

2023 International Conference on Consumer Electronics - Taiwan (ICCE-Taiwan 2023)

**PingTung, Taiwan
17-19 July 2023**

Pages 1-430



**IEEE Catalog Number: CFP23CCC-POD
ISBN: 979-8-3503-2418-1**

**Copyright © 2023 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:	CFP23CCC-POD
ISBN (Print-On-Demand):	979-8-3503-2418-1
ISBN (Online):	979-8-3503-2417-4
ISSN:	2575-8276

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
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Arousal and Emotional Valence-Level Estimations Using Non-Contact Environmental Sensing	1
<i>Tsumugi Isogami, Nobuyoshi Komuro</i>	
A Disaster Rescue Support System with 3D GIS and Robot Captured Data.....	3
<i>Shih-Ying Lin, Chi-Chang Li, Ze-Yi Wei, Chih-Hsien Chi, Jiann-Yeou Rau, Wei-Guang Teng, Ting-Wei Hou</i>	
Design and Building of P4 Programmable Network Testbed and Reservation System on TWAREN	5
<i>Wun-Yuan Huang, Ta-Yuan Chou, Nai-Yuan Hu, Hui-Min Tseng, Te-Lung Liu</i>	
Using Finger for Smart Home Applications	7
<i>Rung-Ching Chen, Wei-Kai Chao, William Eric Manongga</i>	
Applying Ant Colony Optimization Algorithm to Solve Flying Probe Inspection Problem.....	9
<i>Chih-Yung Chen, Yu-Ming Chang</i>	
The Efficient Cluster Head Selection for NarrowBand Internet of Things.....	11
<i>Shih-Yun Huang, Shou-Yu Lee, Tin-Yu Wu, Yao-Chung Chang, Han-Chieh Chao</i>	
Using Wearable Sensors to Study the Brain-Heart Interactions During Attentional and Resting States	13
<i>Jia-Jeng Lee, Chun - Chuan Chen, Eric Hsiao-Kuang Wu, Shih-Ching Yeh, Wei-Jen Wang</i>	
TNP: A Step Towards Elastic Training.....	15
<i>Li-Chung Yeng, Wei-Tsong Lee, Hsin-Wen Wei</i>	
Real-Time Dynamic Sign Language Recognition Using LSTM Based on MediaPipe Hand Data	17
<i>Hyeonsoo Yoo, Igor Goncharenko, Yanlei Gu</i>	
Effects of Different Candies and Color Variations in Mukbang ASMR on Visual Attention and Emotion	19
<i>Yi-Ting Huang, Wen-Tzu Lee</i>	
Emotion Wheel: Getting Feedback Through Mobile Application After Children Reading Books.....	21
<i>Han Chung, Ko-Chiu Wu</i>	
Development of a Transmissive LED Touch Display for Engineered Marble	23
<i>Chihiro Ura, Hiroshi Kano, Shigeyuki Hirai</i>	
The Influence of Different Visual Cues of Women's Bags on Consumers' Attention	25
<i>Yi-Ting Huang, Chi-Yuan Lin</i>	
Exploring Parental Decision Factors for Purchasing Interactive Picture Books on Tablets	27
<i>Chih-Ying Chen, Bo Liu, Zhao Liu, Xiaofang Li</i>	
CPU Clock Rate Control Based on ART Application Behavior Monitoring Without JIT	31
<i>Kota Kumakura, Takeshi Kamiyama, Masato Oguchi, Saneyasu Yamaguchi</i>	
Indoor Walking Trajectory Estimation Method Using Mobile Device Sensors.....	33
<i>Yuta Izutsu, Nobuyoshi Komuro</i>	
Design of Improved Path Planning Algorithm for Realistic Roads.....	35
<i>Chi-Hsun Lee, Chang-Yi Li, Cheng-Yuan Chang</i>	

Scheduling System in Vehicular Microclouds	37
<i>Bo-Jun Qiu, Jyh-Cheng Chen</i>	
A Note on Discriminator Updating Method Based on Weights of Other Models and Its Verification	39
<i>Kota Uenishi, Masahiro Yagi, Sho Takahashi, Toru Hagiwara</i>	
Concept Identification Visualizer (CIV) Using Knowledge Tracing.....	41
<i>Hui-Jun Huang, I-Wei Lai</i>	
Positioned Quality Evaluation of Posterior Breast by Consensus Decision-Making from Multi-Candidate Classification Results	43
<i>Yi-Chong Zeng, Yu-Hao Chen</i>	
Classification and Model Interpretation of Mammography Positioned Quality for Posterior Breast.....	45
<i>Yi-Chong Zeng</i>	
Hybrid Vision Transformer for Classification of Pancreatic Cystic Lesions on Confocal Laser Endomicroscopy Videos	47
<i>Clara Lavita Angelina, Yi Kai Chou, Tsung-Chun Lee, Pradermchai Kongkam, Ming-Lun Han, Hsiu-Po Wang, Hsuan-Ting Chang</i>	
Fraudulent User Detection with Time-Enhanced Graph Neural Networks on E-Commerce Platforms	49
<i>Yen-Wen Lu, Cheng-Te Li</i>	
A Data Monitoring System with Human Action Recognition for Long-Term Care Institutions	51
<i>Yuan-Heng Lin, Yi-Hsing Chien, Min-Jie Hsu, Wei-Yen Wang, Cheng-Kai Lu, Chen-Chien Hsu</i>	
Image-To-Action Translations Based Object Grasping Strategy Without Depth Information and Robot Kinematics Analysis	53
<i>Yu-Wei Lin, Yi-Hsing Chien, Min-Jie Hsu, Wei-Yen Wang, Cheng-Kai Lu, Chen-Chien Hsu</i>	
Smart Manufacturing Security Challenges and Solutions	55
<i>Yu-Shan Hsu, Ming-Hour Yang, I-An Lin, Yao-Yang Tsai</i>	
Hierarchical Charging Vehicles Scheduling Algorithm in Wireless Rechargeable Sensor Networks	57
<i>Bhargavi Dande, Chih-Yung Chang, Yu-Ting Yang, Qiaoyun Zhang</i>	
A Fine-Grained Scheduling Based on GPU Sharing for Deep Learning Jobs on the Cloud	59
<i>Wu-Chun Chung, Jyun-Sen Tong</i>	
A Group Recommendation System for Movies Using Deep Learning.....	61
<i>Wen-Hwa Liao, Yu-Tuan Lin, Chen-Yang Lin, Ssu-Chi Kuai</i>	
Research on Full-Text Recommendation System Based on Language Technology Applied in Library.....	63
<i>Ssu-Chi Kuai, Yun-Chien Lan, Wen-Hwa Liao</i>	
Smart Bracelet Based on the Internet of Things	65
<i>Zhijie Hu, Chih-Yung Chang, Ruibing Shen, Shih-Jung Wu, Di Hou</i>	
Design and Implementation of the Crib Monitoring System.....	67
<i>Zhijie Hu, Chih-Yung Chang, Ruibing Shen, Shih-Jung Wu, Di Hou</i>	
Design of QR Code Tracking Car Based on Monocular Vision	69
<i>Ruibing Shen, Chih-Yung Chang, Zhijie Hu, Shih-Jung Wu, Di Hou</i>	

