Yuki Uwajima, Miura Masashi, Wonseok Yang</i>                                                                                                         |     |
| Efficient Motion Blur Detection and Extraction from a Single Image in HVS-Based Gradient Domain .....                                                    | 860 |
| <i>Yuan-Kang Lee, Yu-Chieh Yu, Jian-Jiun Ding</i>                                                                                                        |     |
| Distilled RSN: Lightweight Pose Estimation Using Knowledge Distillation.....                                                                             | 862 |
| <i>Jiu Yi, Haoyuan Liu, Hiroshi Watanabe</i>                                                                                                             |     |
| Skin Segmentation-Based Clothing Estimation Using RGB Images.....                                                                                        | 865 |
| <i>Tatsuya Chuman</i>                                                                                                                                    |     |
| Defending Against Adversarial Patch Attacks in Object Detection Through Bounding Box Filling .....                                                       | 868 |
| <i>Yoshihiro Koseki</i>                                                                                                                                  |     |
| Enhancing Object Detection with Non-Local Modules in the Feature Pyramid Network.....                                                                    | 870 |
| <i>Hongrui Fan, Haoyuan Liu, Hiroshi Watanabe</i>                                                                                                        |     |
| Object Detection of Equirectangular Images by Swapping the Equator and Poles .....                                                                       | 874 |
| <i>Zihao Zhao, Shigang Li</i>                                                                                                                            |     |
| Offline Temporal Dominance of Emotions Method Using Recorded Videos.....                                                                                 | 879 |
| <i>Haoke Yu, Yuki Kosuge, Shogo Okamoto</i>                                                                                                              |     |
| Does Scrolling Through Or Clicking Interactive Infographics Reduce Anxiety? Exploring International Students' Reactions When Reading Disaster News ..... | 882 |
| <i>Pauline Yosephine Maria, Yi-Ting Huang</i>                                                                                                            |     |
| Vibratory Stimuli to External Auditory Meatus to Cause Subjective Relaxation.....                                                                        | 884 |
| <i>Yuta Goto, Shogo Okamoto</i>                                                                                                                          |     |
| Fundamental Study on Relationship Between Gaze and Efficiency to Develop Office Work Support System by Concentration and Skill Level Estimation .....    | 887 |
| <i>Ryohei Saijo, Takeru Isaka, Iwaki Toshima, Shohei Matsuo</i>                                                                                          |     |

|                                                                                                                                              |     |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----|
| The Effect of Wording Differences in a Notification System Encouraging Users to Refrain from Smartphone Use .....                            | 889 |
| <i>Kazuyoshi Murata</i>                                                                                                                      |     |
| The Impact of Auditory Stimuli Aids on Teaching Materials for Introverted and Extroverted Personalities.....                                 | 892 |
| <i>Jia-Xian Lin, Yi-Ting Guo, Chun-Ching Chen</i>                                                                                            |     |
| Data Collection Method for Legacy Devices Using LwM2M Gateway in Next-Generation IoT Device and Service Search System .....                  | 894 |
| <i>Seiya Komonguchi, Ryosei Takaki, Hidekazu Suzuki</i>                                                                                      |     |
| Nudge Application Methods for Enhancing Information Security Countermeasures.....                                                            | 896 |
| <i>Shigeaki Tanimoto, Shinko Usami, Takashi Hatashima, Atsushi Kanai</i>                                                                     |     |
| Travelers' Dissatisfaction in Tokyo's Short-Term Rentals: Factors Influencing Location Reviews .....                                         | 898 |
| <i>Kurumi Muto, Akihisa Kodate</i>                                                                                                           |     |
| Assurance Technology to Ensure Safety-Critical Information for Flight Operations.....                                                        | 902 |
| <i>Xiaodong Lu, Kazuyuki Morioka, Naoki Kanada</i>                                                                                           |     |
| Fair Distribution of Supplies Through a Disaster Information Sharing System Utilizing Blockchain.....                                        | 904 |
| <i>Yuka Shiozaki, Haruhisa Hasegawa</i>                                                                                                      |     |
| Assessing Precision of Cloud Robotics Device by Visualization for Non-Network Expert.....                                                    | 908 |
| <i>Arata Koike, Yoshiko Sueda</i>                                                                                                            |     |
| Human Action Recognition on Edge Devices: A Novel Light-Weight Model .....                                                                   | 910 |
| <i>Hoangcong Le, Chen-Chien Hsu, Cheng-Kai Lu, Wei-Yen Wang, Pin-Yen Monica Kuo</i>                                                          |     |
| Domestic Tourist Identification Using Big Data .....                                                                                         | 912 |
| <i>Jensen Xiao, Chiu-Wing Sham, Ka-Shing Cheung, Chung-Yim Yiu</i>                                                                           |     |
| Proposal of Elevator Control System Applying Ant Colony Optimization .....                                                                   | 915 |
| <i>Shunto Yamamoto, Takahiro Uchiya, Ichi Takumi</i>                                                                                         |     |
| The Design of an AI-Based Deep Learning Model for Identifying Marine Debris to Enhance Awareness of Marine and Plastic Reduction Issues..... | 917 |
| <i>Yen-Hsi Cheng, Hsiao-Yue Tsao</i>                                                                                                         |     |
| Store Clustering Based on Product Genre Representation in POS Data.....                                                                      | 919 |
| <i>Yuta Marui, Atsuko Mutoh, Kosuke Shima, Koichi Moriyama, Tohgoroh Matsui, Nobuhiro Inuzuka</i>                                            |     |
| Hybrid EEG-NIRS BCI Using Feature Extraction Based on Riemannian Geometry .....                                                              | 923 |
| <i>Yoshiki Hirayama, Takuto Sakuma, Shohei Kato</i>                                                                                          |     |
| Proposal of a Soccer Training System Using MR Technology.....                                                                                | 926 |