Using Patent Mining to Explore the Impacts of Patent Intensity and Diversity on the Enterprise's Financial Performance.....	71
<i>Deng-Neng Chen, Chia-Yu Lai, Tzu-Ying Yang, Yi-Hung Liao</i>	
TARFlow: A Workflow System for Text Analytics and Retrieval	73
<i>Yi-Hang Tsai, Chia-Ming Chang, San-Yih Hwang</i>	
Identical Twins Verification with Fine-Grained Recognition	75
<i>Chih-Chung Hsu, Pi-Ju Tsai</i>	
Prioritized Transmission Enhancement Based on Time Sensitive Networks and Industrial Digital Twins	79
<i>Chao-Hsien Lee, Tsu-En Huang</i>	
Vehicles of Everything Combined Yolov7 with Traffic Enforcement Camera on the Roadside System	81
<i>Wei-Ting Tai, Chien-Hao Pan, Van-Khoa Pham, Yung-Yeh Lin, Chi-Chia Sun</i>	
Survival Game Assisted Tactical Helmets	83
<i>Zhe-Xuan Su, Wei-Chang Zeng, Guo-Siang Pan, Chi-Chia Sun</i>	
3D Large Scene Semantic Segmentation System	85
<i>Yu-Cheng Fan, Wei-Zhe Yan, Yu-Sheng Liu</i>	
Study on CuO Thin Film Dopamine Biosensor Modified by Tungsten Trioxide Nanoparticles by Non-Enzyme Potentiometric Method.....	87
<i>Wei-Shun Chen, Jung-Chuan Chou, Po-Hui Yang, Chih-Hsien Lai, Po-Yu Kuo, Yu-Hsun Nien, Ying-Sheng Zhang, Che-Tsung Chan, Tai-Hui Wang, Jyun-Ming Huang, Ming-Tai Hsu, Chi-Han Liao, Hao-Jun Hu</i>	
An Enzymatic MgO Film Glucose Sensor and Potentiometric Sensing Measurement	89
<i>Jyun-Ming Huang, Po-Hui Yang, Jung-Chuan Chou, Chih-Hsien Lai, Po-Yu Kuo, Yu-Hsun Nien, Ying-Sheng Zhang, Che-Tsung Chan, Tai-Hui Wang, Wei-Shun Chen, Ming-Tai Hsu, Chi-Han Liao, Hao-Jun Hu</i>	
Measurement of Uric Acid by Enzyme Potentiometric a-IGZO Thin Film Biosensor.....	91
<i>Hao-Jun Hu, Po-Hui Yang, Jung-Chuan Chou, Chih-Hsien Lai, Po-Yu Kuo, Yu-Hsun Nien, Ying-Sheng Zhang, Che-Tsung Chan, Tai-Hui Wang, Jun-Ming Huang, Ming-Tai Hsu, Chi-Han Liao, Wei-Shun Chen</i>	
System Integration and Optimization of AI Hardware Acceleration Architecture for Object Detection	93
<i>Chung-Bin Wu, Yi-Yen Lai, Yen-Ren Hou</i>	
TCB Convolution: Ternary-Coded Binarized Convolutions with Fixed-Point Filters.....	95
<i>Ting-Yu Chen, Zong-Yu Wang, Tsung-Chu Huang</i>	
Redundant Lagrange Interpolation for Fault-Tolerant Winograd Convolution	97
<i>Che Lin, Heng Hsu, Tsung-Chu Huang</i>	
An Efficient Convolutional Neural Network Accelerator.....	99
<i>Yeong-Kang Lai, Zheng-Xun Yeh</i>	
Worksite Injury Prevention Through Automatic Mental Fatigue Detection.....	101
<i>Yenming J. Chen, Wen-Hsien Ho</i>	

An Improved Optimization Algorithm to Find Suitable Technical Indicators for Identifying Low-Risk Trading Signals.....	103
<i>Chun-Hao Chen, Chun-Yeh Huang, Meng-Shiuan Pan</i>	
Considerations of Charging Vehicles and Environmental Charging in Sensor Deployment Problems	105
<i>Chien-Fu Cheng, Wen-Hao Lin, Chi-Yi Lin</i>	
Prior-Guided Parallel Residual Bi-Fusion Network in USV Obstacle Detection	107
<i>Chih-Chung Hsu, Sophia Yang, Xiu-Yu Hou, Yu-An Jhang</i>	
Design of Operation and Monitoring Architecture of Content Delivery Network Service	111
<i>Ta-Yuan Chou, Hui-Min Tseng, Wun-Yuan Huang, Nai-Yuan Hu, Te-Lung Liu</i>	
Exploring Data Analytics to Identify Time-Dependent Factors of Emergency Department Crowding.....	113
<i>Wun-Ci Huang, Wei-Guang Teng, Chih-Hsien Chi, Ting-Wei Hou</i>	
Gurobi Optimization for 5GC Refactoring.....	115
<i>Yun-Fan Huang, Wei-Kuo Chiang</i>	
Research on Interaction Between Dancers' Motion Capture and Robotic Arm.....	117
<i>Po-Chih Lin, Feng-Cheng Lin</i>	
A Real-Time Embedded System on Behavioral Recognition of Students in Classroom.....	119
<i>Zhe-Wei Sun, Feng-Cheng Lin</i>	
Implementation of Multi-Process Automatic Loading and Unloading Production System.....	121
<i>Li-Chiuan Tung, Shu-Hung Chen, Yu-Cheng Ye, Guan-Zhi Liu, Lin-Yin Chen, Yu-Rou Tu, Yen-Wen Lai, Jeng-Dao Lee</i>	
Wire Break Prediction and Avoidance Technique for Wire Electrical Discharge Machining.....	123
<i>Ping-Cheng Hsieh, Wei-Bo Lin</i>	
Prototype of a Smart Agricultural Vehicle for Pineapple Flower Induction	125
<i>Kun-Cheng Huang, Ya-Rung Tsai, Ming-Fong Tsai</i>	
Action Recognition with Multiple People Using Long Short-Term Memory	127
<i>Hsiang-Wen Lee, Shu-Lin Hsieh, Ming-Fong Tsai</i>	
Smart System for the Identification of Fruit Quality and Prototype Implementation of an Honest Store	129
<i>Jhih-Yu Wang, Ya-Rung Tsai, Ming-Fong Tsai</i>	
Designing Multi-Class Classifiers for Sub-MA Microcontroller Platforms	131
<i>Qihui Sun, Mei-Lan Lin, Chia-Heng Tu</i>	
Lightweight CNN Hardware Accelerator Using the Ternary Quantization Method for Fault Diagnosis of CNC Machinery	133
<i>Ching-Che Chung, Yu-Pei Liang, Jo-Chen Huang</i>	
A Web-Based UAV Control System for Intuitive Human-Drone Interaction	135
<i>Cheng-I Lin, Ya-Yun Chang, Kuan-Ting Lai</i>	
IoT Guardian Drones	137
<i>Chung-Ying Ho, Zong-Ming He, Chien-Hung Lai, Yuh-Shyan Hwang, Kuan-Ting Lai</i>	

Field Monitoring System for Frost Damage Warning and Quality Difference Analysis of Tea Leaves.....	139
<i>Shunsuke Mukai, Satoshi Ohtake</i>	
Ureka: A Decentralized and Secure System for Managing Personal IoT Devices.....	141
<i>Yi-Chun Yang, Ren-Song Tsay</i>	
Hybrid Cloud Energy Management for Edge Computing	143
<i>Ming-Yen Wu, Chung-Jhih Tsai, Wan-Ting Su, Sian Ciou, Yu-Shuo Lee, Chien-Hua Lee</i>	
Real-Time Human Activity Recognition for VR Simulators with Body Area Networks	145
<i>Yun-Chieh Fan, Chih-Yu Wen</i>	
LoRa-Based Hierarchical Network Architecture for IoT Indoor Positioning Applications	147
<i>Chia-Yu Wang, Meng-Zhe Zhong, Sheng-Chung Wang, Robert Chen-Hao Chang, Chih-Yu Wen</i>	
Fusing mmWave and RGBD Sensor for Vitalsign Detection in Sleep and Respiratory Applications	149
<i>Sheng-Hsien Hsieh, Yuh-Jiuan Tsay, Ya-Yun Huang, Yu-Wei Chen, Yu-Xuan Yu</i>	
POEM: Proactive Over-Exercise Monitoring	151
<i>Zhenyu Mao, Jialong Li, Kenji Tei</i>	
MentBot: A Repository for Mental Health Disorders*	153
<i>Shaidah Jusoh, Rabiah Abdul Kadir, Hejab Al Fawareh</i>	
VR First Aid: Step by Step Development Process*	155
<i>Shaidah Jusoh, Narmeen Al-Hiyari</i>	
Teaching at the Right Moment: A Generative AI-Enabled Bedtime Storybook Generation System Communicating Timely Issues	157
<i>Ying-Xuan Li, Nan-Ching Tai</i>	
Non-Invasive SpO2 Monitoring Using Reflective PPG: A Low-Cost Calibration Method	159
<i>Jin-Ting Lin, Shih-Hung Huang, Yu-Ting Chou, Yu-Fang Chang, Ju-Lin Pan, Feng-Wei Chen, Po-Yu Tsai, You-Ren Lin, Guo-Dung John Su</i>	
Enhancing Optical Coherence Tomography (OCT) Images with Python and OpenCV	161
<i>Kean Anderson S. Tan, Francisco Emmanuel T. Munsayac, Renann G. Baldovino, Nilo T. Bugtai</i>	
A Medical Domain Visual Question Generation Model Via Large Language Model	163
<i>He Zhu, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>	
Estimation of Amyloid- β Positivity Using QSM Images Considering Age Information.....	165
<i>Tsubasa Kunieda, Ren Togo, Noriko Nishioka, Yukie Shimizu, Shiro Watanabe, Kenji Hirata, Keisuke Maeda, Takahiro Ogawa, Kohsuke Kudo, Miki Haseyama</i>	
An Energy Recharging Scheme in Mobile Wireless Sensor Networks	167
<i>Zhijie Hu, Chih-Yung Chang, Ruibing Shen, Shih-Jung Wu</i>	
Applying Super Resolution and Optical Flow to Implement a Roll Call System for a Small Classroom by Webcam	169
<i>Ming-Yang Su, Wang-Di Xu</i>	
Social Distance Estimation System Using Low-Resolution IR Images with Boosting-CNN	171
<i>Kiichi Ogawa, Naoyuki Morimoto</i>	