| <i>Ren Otsuka, Tomochika Ozaki</i>                                                                                                           |     |
| Infinite Museum: Implementation and Evaluation of Redirected Experience.....                                                                 | 928 |
| <i>Chien-Hsu Chen, Hsiang Yu Hsieh, Chia-Yu Liu, Wei-Jung Li, Yi-Pei Wu, Yang-Cheng Lin</i>                                                  |     |
| Proposal for a Virtual Reality System to Practice Knife Handling in Cooking .....                                                            | 932 |
| <i>Yukitoshi Nakazato, Toru Kano</i>                                                                                                         |     |

|                                                                                                                            |     |
|----------------------------------------------------------------------------------------------------------------------------|-----|
| Development of Augmented Reality-Based Dental Surgical Guide System for Clinical Use .....                                 | 934 |
| <i>Yusuke Fukuda, Akira Takebayashi, Hiroaki Yamamoto, Toru Kano</i>                                                       |     |
| Development of VR Kyogi Karuta Game System.....                                                                            | 936 |
| <i>Ayaka Maruyama, Kazutaka Kurihara</i>                                                                                   |     |
| Development of a Self-Study Environment for Voice Actors Using VR.....                                                     | 939 |
| <i>Riho Kambe, Kazutaka Kurihara</i>                                                                                       |     |
| Recommendation System Using Serendipity Evaluation Based on Personal Preferences .....                                     | 941 |
| <i>Haruto Domoto, Ryusei Okuda, Takahiro Uchiya, Ichi Takumi</i>                                                           |     |
| Paraphrasing Method for Controlling a Robotic Arm Using a Large Language Model.....                                        | 943 |
| <i>Shohei Yasuda, Yuka Komori, Kosuke Nakajima, Ryota Tanabe, Wataru Uemura, Niclas Walter</i>                             |     |
| Measuring Objective and Subjective Thermal Comfort Data for Outdoor Pedestrians in Subtropical Urban Canyons .....         | 946 |
| <i>Min-Hsiang Chang, Pei-En Li, Ko-Chiu Wu</i>                                                                             |     |
| Integrating Text-Analysis to Explore the Application of Generative AI Tools on User Interface Design and Engineering ..... | 948 |
| <i>Yi-Ci Liao, Sheng-Ming Wang</i>                                                                                         |     |
| Enhancing Fitness Lifestyle Via Smart Health Tech in Line App.....                                                         | 950 |
| <i>Pinkanok Wongpinpech Pibooltaew, Termpetch Sookhanaphibarn, Manop Chunin, Soontaree Sookhanaphibarn</i>                 |     |
| Vertebral Force Prediction During Manual Lifting Using Sagittal Plane Posture and Machine Learning .....                   | 952 |
| <i>Kodai Kitagawa, Mitsumasa Hida, Chikamune Wada, Hiroaki Yamamoto</i>                                                    |     |
| Development of GUI Application for Multimodal Analysis for Evaluation of Swallowing Function .....                         | 954 |
| <i>Shuto Nakagomi, Yutaka Suzuki, Masayuki Morisawa, Hiromitsu Nishizaki, Hideaki Muramatsu, Motoki Arakawa</i>            |     |
| Design of an IoT Monitoring Platform for Smart Elderly Home Activities .....                                               | 959 |
| <i>Teh-Lu Liao, Chia-Cho Pan, Ming-Hung Lin, Chio-Feng Ke, Yi-You Hou, Yang-Tin Lou</i>                                    |     |
| Influence of Implicit Knowledge on Evaluation for Gait Motion Using Different Avatars.....                                 | 961 |
| <i>Shoma Sasamoto, Koji Makino, Masahiro Nakamura, Kazuyoshi Ishida, Xiao Sun, Hidetsugu Terada</i>                        |     |
| Behavior Recognition Through an Intelligent Mattress Cover.....                                                            | 965 |
| <i>Phil Meier, Oussama Ferhi, Marcus Prochaska</i>                                                                         |     |
| Chewing and Swallowing Pattern Recognition Using Sound Information.....                                                    | 968 |
| <i>Mai Takeuchi, Masafumi Nishida, Masafumi Nishimura</i>                                                                  |     |
| Grad-CAM Visualization and Ensemble Learning for Improved Gastrointestinal Disease Classification Using CNNs.....          | 971 |
| <i>Chih Mao Tsai, Jiann-Der Lee</i>                                                                                        |     |
| Mora-Based Evaluation of Naturalness for Japanese Dysarthric Speech .....                                                  | 973 |
| <i>Megumi Hatakeyama, Yuto Suzuki, Motomichi Shirahase, Naohisa Furuta, Naoshi Yamamoto, Masafumi Nishimura</i>            |     |

|                                                                                                                                    |      |
|------------------------------------------------------------------------------------------------------------------------------------|------|
| Proposed Models for Improving Lesion Segmentation in Ischemic Stroke CT Images Based on Hybrid CNN-Transformer Architectures ..... | 975  |
| <i>Yonghao Ba, Yuji Watanabe</i>                                                                                                   |      |
| Estimation of the Center of Gravity Position Transition by Image Processing in Manual Material Handling .....                      | 977  |
| <i>Yusuke Asaka, Yoshie Nogami, Kazuyuki Kojima</i>                                                                                |      |
| A Fake Face Image Encryption with Style Mixing.....                                                                                | 979  |
| <i>Xin Yan, Shingo Otsu, Taizo Suzuki, Kosuke Shimizu</i>                                                                          |      |
| Evaluation of the Influence of Mass Load of Neck Head on Sanshin .....                                                             | 984  |
| <i>Kojiro Nishimiya, Hideo Cho</i>                                                                                                 |      |
| Classification in Japanese Sign Language Based on Dynamic Facial Expressions.....                                                  | 986  |
| <i>Yui Tatsumi, Shoko Tanaka, Shunsuke Akamatsu, Takahiro Shindo, Hiroshi Watanabe</i>                                             |      |
| Applying Modified Metaheuristic Algorithm for Optimizing Parameters in Lithium-Ion Batteries .....                                 | 988  |
| <i>Chen-Kai Wen, Wel-Lun Lin, Kai-Jun Weng, Hung-Chih Ku, Wei-Lun Yu, En-Jui Liu</i>                                               |      |
| A Study on System for Rehabilitation Using Sensing Data of Patients with Mental Illness .....                                      | 993  |
| <i>Yuuto Takahashi, Kanae Matsui</i>                                                                                               |      |
| Remote Control of Cart Platform for Alter Ego Robot by Gaze Input .....                                                            | 998  |
| <i>Kai Mori, Koki Shibasato</i>                                                                                                    |      |
| A Study on the Design of Transportation Network Based on OD Flow in Utsunomiya City.....                                           | 1000 |
| <i>Ryuki Shibuya, Masahiro Fujii</i>                                                                                               |      |
| Investigation and Evaluation of a High-Resolution Image Prediction Method Using Autoencoders and Integer Wavelets .....            | 1002 |
| <i>Koutarou Abe, Yoshio Iwai, Kota Aoki</i>                                                                                        |      |
| Time Series Analysis for Social Media Anxiety Detection: A Mini Review .....                                                       | 1006 |
| <i>Ashala Senanayake, Zilu Liang</i>                                                                                               |      |
| Beacon Installation Considering the Directional Characteristics of BLE Beacons and Evaluation of 2D RSSI Distribution .....        | 1008 |
| <i>Yasuki Hotta, Takahiro Uchiya, Ichi Takumi</i>                                                                                  |      |
| A Throughput-Optimized Accelerator for Submanifold Sparse Convolutional Networks .....                                             | 1010 |
| <i>Yu-Hsuan Lai, Shang-Jang Ruan, Ming Fang, Edwin Naroska, Jeng-Lun Shieh</i>                                                     |      |
| Estimation of Human Anxiety Based on Skin Conductance Response and Its Application to eHMI Performance Evaluation .....            | 1012 |
| <i>Yuya Iwamoto, Haruki Kawanaka, Koji Oguri</i>                                                                                   |      |
| Analysis of Electrocardiogram and Photoplethysmography Features to Identify Frustration While Driving .....                        | 1015 |
| <i>Hinata Kanie, Haruki Kawanaka, Koji Oguri</i>                                                                                   |      |
| Analysis of Inside Sensor Signals When the Diaper Opening to Confirm Excretion.....                                                | 1019 |
| <i>Yasuhiro Toyoda, Haruki Kawanaka, Koji Oguri</i>                                                                                |      |
| On the Continuity of Moore-Penrose Inverse of the Graph Laplacian .....                                                            | 1022 |
| <i>Tse-Yu Lin, Yen-Lung Tsai</i>                                                                                                   |      |

|                                                                                                                                                                                           |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| An Efficient DDCCANet for Multi-View Representation Learning .....                                                                                                                        | 1024 |
| <i>Zheng Guo, Lei Gao, Ling Guan</i>                                                                                                                                                      |      |
| Machine Learning Using DNA-Based Computing.....                                                                                                                                           | 1026 |
| <i>Sharifu Ura</i>                                                                                                                                                                        |      |
| Heart Failure Data Diversity: A Pilot, Comparative Analysis of Real-World Patient Data .....                                                                                              | 1030 |
| <i>Qisthi Alhazmi Hidayaturrohman, Budi Ario Tejo, Eisuke Hanada</i>                                                                                                                      |      |
| Respiratory Estimation During Sleep Using Depth Camera in Real Environment .....                                                                                                          | 1034 |
| <i>Daisuke Kushida, Ryuga Kodani</i>                                                                                                                                                      |      |
| LSTM-Based Glucose Prediction for Prediabetes .....                                                                                                                                       | 1037 |
| <i>Cleber Franca Carvalho, Thilini Savindya Karunarathna, Zilu Liang</i>                                                                                                                  |      |
| Abnormal Gait Classification Approach Based on Single IMU on Glasses-Typed System .....                                                                                                   | 1039 |
| <i>Fang-Yi Lin, Pi-Shan Sung, Peng-Ting Chen, Chih-Lung Lin</i>                                                                                                                           |      |
| Classifying Muscle Resistance Training Levels Using sEMG with Visibility Graphs .....                                                                                                     | 1041 |
| <i>Poh Thong Tan, Shing-Sheng Guan, Yimo Lin, Chun-Chun Wei, Yang-Cheng Lin</i>                                                                                                           |      |
| Metrics for Comparing Different Types of Positioning Techniques: Proximity Detection and<br>Location Coordinate Estimation.....                                                           | 1045 |
| <i>Satoki Ogiso, Satoshi Nakae, Karimu Kato, Ikue Mori, Takahiro Miura, Ryosuke Ichikari,<br/>Takashi Okuma, Takeshi Kurata, Takanori Sugi, Yasunori Haga, Eri Nakano, Atsushi Kimura</i> |      |
| Examining the Emotional Impact and Visual Attention of Audiences in Virtual Reality<br>Environments Through Character Configuration and Spatial Distance Management.....                  | 1049 |
| <i>Yu-Jie Zheng, Hsiao-Yue Tsao</i>                                                                                                                                                       |      |
| Virtual Force Feedback Based on Phantom Sensation for Teleoperated Robot.....                                                                                                             | 1051 |
| <i>Taro Shibanoki, Takahisa Tokushima</i>                                                                                                                                                 |      |
| Distinct Technology Acceptance Models for Unfamiliar Systems in Japan and the United States<br>During the COVID-19 Pandemic .....                                                         | 1053 |
| <i>Nianzhi Tu, Zixin Cui, Makoto Itoh</i>                                                                                                                                                 |      |
| Sentiment Analysis of Movie Reviews Using Time-Series Text Data.....                                                                                                                      | 1055 |
| <i>Naohisa Fujisue, Atsumi Ogata, Kouta Yamashita, Naoya Higuchi, Noriko Horibe, Shin-Ichi<br/>Aoqui</i>                                                                                  |      |
| A Basic Study of a Method for Clustering the Gaze Regions of a Program on the Basis of Eye<br>Movement Information During Program Reading.....                                            | 1059 |
| <i>Hidehiko Iwasa, Takuya Akashi, Shuichi Ohno</i>                                                                                                                                        |      |
| Detection of Focal Liver Lesions in CT Images Using a Transformer-Based End-To-End Detection<br>Model .....                                                                               | 1061 |
| <i>Jian Song, Yuchang Hu, Junhao Zhang, Rahul Jain, Yen-Wei Chen</i>                                                                                                                      |      |