Enhancing Academic Writing: A Smart Citation Recommendation System Leveraging BERT and Weighted Bag-Of-Words Models	173
<i>Yu-Ting Yang, Chih-Yung Chang, Shih-Jung Wu, Chia-Ling Ho</i>	
A Novel Deep Convolutional Neural Network Pooling Algorithm for Small Floating Objects Detection	175
<i>Jun-Yu Shen, Cheng-Kai Lu, Lam Ghai Lim</i>	
A Real-Time System of Two-Stage Track Component Classification Based on YOLOX-Nano and ResNet34	177
<i>Han-Chieh Chia, Ke-Sih Yang, Chen-Chiung Hsieh</i>	
Energy Aware Collaborative Machine Learning on Energy-Harvesting Devices.....	179
<i>Qihui Sun, Chia-Heng Tu</i>	
Generic Stacked BMS Using Low-Side MOSFET Control Architecture.....	181
<i>Lo-Tung Chen, J. C. Teo, Xiang-Jun Yang, Jun-Yang Tan, Po-Wei Chi, Leehter Yao, Maw-Kuen Wu</i>	
Minimizing Energy Loss for Optimum Storage Capacity Design in Distributed Power Flow System	183
<i>Yuto Lim, Saher Javaid, Yasuo Tan, Ruengwit Khwanrit</i>	
Supply-Dominated Energy Balancing for Periodic Operation of Power System	185
<i>Saher Javaid, Mineo Kaneko, Yasuo Tan</i>	
A Blockchain-Based Transactive Energy Management Scheme for Nano-Grids Using Power Flow Coloring.....	187
<i>Abdullah Bin Masood, Saher Javaid, Yasuo Tan, Vasos Vassiliou, Marios Lestas</i>	
Motivating an Agent-Based Distributed AI Framework for Renewable Integration: Power Balancing.....	189
<i>Saher Javaid, Iacovos I. Ioannou, Andreas Pitsillides, Yasuo Tan</i>	
Optimal Vehicle-To-Grid Strategies for Electric School Bus Using Game-Theoretic Approach	191
<i>Ruengwit Khwanrit, Yuto Lim, Chalie Charoenlarnnoppa, Somsak Kittipiyakul, Saher Javaid, Yasuo Tan</i>	
Investigating the Impact of Generative Artificial Intelligence on Brainstorming: A Preliminary Study.....	193
<i>Yu-Han Chiu, Chun-Ching Chen</i>	
A Usability Analysis of the Multi-Window Working Environment Modified for a Tablet PC	195
<i>Keizo Sato, Yusuke Chibe, Makoto Nakashima</i>	
An Expressive Chat Room with Personalized Fonts Mimicking Actual Inconsistencies in Human Handwriting.....	197
<i>Yi-An Hsieh, Nan-Ching Tai</i>	
Exploring Promising Interactive Features in Interactive Picture Books for Preschool Children: An Observational Study	199
<i>Chih-Ying Chen, Bo Liu, Zhao Liu, Xiaofang Li</i>	
Improving Real-Time Communication for Educational Metaverse by Alternative WebRTC SFU and Delegating Transmission of Avatar Transform.....	201
<i>Yong-Hao Hu, Kenichiro Ito, Ayumi Igarashi</i>	

Understand the Differences and Needs of Elementary School Students in Learning Dance with Kinect-Based DANZOO Teaching Materials	203
<i>Kuan-Wei Chen, Hsiao-Yue Tsau</i>	
Dynamic Asset Allocation Using Trading Agent.....	205
<i>Shingchern D. You, Chien-Hung Liu, Ching-Cheng Yen</i>	
Using Machine Learning for Efficient Smishing Detection	207
<i>Sheng-Shan Chen, Chin-Yu Sun, Tun-Wen Pai</i>	
Prevention Mechanisms for Stolen Access Token Injection Attack in Financial-Grade API.....	209
<i>Decian Li, Ching-Huang Lin</i>	
Zero Trust Framework in Financial Sector: The Handling of Machine Learning Based Trust Management	211
<i>Yu Chih Wei, Tak Wai Yu</i>	
Analyzing on Reward and Fee Effect on the Size of Mining Pools - A Case of Bitcoin System	213
<i>Chun-Yu Huang, Yean-Fu Wen, Yu-Wei Chen</i>	
CHFDS: Clustered-Based Hierarchical Federated Learning Framework with Differential Privacy and Secure Aggregation.....	215
<i>Chih-Hung Han, Wei-Chih Yin, Chia-Yu Lin, Ted T. Kuo</i>	
A 12-Bit 1GS/s Digital to Analog Converter with Switching-Minimized Monotonic Coding	217
<i>Ko-Chi Kuo, Shih-En Huang, Hong-Yi Liao</i>	
Optimizing Device Metal Routing Layouts by the Simulation Tool	219
<i>Shao-Chang Huang, Ching-Ho Li, Chih-Cherng Liao, Jung-Tsun Chuang, Chien-Wei Wang, Gong-Kai Lin, Lin-Fan Chen, Chun-Chih Chen, Kuan-I Ho, Che-Hua Chang, Hsiao-Ying Yang, Chung-Ren Lao, Jian-Hsing Lee, Ke-Horng Chen</i>	
Bipolar Transistors' Holding Phenomena	221
<i>Shao-Chang Huang, Kai-Chieh Hsu, Chih-Hsuan Lin, Chien-Wei Wang, Ching-Ho Li, Chih-Cherng Liao, Jung-Tsun Chuang, Gong-Kai Lin, Lin-Fan Chen, Chun-Chih Chen, Yeh-Ning Jou, Jian-Hsing Lee, Ke-Horng Chen</i>	
ESD-Capability Study of High-Voltage nLDMOSs with Out the Drift Region DPW Effect.....	223
<i>Xiu-Yuan Yang, Xing-Chen Mai, Shen-Li Chen, Yu-Jie Chung, Jhong-Yi Lai, Ting-En Lin</i>	
High-Voltage nLDMOS Drain Side Schottky/SCR Modulations for Enhancement Reliability Capabilities	225
<i>Ting-En Lin, Shen-Li Chen, Zhi-Wei Liu, Xing-Chen Mai, Xiu-Yuan Yang, Yu-Jie Chung</i>	
Transmission Line Pulse Width Impacting on Device Performances	227
<i>Shao-Chang Huang, Chien-Wei Wang, Chih-Hsuan Lin, Kai-Chieh Hsu, Ching-Ho Li, Chih-Cherng Liao, Jung-Tsun Chuang, Gong-Kai Lin, Lin-Fan Chen, Chun-Chih Chen, Yeh-Ning Jou, Jian-Hsing Lee, Ke-Horng Chen</i>	
Investigation of Posture Similarity Metrics for Online Dance Learning Support.....	229
<i>Maki Kato, Igor Goncharenko, Yanlei Gu</i>	
Applications of Three Introductory C Programming Exercise Problems in Nihon University	231
<i>Xiqin Lu, Nobuo Funabiki, Kiyoshi Ueda, Wen-Chung Kao</i>	