| A Multi-Path Global and Local Cycle GAN for Enhancing CT Brain Image Synthesis from MR<br>Brain Images.....                                                                               | 1065 |
| <i>Hidemasa Hayashi, Yutaro Iwamoto, Masahiro Nonaka, Yen-Wei Chen</i>                                                                                                                    |      |
| K-Uniform Hypergraph Reasoning Network for Focal Liver Lesions Classification in Multimodal<br>Magnetic Resonance Imaging .....                                                           | 1069 |
| <i>Shaocong Mo, Ming Cai, Lanfen Lin, Ruofeng Tong, Fang Wang, Qingqing Chen, Hongjie<br/>Hu, Yinhao Li, Yen-Wei Chen</i>                                                                 |      |

|                                                                                                                             |      |
|-----------------------------------------------------------------------------------------------------------------------------|------|
| Knowledge Distillation Using Segment Anything to U-Net Model for Lightweight High Accuracy Medical Image Segmentation ..... | 1073 |
| <i>Xiaoyu Shi, Yinhao Li, Jingliang Cheng, Jie Bai, Guohua Zhao, Yen-Wei Chen</i>                                           |      |
| Age Assessment from Salmon Scale Image Using Continuous Endpoint Connections Based on Resting Zone Structure .....          | 1077 |
| <i>Hao Li, Jiaming Zheng, Genki Suzuki, Hiroyuki Shioya</i>                                                                 |      |
| Evaluation and Comparison of Facial Recognition Technology in Drawn Portraits .....                                         | 1079 |
| <i>Cheng Chang, Yong-Yi Fanjiang, Chi-Huang Hung, Jung-Hua Chen, Kiem-Trinh Phung, Van-Duc Trieu</i>                        |      |
| A System for Mid-Air Images that Follow Real Objects .....                                                                  | 1081 |
| <i>Ryo Sugawara, Naoya Koizumi</i>                                                                                          |      |
| Design and Effectiveness Analysis of an Alarm Clock App to Promote Behavior Change Through Anxiety .....                    | 1083 |
| <i>Yu-Che Cheng, Hsiao-Yue Tsao</i>                                                                                         |      |
| From Individual to Collective: An Interface for Thermal Comfort Management in Smart Buildings .....                         | 1085 |
| <i>Xiao Pu, Takeshi Yashiro</i>                                                                                             |      |
| DynaMap: A Flexible UI Framework for Dynamic Smart Building Environment .....                                               | 1088 |
| <i>Kanata Izumikawa, Takeshi Yashiro</i>                                                                                    |      |
| Exploring the Feasibility of Generative AI Combined with SCAMPER in Design Execution .....                                  | 1092 |
| <i>Ching-Yun Hsu, Chun-Ching Chen</i>                                                                                       |      |
| One-Dimensional CNN Model for Intrusion Detection in Industrial IoT Networks .....                                          | 1094 |
| <i>Naoki Kawamoto, Takeshi Yashiro</i>                                                                                      |      |
| A Method of Synchronous Control for Stream Processing in Digital Twin Environment .....                                     | 1097 |
| <i>Tsuyoshi Uehara, Daisuke Kasamatsu</i>                                                                                   |      |
| Representative Node on Voting Blockchain on for High Secure Mobile Wallet Users .....                                       | 1099 |
| <i>Hironao Takahashi, Uzair Lakhani, Asadullah Soomro, Muhammad Kamran Khan, Muhammad Mubashir Khan, Muhammad Waqar</i>     |      |
| High Performance of Au/MgO/ZnO Metal-Oxide-Semiconductor Ultraviolet Schottky-Barrier Photodiodes .....                     | 1102 |
| <i>Jun-Dar Hwang, Zi-Jun Hong</i>                                                                                           |      |
| Enhanced Illumination-Light VN-CodeSK System with Secret Sharing Scheme .....                                               | 1104 |
| <i>Junya Yada, Yusuke Kozawa, Hiromasa Habuchi</i>                                                                          |      |
| Frame Acquisition Scheme for Optical-Wireless Modified MPPM .....                                                           | 1109 |
| <i>Riku Sakai, Yusuke Kozawa, Hiromasa Habuchi</i>                                                                          |      |
| New Design for CYPHONIC Client Program Supporting Multiple Operating Systems .....                                          | 1114 |
| <i>Guilherme Seidy Ujiie, Yoshiya Suzuki, Kazuki Miyamura, Ryouta Aihata, Hidekazu Suzuki, Katsuhiro Naito</i>              |      |
| Service Separation Scheme for Distributed Processing in InfoFlow .....                                                      | 1119 |
| <i>Kensuke Suzuki, Takafumi Sakai, Ginga Nishimiya, Katsuhiro Naito</i>                                                     |      |

|                                                                                                                                  |      |
|----------------------------------------------------------------------------------------------------------------------------------|------|
| Using a Design Pattern to Build Microservices for Instant Messaging Software to Access IoT Devices .....                         | 1124 |
| <i>Hsin-Yu Huang, Yong-Yi Fanjiang, Hsing-Yu Tsai, Yung-Shiang Huang, Yi-Shiang Yu</i>                                           |      |
| A Networked Virtual Reality System for Real-Time Immersive Learning .....                                                        | 1127 |
| <i>Iwai Wataru, Oorui Tesuhito, Duc V. Nguyen</i>                                                                                |      |
| Virtual Reality Based NIHSS Assessment System Utilizing Design Patterns and SOLID Principles.....                                | 1129 |
| <i>Chien-Hsu Chen, Cian-Yue Liao, Wei-Jung Li, Pi-Shan Sung, Yu-Ming Chang</i>                                                   |      |
| Innovative Survival Skills Training for Children Via Roblox Metaverse.....                                                       | 1134 |
| <i>Worawat Choensawat, Kingkarn Sookhanaphibarn</i>                                                                              |      |
| Empowering Studio Design Pedagogy Through Extended Reality Environment .....                                                     | 1136 |
| <i>Nina Lee, Chien-Hsu Chen</i>                                                                                                  |      |
| Stress Relief Through Voice-Controlled Flappy Bird Gameplay .....                                                                | 1140 |
| <i>Kingkarn Sookhanaphibarn</i>                                                                                                  |      |
| Enhancing the Extended Kalman Filter with Bio-Inspired Algorithms for Battery SOC Estimation.....                                | 1142 |
| <i>Bing-Jie Chen, Chung-Jie Liao, Chun-Ju Li, Hung-Chih Ku, Wei-Lun Yu, En-Jui Liu</i>                                           |      |
| A Numerical Loss Analysis of Grid-Connected Three Phase Inverter Driven Two-Phase PWM Scheme Under High Switching Frequency..... | 1147 |
| <i>Masataka Minami, Tenshin Kamahara</i>                                                                                         |      |