A Study of Grammar-Concept Understanding Problem for Web Server-Side JavaScript Programming Learning.....	233
<i>Soe Thandar Aung, May Zin Htun, Nobuo Funabiki, Yan Watequlis Syaifudin, Wen-Chung Kao</i>	
Gas Leak Detection in Collapsed Buildings Using Multiple Micro-Drones	235
<i>Kazuyuki Kojima, Yiming Li</i>	
A Consistency Preservation Method for Content Sharing in Peer-To-Peer Network Using CCN Control.....	237
<i>Toshiki Sanno, Kosuke Yamaki, Shinji Sugawara</i>	
Detecting Pedestrian Spatial Behavior in City Spaces by Processing 360° Videos.....	239
<i>Yu Ouyang, Sheng-Ming Wang</i>	
The Development of a Map-Based Application for Enhancing the Wayfinding in Night Market.....	241
<i>Kuang-Ting Huang, Yun-Lin Cheng, Stepanus Andi Saputra</i>	
A Vision Method for Step Detection Using Sensor Fusion of 2D LiDAR and Binocular Camera on Electric Mobility Scooter	243
<i>Bowen Zhang, Masahiro Tanaka</i>	
Traffic Object Detection in Virtual Environments.....	245
<i>Bo-Yi Lin, Chih-Sheng Huang, Jia-Ming Lin, Pin-Hsuan Liu, Kuan-Ting Lai</i>	
Sewage Treatment Interactive Learning Game Design	247
<i>Tzu-Chuen Lu, Sheng-Ming Huang, Yu-Qi Chen</i>	
Design of PPG and ECG Synchronous Acquisition System Based on NRF52832	249
<i>Han-Dong Chen, Liang-Hung Wang, Ming-Hui Fan, Kun-Kun Sun, Chun-Hong Chen, Chia-Feng Liu, Pao-Cheng Huang</i>	
A Multi-Channel EEG Acquisition Device Based on BT Microcontroller.....	251
<i>Hai-Yin Hu, Liang-Hung Wang, I-Chun Kuo, Min-Haw Wang, San-Fu Wang, Pao-Cheng Huang</i>	
Denosing ECG Using Different FIR Filters on FPGA	253
<i>Yan-Ting Liu, Wan-Lin Cheng, Fu-Yu Chang, Min-Haw Wang</i>	
An Area Efficient Analog Front-End for Sensing EEG Signals with MOS Capacitors in 90nm Process.....	255
<i>Ko-Chi Kuo, Chao-Tung Chen, Hong-Yi Liao</i>	
Automatic Recognition of Container Serial Code	257
<i>Chung-Chian Hsu, Yu-Zen Yang, Arthur Chang, S. M. Salahuddin Morsalin, Guan-Ting Shen, Li-Shin Shiu</i>	
Weighted SMOTE Algorithm: A Tool to Improve Disease Prediction with Imbalanced Data	259
<i>Rakesh Kumar Patnaik, Ming Chih Ho, J. Andrew Yeh</i>	
Forward-Backward-View Depth-Visual SLAM and Navigation Based on Upward-View Visual Odometry and Wheel Odometry.....	261
<i>Chian C. Ho, Ke-Chi Hu</i>	
Predicting Metabolic Syndrome with Machine Learning Models of Hybrid Analysis.....	263
<i>Yi-Syuan Wu, Wei-Yun Wang, Hao-Yi Wu, Chao-Wen Chen, Chi-Ming Chu, Cheng-Wei Wu</i>	

Research of Cell-Decomposition in Polar Coordinate System for Point Cloud Semantic Segmentation	265
<i>Min-Han Tsai, Chien-Chou Lin</i>	
Detecting the Underwater Distance and Swimming Direction of Tilapia Using YOLO	267
<i>Yi-Zeng Hsieh, Chia-Hsuan Wu, Cheng-Hou Chou, Chia-Ching Teng, Chih-Hsiang Ho</i>	
A Study on Text Generation of Kinmen Culture Vocabulary Based on GPT-2	269
<i>Chia-Yuan Chang, Yu-Xiang Zhao, Yu-Ying Chen</i>	
Contour Based Hand Segmentation Using Deep Convolutional Neural Networks.....	271
<i>Tsung-Han Tsai, Po-Ting Chi, Yuan-Chen Ho</i>	
Generating Virtual Head-Mounted Gyroscope Signals from Video Data.....	273
<i>Minyen Lu, Chenhao Chen, Billy Dawton, Yugo Nakamura, Yutaka Arakawa</i>	
RIC-Assisted Smart Microgrid for Renewable Powered Radio Access Network	275
<i>Li Cho, Ching-Po Lin, Chun-Wei Li, Tsung-Hao Yang, Sheng-Hsiang Fu, Chun-Yu Hsiao</i>	
± 3 a Bidirectional Current Sensor for 57.6 V Li-Ion Battery Management System of AUV	277
<i>Tzung-Je Lee, Hsieng-Han Chen</i>	
Empowering Interactive Fitness Game.....	279
<i>Jun-Ye Zhou, Tz-Heng Fu</i>	
Sybil Attack Models of MM-Wave Communication for LEO Satellite Network in Cybersecurity.....	281
<i>Abdiasis Ahmed Mohamed, Shih Hao Chang</i>	
The Assessment of the Design Risk for ORAN.....	283
<i>Shiang-Jiun Chen, Yahan Chang, Nattapol Raksasook, Wei-Liang Wu</i>	
Evaluation of Machine Learning Based Optimized Feature Selection Approaches and Classification Methods for Intrusion Detection System.....	285
<i>Muhammad Bisri Musthafa, Md. Arshad Ali, Samsul Huda, Yuta Kodera, Takuya Kusaka, Yasuyuki Nogami</i>	
A Framework for Robustness Evaluation in AI-Based Malware Detectors.....	287
<i>Gao-Yu Lin, Shin-Ming Cheng, Hahn-Ming Lee</i>	
Applying the Diamond Model of Intrusion Analysis with Generative Pre-Trained Transformer 3.....	289
<i>Sheng-Shan Chen, Tun-Wen Pai, Chin-Yu Sun</i>	
Note on "RAKS: Robust Authentication and Key Agreement Scheme for Satellite Infrastructure".....	291
<i>Chun-Chieh Tsai, Chin-Yu Sun, Shih-Hsuan Yang</i>	
AES Encryption Method Based on Chaotic Cryptography	293
<i>Chin-Sheng Chen, Siang-Yu Chiu, Shih-Yu Li</i>	
A File Verification Scheme Based on Verkle Trees	295
<i>Kai-Wei Lin, Yu-Chi Chen</i>	
Low-Cost Hardware Design of Fast 3D-Sorter Engine for Successive Cancellation List Polar-Decoders in 5G Applications.....	297
<i>Xin-Yu Shih, Lok Hin Samuel Leung, Geng-Hong Li</i>	