| The Analysis Method Using Deep Learning for Harmonics Generated by Power Conversion Devices .....                                | 1149 |
| <i>Keita Yamamoto, Masakazu Michihira</i>                                                                                        |      |
| Compensation Method for Dead-Time Error Using Drive Signal Delays in Voltage-Fed Inverters.....                                  | 1151 |
| <i>Kotaro Kawano, Shin-Ichi Motegi</i>                                                                                           |      |
| Effects of Age-Related Decline on the Acoustic Characteristics of Daily Conversation.....                                        | 1153 |
| <i>Yumi Wakita, Atsuteru Iida</i>                                                                                                |      |
| Speech Emotion Recognition Based on Linguistic Features of Spoken Language .....                                                 | 1157 |
| <i>Keita Kishi, Kiyohide Sato, Tetsuo Kosaka</i>                                                                                 |      |
| Antispoofing System Based on Synchronization of Speech and Lip Movements for Speaker Verification .....                          | 1161 |
| <i>Shingo Tosaka, Shinichi Kawamoto</i>                                                                                          |      |
| An Evaluation Metric for Single Image-To-3D Models Based on a Class Confidence Score of Object Detection Models .....            | 1163 |
| <i>Yuiko Uchida, Ren Togo, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>                                                      |      |
| MLLM-Based Automatic Exploration of Editing Prompt for High Engagement Image Generation .....                                    | 1165 |
| <i>Kenta Kubota, Ren Togo, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>                                                      |      |
| Personalized Visual Emotion Classification Via In-Context Learning in Multimodal LLM.....                                        | 1167 |
| <i>Ryo Takahashi, Naoki Saito, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>                                                  |      |
| Zero-Shot Controllable Music Generation from Videos Using Facial Expressions .....                                               | 1169 |
| <i>Shilin Liu, Kyohei Kamikawa, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>                                                 |      |

|                                                                                                                                                       |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| A Method for Layer Partitioning and Computation of AI Models Using Multiple MCUs .....                                                                | 1171 |
| <i>Junik Ma, Junho Kwak, Sein Lee, Jeonghun Cho</i>                                                                                                   |      |
| A Digital PSR Flyback Adapter in CCM/DCM with Midpoint Detection .....                                                                                | 1173 |
| <i>Chen Chun Yu, Yu-Qian Hong, Shang-Chien Yang, Ming-Ching Hsu, Chien-Hung Tsai</i>                                                                  |      |
| Integration of AUTOSAR Adaptive Platform with ROS2 Through Network Binding .....                                                                      | 1175 |
| <i>Yeonho Cho, Sein Lee, Jihye Yang, Jeonghun Cho</i>                                                                                                 |      |
| FTM Implementation and Ranging Performance Characterization for Indoor Localization.....                                                              | 1177 |
| <i>Rei Hirata, Atsushi Koizumi, Hiroshi Oguma, Naotaka Sakaguchi, Takenori Sumi, Yukimasa Nagai</i>                                                   |      |
| Privacy-Preserving Vision Transformer Using Images Encrypted with Restricted Random<br>Permutation Matrices.....                                      | 1179 |
| <i>Kouki Horio, Kiyoshi Nishikawa, Hitoshi Kiya</i>                                                                                                   |      |
| Multimodal Adversarial Defense Trained on Features Extracted from Images and Brain Activity.....                                                      | 1183 |
| <i>Tasuku Nakajima, Keisuke Maeda, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>                                                                        |      |
| Visualizing Virtual Embedded Systems: Enhancing Renode with Interactive Board Simulations.....                                                        | 1185 |
| <i>Jehong Jeon, Hyeongrae Kim, Jeonghun Cho</i>                                                                                                       |      |
| Intelligibility Improvement of Tollgate Call Communication Using Noise Canceller with RLS<br>Method .....                                             | 1187 |
| <i>Mamoru Iwaki, Daiki Goto</i>                                                                                                                       |      |
| Transformer-Based Inverse Halftoning with Attention Mechanism for Halftone Image<br>Reconstruction.....                                               | 1189 |
| <i>Wang-Han Lee, Pin-Tzu Huang, Li-Wei Kang</i>                                                                                                       |      |
| UAV Video Surveillance System Compliant with WoT Standard .....                                                                                       | 1191 |
| <i>Junya Yamamoto, Shigeyuki Sakazawa</i>                                                                                                             |      |
| HEVC Image Evaluation and Analysis Between Contrast and Rotation Based on Material Data Set<br>of the Shitsukan Perception Standard Problem.....      | 1193 |
| <i>Norifumi Kawabata</i>                                                                                                                              |      |
| Deep Learning-Based Point Cloud Compression with Optimization by Point Density Ratio.....                                                             | 1195 |
| <i>Hideaki Kimata</i>                                                                                                                                 |      |
| Deconvolution of 3D Data Measured by FMCW LiDAR Based on Image Sensor Under Influence<br>of Spatially Inhomogeneous Frequency Modulation.....         | 1197 |
| <i>Nobuhide Yokota, Masato Ohira, Hideyuki Takahashi, Kazuya Sugiyasu, Hiroshi Inokawa, Hiroshi Yasaka</i>                                            |      |
| Verification of Reproducibility and Analysis of Factors Leading to Realization of MR Disaster<br>Prevention Training Considering Cognitive Bias ..... | 1199 |
| <i>Ryusei Okuda, Haruto Domoto, Takahiro Uchiya, Ichi Takumi</i>                                                                                      |      |
| Design of Dynamic Connection Switching Control Function Based on Coordination of Mini-<br>Drones .....                                                | 1201 |
| <i>Hideyuki Takahashi, Miduki Watanabe, Koto Tanita, Kazuya Sugiyasu, Nobuhide Yokota</i>                                                             |      |
| Core Training System with Real-Time Voice Feedbacks Based on OpenPose.....                                                                            | 1203 |
| <i>Tokumi Hashimoto, Naoyuki Morimoto</i>                                                                                                             |      |

|                                                                                                                          |      |