Voltage-Mode High Input Impedance Highpass, Bandpass and Lowpass Filters Using Two Current Conveyors.....	299
<i>Jiun-Wei Horng, Chang-Ming Wu, Shao-Wei Chang, Che-Wei Chao, Kuan-Wei Huang</i>	
A Metal-Only ECO Algorithm for Improving Hardware Security with Gate Camouflaging.....	301
<i>Liang-Ying Su, Shih-Hsu Huang</i>	
Fault-Tolerant Near-Memory MAC Design with Redundant Memories.....	303
<i>Hsin-Chen Lu, Shih-Hsu Huang</i>	
Convolutional Neural Network Accelerator for Integrated Winograd and Convolution Computations.....	305
<i>Yueh-Fan Lo, Wei-Kai Cheng</i>	
Framework and Quantization Method Design for CIM.....	307
<i>Hsin-Yi Pai, Wei-Kai Cheng</i>	
An Automatic Facial Analysis System for the Detection of Pediatric Obstructive Sleep Apnea.....	309
<i>Chia-Jo Lin, Shih-Hsu Huang, Wan-Yi Hsueh, Wei-Chung Hsu, Chih-Wen Su</i>	
Study of Iterations Reduction for CORDIC Computation with More Accuracy.....	311
<i>Juinn-Horng Deng, T. N. Vyas Kaushik, P. R. Siva Prasanna, Min-Sion Yang, Pavan Vatal Shankar Prasad</i>	
Writing and Walking Support by Haptic and Wearable Devices	313
<i>Pingguo Huang, Yutaka Ishibashi</i>	
Study on Early Detection and Prevention of Dementia Using Olfactory and Haptic Senses	315
<i>Pingguo Huang, Yutaka Ishibashi</i>	
QoE Assessment of Audiovisual Streaming Over a Full-Duplex Wireless LAN with Interference Traffic	317
<i>Toshiro Nunome, Daiki Deguchi</i>	
One User Operation Versus Two Users Operation in Cooperative Remote Robot Systems.....	319
<i>Ruzhou Ye, Jasmin Söll, Yutaka Ishibashi</i>	
Proposal and Implementation of Activity Status Acquisition System for Automatic Guided Vehicles and Compare with Simulation Results	321
<i>Midori Takemoto, Noriko Yuasa, Shuto Kawakita, Takanobu Otsuka</i>	
Proposal and Implementation of a Ball Screw Torque Monitoring System for Analyzing Bearing Status	323
<i>Koki Katagiri, Soma Maeda, Shuto Kawakita, Takanobu Otsuka</i>	
Development of a Location and Operation Monitoring Device for Medical Device Management.....	325
<i>Kazuto Kakutani, Nobuhiro Ito, Kosuke Shima, Shintaro Oyama, Takanobu Otsuka</i>	
A Time Series Analysis of Single Server Queueing Systems by Using Machine Learning.....	327
<i>Tomoyasu Kudou, Takashi Okuda</i>	
Intrusion Detection with Radio Frequency Sensing Based on Wi-Fi Mesh Network for Home Security.....	329
<i>Ming-Yen Wu, Sz-Hsien Wu, Yu-En Chang, Yu-Hsiang Lin, Sin-Jie Huang, Hsiao-Ting Tseng</i>	
Homomorphic Encryption-Based Similarity Calculation for Mobile Data Usage Prediction	331
<i>Abel C. H. Chen, Chia-Yu Lin, Yueh-Ting Lai</i>	

License Plate Restoration System.....	333
<i>Meng-Chen Luo, Chia-Yu Lin</i>	
Booming Blooming: When Can You Enjoy Flowering Season?	335
<i>Yun-Chiao Cheng, Yan-Hung Chou, Chia-Yu Lin</i>	
Continual Learning with Out-Of-Distribution Data Detection for Defect Classification	337
<i>Cheng-Hsueh Lin, Chia-Yu Lin, Li-Jen Wang, Ted T. Kuo</i>	
Image Inpainting with Self-Supervised Learning for Mura Detection System.....	339
<i>Tzu-Min Chang, Hao-Yuan Chen, Chia-Yu Lin</i>	
Fine-Regularity Feature Extraction of Elderly Behaviors Based on Unsupervised Learning	341
<i>Cuijuan Shang, Qiaoyun Zhang, Chih-Yung Chang</i>	
Collision Avoidance in Bluetooth Low Energy (BLE) Networks.....	343
<i>Qiaoyun Zhang, Xuan Li, Cuijuan Shang, Chih-Yung Chang</i>	
A Consideration of Parameters for a Nonlinear Filter Generator and Its Linear Complexity Profile.....	345
<i>Yuki Takeuchi, Itsuki Maebayashi, Md. Arshad Ali, Takuya Kusaka, Yasuyuki Nogami, Yuta Kodera</i>	
A Modified M-Sequence with Dynamic Mapping and Its Autocorrelation.....	347
<i>Itsuki Maebayashi, Yuki Takeuchi, Md. Arshad Ali, Takuya Kusaka, Yasuyuki Nogami, Yuta Kodera</i>	
Smallest Botnet Firewall Building Problem and a Girvan-Newman Algorithm-Based Heuristic Solution	349
<i>Shingo Yamaguchi, Ryutaro Matsumoto</i>	
A High-Security Internet of Drones Design by Integrating Physical-Layer Key Generation and Blockchain.....	351
<i>Ying-Chi Tsou, Rui-Hsing Chou, Yu-Jia Chen</i>	
Development of a Smart Gate for the University Library with Multiple Sensors	353
<i>Masahiro Tanaka</i>	
Edge-Cloud Architecture for Precision Aquaculture	355
<i>Wai Khuen Cheng, Boon Yaik Ooi, Teik Boon Tan, Yen-Lin Chen</i>	
Edge Computing and AI for IoT: Opportunities and Challenges.....	357
<i>Ean Heng Lim, Tong Yuen Chai, Manoranjitham A-P Muniandy, Tien Fui Yong, Boon Yaik Ooi, Jim-Min Lin</i>	
Visual Traits-Based Recommendation System for Proactive Retailing in Physical Store Environment	359
<i>Xin Yi Kh'Ng, Boon Yaik Ooi, Sheng Kang Teoh, Boon Sheng Ooi, Yen-Lin Chen</i>	
Internet of Things: Interoperability and Integration Test with the Combined Business Process Technique in the Layered Architecture.....	361
<i>Teik-Boon Tan, Yiqi Tew, Tong-Ming Lim, Wai-Khuen Cheng, Yen-Lin Chen</i>	
Performance and Efficiency Comparison of VisionFive V1 Board and Raspberry Pi 4B.....	363
<i>Kai-Heng Kam, Chee-Siang Wong, Kean-Vee Sor, Boon-Yaik Ooi, Zeng-Wei Hong</i>	