|--------------------------------------------------------------------------------------------------------------------------|------|
| An Interaction Model for E-Coaching Systems Harmonizing Human and Digital Habit Coaches .....                            | 1205 |
| <i>Ken Ohta, Sanshin Iwama</i>                                                                                           |      |
| Web-App Based Melanoma Skin Cancer Classification Through Streamlit and Deep Learning.....                               | 1210 |
| <i>Muhammad Rizki Satria, Yulia Sufani, Kahlil Muchtar, Fathurrahman Fathurrahman, Yunida Yunida</i>                     |      |
| Development of an Automated Eye Drop System Using Games.....                                                             | 1212 |
| <i>Miu Moritani, Kazutaka Kurihara</i>                                                                                   |      |
| Hypnagogia Low Arousal Clock for Reducing Sleep Disruption with IoT Environmental Monitoring.....                        | 1214 |
| <i>Chun-Wei Chang, Ko-Chiu Wu</i>                                                                                        |      |
| Design and Implementation of Elders Lifestyle Assistance System with ChatBot and Retrieval Augmented Generation.....     | 1216 |
| <i>Yi-Shiun Lee, Tung-You Hsu, Yu-Chun Chen, Chia-Hsun Hsu, Yung-Wei Lin</i>                                             |      |
| Quantitative Evaluation of Blind Spot Prediction Using Semantic Segmentation and Monocular Depth Estimation.....         | 1218 |
| <i>Da Li, Takumi Tsukamoto, Koushun Hayashi, Shintaro Ono</i>                                                            |      |
| Protecting In-Vehicle Communication with Dynamic Access Control for Next-Generation Vehicles .....                       | 1222 |
| <i>Shi-Cho Cha, Shih-Chuan Yang, Wen Wei Li, Kuan-Yu Chen</i>                                                            |      |
| Local DGNSS Scheme for Accurate Inter-Vehicle Distance Estimation by Using Two Receivers Mounted on Single Vehicle.....  | 1224 |
| <i>Shota Matsumura, Hiroyuki Hatano, Kosuke Sanada, Kazuo Mori</i>                                                       |      |
| One-Hop On-Demand WSN Based on Multi-Carrier CDMA with Orthogonal M-Sequences .....                                      | 1229 |
| <i>Shin Hirayama, Yusuke Kozawa, Hiromasa Habuchi</i>                                                                    |      |
| A Facial Sentiment Analysis Method for Comfortable Cycling .....                                                         | 1234 |
| <i>Hiroto Nakagawa, Ryoki Takemura, Da Li, Shintaro Ono</i>                                                              |      |
| Pedestrian-Vehicle Collision Avoidance Support System Using Multiple Pedestrian Motion .....                             | 1237 |
| <i>Tomotaka Wada, Hikaru Shimada, Sota Uchida</i>                                                                        |      |
| Sequential Wireless Power Transfer from Multiple Sets of On-Vehicle Fixed Beamformers for Radiation Power Reduction..... | 1239 |
| <i>Masaaki Fujii, Chuting Wang, Naoki Tsuji, Shigemi Masuda</i>                                                          |      |
| Ultra-Spot Detection Using Multiple Wi-Wi Devices for mmWave/THz UAV-UAV Communications.....                             | 1241 |
| <i>Phuc Duc Nguyen, Ryosuke Isogai, Satoshi Yasuda, Nobuyasu Shiga, Yoshito Okada, Yozo Shoji</i>                        |      |
| Resource Assignment Based on Deep Neural Networks for MUDiv/OFDMA.....                                                   | 1243 |
| <i>Seiha Homma, Shunsuke Tsumori, Yuta Ida, Yasuaki Ohira, Sho Kuroda, Takahiro Matsumoto</i>                            |      |
| Evaluation of Migration Methods for High Transmission Rate Nodes in RPL .....                                            | 1245 |
| <i>Yuki Kawashima, Yukimasa Nagai</i>                                                                                    |      |
| Direction Finding Based on Principal Component Analysis for Planar Antenna Array .....                                   | 1247 |
| <i>Masaaki Fujii</i>                                                                                                     |      |

|                                                                                                                                                    |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------|
| IRS Controlling Method with Machine Learning Based on Position Information .....                                                                   | 1249 |
| <i>Yoshihiko Tsuchiya, Norisato Suga, Kazunori Uruma, Masaya Fujisawa</i>                                                                          |      |
| Towards ECHONET Lite Web API as a RESTful API for Matter Devices.....                                                                              | 1251 |
| <i>Van Cu Pham, Tao Xin, Toan Nguyen-Mau, Gia Duc Le Trong, Yasuo Tan</i>                                                                          |      |
| OpenAPI-Driven Development of ECHONET Lite Web API Servers for Distributed Energy<br>Resource Management .....                                     | 1253 |
| <i>Hiroshi Kawazoe, Takaomi Murakami, Takeshi Sakoda, Tomonori Maegawa, Keiichi<br/>Teramoto, Takeshi Saito</i>                                    |      |
| Research on Changes in Power Consumption by Residential Attributes Using Data from Home<br>Energy Manegement System Linked with ECHONET Lite ..... | 1255 |
| <i>Yuya Tanaka, Masato Oota, Kaoru Taisa</i>                                                                                                       |      |
| Optimized Battery Controlling for Smart Homes with Dynamic Insensitive-Zone Adjustment .....                                                       | 1257 |
| <i>Lo Pang-Yun Ting, Yu-Hao Chiang, Yu-Hsiang Chang, Michihiro Konagai, Kun-Ta Chuang</i>                                                          |      |
| A Study of Remote Control Methods for Heterogeneous Smart Home Devices .....                                                                       | 1260 |
| <i>Ryosei Takaki, Seiya Komonguchi, Hidekazu Suzuki</i>                                                                                            |      |
| A Simplified Simulated Annealing Algorithm and Its Implementation.....                                                                             | 1262 |
| <i>Wu-Hsun Chu, Yuan-Ho Chen</i>                                                                                                                   |      |
| Proposing the Blend Pixel Algorithm(BPA) for Enhancing 2D Image Quality of CartoonGAN .....                                                        | 1265 |
| <i>Stellar Choi, Youmin Jung, Minseo Kim, Liang Li, Hyunsook Lee, Woong Choi</i>                                                                   |      |
| Developing a Three-Dimensional Motion Data Analysis System Using the Hilbert-Huang<br>Transform .....                                              | 1267 |
| <i>Seungmin Jeon, Hyunsoo Shin, Jungho Ahn, Haejong Joo, Liang Li, Woong Choi</i>                                                                  |      |
| Application of ChatGPT-Integrated NPCs to Enhance Virtual Reality Brainstorming .....                                                              | 1271 |
| <i>Xin-Kai Lin, Chih-Wei Shiu, Nai-Yuan Pai</i>                                                                                                    |      |
| Development of a Cryptocurrency Futures Trading System Based on High and Low-Price Data<br>Using LSTM.....                                         | 1273 |
| <i>Minseok Choi, Haejong Joo, Liang Li, Woong Choi</i>                                                                                             |      |