Success Factors for Using New Communication Technologies, Google Meet, in College Student's Graduation Production. Take Kun-Sun University Public Relations and Advertising Department for Example.....	365
<i>Hsing-Tung Ho</i>	
A Study of the Influence of Introduction of Block Chain into Traceability Certification on Consumer's Acceptance of Smart Agriculture.....	367
<i>Ming-Tsun Chen</i>	
Exploring Web3 for Applying to Online Health Community Development Using Text Analysis.....	369
<i>Yi-Ting Hsiao, Sheng-Ming Wang</i>	
The Application of Mixed Reality in Sports Event Broadcasting.....	371
<i>N/A</i>	
A Speed Estimation for Reliable Performance of Field Oriented PMSM Control Using Adaptive Neuro-Fuzzy Inference System	373
<i>Mentari Putri Jati, Muhammad Rizani Rusli, Yibeltal Canie Manie, Peng-Chun Peng</i>	
Intelligence Human-Machine Interface Design for the Water Dispenser with AIoT Technology	375
<i>Hsin-Chien Li, Cheng-Chih Yeh, Wei-Hsuan Lin, Min-Chien Wu, Jih-Sian Lin, Yu-Chieh Wang, Ching-Ling, Lin, Li-Shan Ma</i>	
Effects of Instructional Vibrotactile Patterns on Takeover Performance in Autonomous Driving	377
<i>Justin Kazuya Miyoshi, Qingxin Chen, Jialong Li, Kenji Tei</i>	
Intelligent Behavior Recognition Based on Gyroscope and Accelerometer.....	379
<i>Pin-Yu Huang, Yung-Han Lu, Chun-Ting Lin, Bo-Xian He, Tun-Wen Pai</i>	
Feasibility Study on Restoring Chinese Documents by Convolutional Autoencoder.....	381
<i>Shi Wei Lo, Hsiu-Mei Chou</i>	
Application of Artificial Intelligence in Developing a Nursing Robot System: Preliminary Design	383
<i>Shih-Jie Chou, Chi-Hung Hwang</i>	
Updating Not Just Payload but Payload and Extra Data Simultaneously in Real-Time IoT Networks.....	385
<i>Mangang Xie, Baozhen An, Changhao Song, Qianqian Wang, Meng Zhou, Xiangdong Jia</i>	
Water Leakage Detection System for Public Toilets Based on Deep Learning	387
<i>Yu Xiu, Wei Wang, Xing-Jing Liu, Jun-Jie Cheng</i>	
Design of Security Assistant Software for Domestic it Innovation Operating System.....	389
<i>Guanwei Cheng, Hanbo Wang, Shasha Hao, Dan Tao</i>	
Customized Training and Application of Monocular Depth Ranging for Assisted Driving	391
<i>Jingwen Li, Chuhan Wang, Pengwei Zhang, Ruipeng Gao, Dan Tao</i>	
LSTM Model-Based Subway Passenger Flow Forecast Solution	393
<i>Chen Liu, Qi Peng, Dan Tao</i>	
A Spatio-Temporal Graph Based Hybrid Encoder-Decoder Approach for PV Output Prediction	395
<i>Yuhang Pang, Yanan Wang, Tongtong Zhang, Xiaozhao Wei, Zhimin Guo, Jian Zhao, Xinyan Wang</i>	
Integrated Vegetable Supply System Based on Smart Contract and LSTM Prediction.....	397
<i>Jun Wu, Ping Zhang, Xianglin Bao, Wenhan Li, Zhaojun Tang, Bin Cheng</i>	

An Obstacle Detection Technique for Marine Intelligent Transportation System Based on Maximum Likelihood Method.....	399
<i>Xin-Ming Ma, Hai-Yan Song, Chang-Yi Yang, Xiao-Jun Song, Dong-Xu Gao</i>	
A Joint DOA and Range Estimation Technique for Underwater Transportation System Based on Compressive Sensing.....	401
<i>Hai-Yan Song, Chang-Yi Yang, Yu-Jie Zhang, Jia-Xin Tang, Jia-Qi Gao</i>	
Urban Second-Hand Housing Price Evaluation System Based on Bayesian Probabilistic Model	403
<i>Zhaojun Tang, Ping Zhang, Xinjing Qin, Bin Cheng, Tao Liu</i>	
Emotion Prediction in Music Based on Artificial Intelligence Techniques	405
<i>Yen-Jung Lin, Su Yen Ding, Cheng-Kai Lu, Tong Boon Tang, Jun-Yu Shen</i>	
Detection of Acrimonious Attacks Using Deep Learning Techniques and Edge Computing Devices	407
<i>Pradeep Kumar, Cheng-Yang Li, Bo-Lin Guo, Yibeltal Chanie Manie, Chen-Kai Yao, Peng-Chun Peng</i>	
Retinal Layer and Fluid Segmentation with Transformer Based Architecture	409
<i>Yi Kang Wang, Koh Kai Wen, Cheng-Kai Lu, Cheng-Hung Lin</i>	
A Novel Network Architecture and Training Strategies for Camera-Radar 3D Detection	411
<i>Sin-Ye Zhong, Hsin-Chun Lin, Xu-Xiang Weng, Ting-Feng Xie, Han-Wei Lin, Yung-Yao Chen</i>	
High Compression Rate Architecture for Texture Padding Based on V-PCC.....	413
<i>Cheng-Lin Lu, He-Sheng Chou, Ya-Yun Huang, Mei-Ling Chan, Szu-Yin Lin, Shih-Lun Chen</i>	
RandAugment with Knowledge Distillation for Finger-Vein Recognition.....	415
<i>Hung-Tse Chan, Judy Yen, Chih-Hsien Hsia</i>	
An Image Enhancement Method for Deep Learning-Based Rib Fracture Detection	417
<i>Hung-Tse Chan, Yi-Hung Liu, Yih-Wen Tarng, Ching-Han Lin, Man-Lin Wu, Yung-Yao Chen</i>	
3D Point Cloud Denoising Algorithm Based on Two-Stage Filtering.....	419
<i>Ming-Zhan Lee, He-Sheng Chou, Yu-Lin Liu, Ting-Lan Lin, Wei-Chen Tu, Shin-Lun Chen</i>	
Deep Convolutional Neural Network Using Orthogonal Projection Loss for Palm-Vein Recognition	421
<i>Liang-Ying Ke, Ho-Yi Liao, Chih-Hsien Hsia</i>	
Deep Violin: Deep Learning-Based Violin Bowing Training System	425
<i>Yu-Hsuan Lo, Shih-Peng Li, Shih-Wei Sun</i>	
RLMD: A Dataset for Road Marking Segmentation	427
<i>Heng-Chih Hsiao, Yi-Chang Cai, Huei-Yung Lin, Wei-Chen Chiu, Chiao-Tung Chan</i>	
An Assessment of Key Factors to Establishing Smart Hospitals.....	429
<i>Yueh-Feng Chuang</i>	
The Utilization of Big Data Analytics and Algorithm Adjustment on the Election Prediction.....	431
<i>Chun-Ting Chang, Huai-Shyuan Wang, Sheng-Tsung Tu, Shyang-Yuh Wang</i>	
Feature Detection and Matching for Low-Resolution Hyperspectral Images	433
<i>Chamika Janith Perera, Chinthaka Premachandra, Hiroharu Kawanaka</i>	
Graph-Based Embedding Improvement Feature Distribution in Videos	435
<i>Junbin Zhang, Pei-Hsuan Tsai, Meng-Hsun Tsai</i>	