| Analysis of Law-Abiding Behavior in the Metaverse Applied Real-World Traffic Regulations.....                                                      | 1275 |
| <i>Minwoo Yun, Haejong Joo, Liang Li, Woong Choi</i>                                                                                               |      |
| Generalizing Listening Human Behavior: 3D Human Pose Estimation Using Music .....                                                                  | 1277 |
| <i>Ren Nakamura, Yutaro Hirao, Monica Perusquia-Hernández, Hideaki Uchiyama, Kiyoshi<br/>Kiyokawa</i>                                              |      |
| Does In-Bed Airflow to the Feet Improve Postural Balance After Waking?: Aiming to Reduce<br>Fatigue.....                                           | 1279 |
| <i>Hazuki Masuda, Shima Okada, Masanobu Manno, Aoki Taizo, Hiroshi Maruyama, Zhou<br/>Shuzhen</i>                                                  |      |
| Fractional Heat Kernel Smoothing Using Fractional Order Graph Laplacian Matrix .....                                                               | 1281 |
| <i>Chien-Cheng Tseng, Su-Ling Lee</i>                                                                                                              |      |
| Development of a String Transfer Assist Device for Electric Bass Picking .....                                                                     | 1283 |
| <i>Ryo Marutsuka, Kazuki Tsurumi, Gou Koutaki</i>                                                                                                  |      |

|                                                                                                                                                   |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Predicting Win Conditions of Counter-Strike: Global Offensive for Analyzing Round Progression .....                                               | 1287 |
| <i>Masaharu Hirota</i>                                                                                                                            |      |
| Identification of Trained VQVAE Models by Watermarking .....                                                                                      | 1289 |
| <i>Masato Takimoto, Shigeyuki Sakazawa</i>                                                                                                        |      |
| GFT Centrality Computation Based on Laguerre Polynomial Graph Filtering Method.....                                                               | 1291 |
| <i>Su-Ling Lee, Chien-Cheng Tseng</i>                                                                                                             |      |
| Enhancing Self-Management Skills Through PE e-Learning Packages .....                                                                             | 1293 |
| <i>Manatsawi Kaeduang, Rungrawee Samawathdana, Suthana Tingsabhat, Termetch Sookhanaphibarn, Kanitpitchaya Autthamathitapakdee</i>                |      |
| Development and Evaluation of a Navigation System for Mobile Devices Using Vibration<br>Positional Information .....                              | 1295 |
| <i>Daichi Watanabe, Tatsuo Nakajima</i>                                                                                                           |      |
| Virtual Reconstruction and Geometric Comparison of Hagi and Nirayama Reverberatory Furnaces,<br>the World Heritage Sites, by Photogrammetry ..... | 1298 |
| <i>Shintaro Ono, Yusho Ura, Da Li</i>                                                                                                             |      |
| An LED Lighting Sharing Method for Multi-User Spatially Parallel Signal Transmission in Visible<br>Light Wireless Communications .....            | 1302 |
| <i>Yusei Hosokawa, Shigeru Tomisato, Satoshi Denno, Kazuhiro Uehara</i>                                                                           |      |
| Biometric Identification Technique Using Video Plethysmography Captured in the Palm Area .....                                                    | 1306 |
| <i>Takanori Terai, Norihiro Sugita, Shuma Matsuzaki, Makoto Yoshizawa</i>                                                                         |      |
| Deepfake Detection with NAND Logic Using Two Region Watermarking .....                                                                            | 1308 |
| <i>Sotaro Kuwahara, Shunsuke Arai, Yuma Kawachi, Hyunho Kang</i>                                                                                  |      |
| Toward Three-Dimensional Surface Texture Display: Recognition Characteristics of Bumps and<br>Dents Presented by Friction.....                    | 1313 |
| <i>Mirai Azechi, Shogo Okamoto</i>                                                                                                                |      |
| Development of a Digital Planisphere for Both Sighted and Visually Impaired People .....                                                          | 1316 |
| <i>Kota Suzuki, Keita Ushida, Qiu Chen</i>                                                                                                        |      |
| Effects of Human Affection and Human-Like Behavior in Short Cat Videos .....                                                                      | 1318 |
| <i>Apavee Prachapokpong, Yi-Ting Huang</i>                                                                                                        |      |
| AI-Aided Adaptive Guidance System for Visually Impaired People with Mobile-Based Sensing .....                                                    | 1320 |
| <i>Woojin Park, Hyeyoung An, Soochang Park, Yongmi Lee, Hyeonah Cho, Eunseon Jeong</i>                                                            |      |
| Interactive Museum Kiosk for Visualizing Visitor Activities .....                                                                                 | 1322 |
| <i>Nobuyuki Umezu, Saku Nishida</i>                                                                                                               |      |
| Interactive Floor Projection in a Museum for Learning Small Creatures.....                                                                        | 1325 |
| <i>Nobuyuki Umezu, Koki Nakagawa</i>                                                                                                              |      |
| Reconfigurable Intelligent Surface Aided Generalized Spatial Modulation Based Multiuser<br>MmWave MISO Systems .....                              | 1328 |
| <i>Chia-Chang Hu, Te-Yu Yang, Po-Kuan Liao, Yun-An Yang</i>                                                                                       |      |
| A 69 – 79 GHz Low Noise Amplifier with Coupled-Lines in 90-Nm CMOS Process.....                                                                   | 1330 |
| <i>Yen-Chung Chiang, Ting-Ju Chang, Li-Wu Ku</i>                                                                                                  |      |

|                                                                                                                                                      |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Decoupled Hybrid Analog/Digital Design for Multiuser Uplink Massive MIMO-OFDM Systems .....                                                          | 1332 |
| <i>Yinman Lee, Xiaozhun Gong</i>                                                                                                                     |      |
| Widening Radiation Angle for Patch Antennas with Multilayered Printed Circuit Board.....                                                             | 1334 |
| <i>Yoshinori Sasaki, Fukuro Koshiji</i>                                                                                                              |      |
| Fingerprint-Based Indoor Localization for MmWave System with Reconfigurable Intelligent Surface.....                                                 | 1336 |
| <i>Souichirou Tada, Haruya Mushiake, Takama Kaito, Yafei Hou, Satoshi Denno</i>                                                                      |      |
| Identification Method of Channel Model Based on CNN Considering AWGN.....                                                                            | 1338 |
| <i>Toshiki Hirabe, Yuta Ida, Yasuaki Ohira, Sho Kuroda, Takahiro Matsumoto</i>                                                                       |      |
| Building a Crop Environmental Data Monitoring System Using Blockchain-Based Smart Contracts .....                                                    | 1340 |
| <i>Nayoung Jung, Hyunwoo Kang, Liang Li, Woong Choi</i>                                                                                              |      |
| Different Lighting Environment Simulation Using Illuminant Estimator and Linear Color Correction.....                                                | 1342 |
| <i>Jason Gerald Sutanto, Chuan-Kai Yang</i>                                                                                                          |      |
| A Method for Estimating the Direction of Maximum Radiated Energy from Singing Signals Obtained by Distant Sensing with Distributed Microphones ..... | 1344 |
| <i>Toru Takahashi, Taiki Kanbayashi, Kotaro Fukuda, Shintaro Matsumoto, Masato Nakayama</i>                                                          |      |
| Processing Flow for Realization of Multi-Channel Spatial Acoustics Using Parametric Speakers.....                                                    | 1349 |
| <i>Akito Fukuda, Hyuma Auchi, Yuta Yamauchi, Homura Kawamura, Keiichi Zempo</i>                                                                      |      |
| Automatic Drum Velocity Control Considering the User's Piano Performance.....                                                                        | 1353 |
| <i>Shinnosuke Seki, Tetsuro Kitahara</i>                                                                                                             |      |
| User Interface for Natural Voice Quality of Alaryngeal Speech.....                                                                                   | 1357 |
| <i>Etsuki Onodera, Naoto Wakatsuki, Tadashi Ebihara, Yuka Maeda</i>                                                                                  |      |
| Physical Modeling Simulation of a Recorder Using a Model Allowing Overall Jet Deflection.....                                                        | 1361 |
| <i>Seiji Adachi</i>                                                                                                                                  |      |
| Evaluation of Oscillation Characteristics by Changing Cross-Sectional Area Profiles of Brass Instruments with Numerical Simulation .....             | 1363 |
| <i>Ukyo Inomata, Naoto Wakatsuki, Tadashi Ebihara, Yuka Maeda</i>                                                                                    |      |
| Phase Noise Compensation with Time Window Averaging for WHT-CTFI-OFDM.....                                                                           | 1368 |
| <i>Shumpei Okamoto, Yuta Ida, Yasuaki Ohira, Sho Kuroda, Takahiro Matsumoto</i>                                                                      |      |
| Code Tracking System Design of Optical-Wireless Code Shift Keying with Concatenated MPOMs .....                                                      | 1370 |
| <i>Norito Baba, Hiromasa Habuchi, Nobuyoshi Komuro</i>                                                                                               |      |
| Study on a Deep Learning Based Demodulation for the Optical M-Ary/SS System .....                                                                    | 1375 |
| <i>Yasuaki Ohira, Shun Hamaguchi, Takahiro Matsumoto, Hideyuki Torii, Yuta Ida</i>                                                                   |      |
| Estimation of Electron Content in the Ionosphere and GPS Receiver Biases for Accurate Positioning.....                                               | 1377 |
| <i>Naoki Sasa, Takahiro Uchiya, Ichi Takumi</i>                                                                                                      |      |
| Route Weight Packet Splitting Transmission for Multi-Hop Cooperative OFDM .....                                                                      | 1379 |
| <i>Yoshiaki Hayashi, Yuta Ida, Yasuaki Ohira, Sho Kuroda, Takahiro Matsumoto</i>                                                                     |      |

|                                                                                                           |      |
|-----------------------------------------------------------------------------------------------------------|------|
| Trajectory Optimization for Multiple Aerial Base Stations for Spatiotemporal Traffic Demand Changes ..... | 1381 |
| <i>Maki Kozaki, Takeshi Hirai, Naoki Wakamiya</i>                                                         |      |
| Mini-LED Based on LEDNet Image Enhancement Network.....                                                   | 1383 |
| <i>Yu-Cheng Fan, Jian-Ping Wang, Ya-Wen Yang, Ching-Min Lee</i>                                           |      |
| Mission Planning Framework for Hydrogen Fuel-Cell UAVs.....                                               | 1385 |
| <i>Wen-Hsing Kuo, Ka-Fung Tong, Tze-Kit Yik, Wei-Yu Lin</i>                                               |      |
| An Edge AI System Based on FPGA Platform for Railway Fault Detection .....                                | 1387 |
| <i>Jiale Li, Yulin Fu, Dongwei Yan, Sean Longyu Ma, Chiu-Wing Sham</i>                                    |      |
| A Framework for Mapping Convolutional Neural Network onto Memristor Crossbars .....                       | 1390 |
| <i>Jiale Li, Yulin Fu, Chiu-Wing Sham, Sean Longyu Ma</i>                                                 |      |
| MTST: A Multi-Task Scheduling Transformer Accelerator for Edge Computing .....                            | 1394 |
| <i>Zongcheng Yue, Dongwei Yan, Ran Wu, Longyu Ma, Chiu-Wing Sham</i>                                      |      |
| Integrating Eye-Tracking in Games: Enhancing Player Experience and Understanding Social Gaze Issues ..... | 1396 |
| <i>Yu He, Shiwei Xie, Han Zhang, Yang Guanghui Dai</i>                                                    |      |
| E-Quality: Neutral Lotteries with Multiple Time-Release Cryptography on Blockchains .....                 | 1401 |
| <i>Kazune Takahashi</i>                                                                                   |      |
| Lightweight Deep Learning Model and Genetic Algorithm Based Optimal Phishing Website Detection .....      | 1403 |
| <i>Brij B. Gupta, Akshat Gaurav, Priyanka Chaurasia, Kwok Tai Chui</i>                                    |      |
| A Color Transfer Method for Simulating Kimono Dyeing.....                                                 | 1405 |
| <i>Tsuyoshi Matsuoka, Kazuhiro Fujita, Shinya Oketani</i>                                                 |      |
| Developing a Security Testbed for International Organization for Standardization 15118-2 .....            | 1407 |
| <i>Wen Wei Li, Kuan-Yu Chen, Yi-Chen Zheng, Shi-Cha Cha</i>                                               |      |
| Balancing Feature Imitation and Knowledge Consistency for Improving Anomaly Detection.....                | 1409 |
| <i>Zi Wang, Katsuya Hotta, Kohei Nakazawa, Chao Zhang, Jun Yu</i>                                         |      |
| Defending Against GCG Jailbreak Attacks with Syntax Trees and Perplexity in LLMs.....                     | 1411 |
| <i>Qiuyu Chen, Shingo Yamaguchi, Yudai Yamamoto</i>                                                       |      |

## Author Index