Examples of Linearity Improvement for Millimeter-Wave 5G Power Amplifiers Using Wideband Digital Predistortion (DPD).....	437
<i>Gokul Somasundaram, Clint Sweeney, Jill C. Mayeda, Donald Y. C. Lie, Jerry Lopez</i>	
Manufacturing Quality Prediction Based on Deep Learning in Conjunction with Gramian Angular and Markov Transition Fields.....	439
<i>Jehn-Ruey Jiang, Hsueh-Chih Chen</i>	
Performance Evaluation of Parallel Tasks for Fault-Tolerant Routing Methods	441
<i>Yota Kurokawa, Masaru Fukushi</i>	
Using YOLOv5 and ResNeSt Model to Detect Chest Situs Inversus in X-Ray Images.....	443
<i>Chuan-Yu Chang, Chun-Liang Lai, Jun-Shuo Chen</i>	
Analysis of Pedestrians Intention Prediction Based on Gradient-Weighted Class Activation Mapping	445
<i>I-Hsi Kao, Ching-Yao Chan</i>	
Image Inpainting Using MSCSWin Transformer and Color Correction.....	447
<i>Bo-Wei Chen, Tsung-Jung Liu, Kuan-Hsien Liu</i>	
Shoot Event Prediction in Soccer Considering Expected Goals Based on Players' Positions.....	449
<i>Ryota Goka, Yuya Moroto, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>	
Speed Up H.266/VVC Intra Coding Based on Statistical Heuristic and Deep Learning Methods.....	451
<i>Yeh-Guan Zhou, Jiann-Jone Chen</i>	
UNet-Based Automatic Multiclass Brain Tissue Segmentation	453
<i>Nisar Ahmad, Yao-Tien Chen</i>	
Motion Based DBSCAN for Object Tracking in Satellite Video.....	455
<i>Guo-Cheng Xu, Pei-Jun Lee, Trong-An Bui</i>	
Mask Generation with Meta-Learning Classifier Weight Transformer Network for Few-Shot Image Segmentation.....	457
<i>Fong-Ci Jhou, Kai-Wen Liang, Chung-Hsun Lo, Chien-Yao Wang, Yung-Fang Chen, Jia-Ching Wang, Pao-Chi Chang</i>	
Improving the Performance of CMGAN in Speech Enhancement with the Phone Fortified Perceptual Loss.....	459
<i>Chi-En Dai, Jia-Xuan Zeng, Wan-Ling Zeng, Eric S. Li, Jieh-Weih Hung</i>	
Exploiting Discrete Wavelet Transform Features in Speech Enhancement Technique Adaptive FullSubNet+	461
<i>Zong-Tai Wu, Pei-Fang Li, Ping-Chen Wu, Eric S. Li, Jieh-Weih Hung</i>	
Virtual Machine Placement Method with Compressed Sensing-Based Traffic Volume Estimation.....	463
<i>Ami Yamamoto, Kenta Yumoto, Takahiro Matsuda, Junichi Higuchi, Takeshi Kodama, Hitoshi Ueno, Takashi Shiraishi</i>	
Anomaly Web Page Detection Using HDBSCAN and Deep SVDD	465
<i>Yusuke Noji, Tomotaka Kimura, Jun Cheng</i>	
Content Prefetching Method to Utilize Reinforcement Learning-Based Routing for In-Network Caching.....	467
<i>Ippei Tayuki, Gen Tabei, Kouji Hirata</i>	

Optimization of UAV Placement with Task Offloading for UAV-Based Edge Computing Systems.....	469
<i>Ryo Kaneko, Hideyoshi Miura, Tomotaka Kimura, Kouji Hirata</i>	
Two-Stage Malware Detection Using Calling API-Based BiLSTM	471
<i>Kohei Tsunewaki, Tomotaka Kimura, Jun Cheng</i>	
Human Assistive Rehabilitation System for Lower-Limb Using Exoskeleton.....	473
<i>Yasunori Kawai, Takato Miyazaki, Takanori Miyoshi</i>	
The Effect of Bitrate Control Methods of MPEG-DASH Streaming on Multi-View Video and Audio QoE.....	475
<i>Toshiro Nunome, Yamato Wakayama</i>	
Enhanced Robot Movement Control Using Force Sensor in Remote Robot Systems Taking Account of Mobility.....	477
<i>Yutaka Ishibashi, Ginsei Kawamura, Pingguo Huang</i>	
Effect of Force Adjustment Control in Cooperative Work Between Remote Robot Systems with Force Feedback.....	479
<i>Hitoshi Ohnishi, Tatsuki Komori, Yutaka Ishibashi, Pingguo Huang</i>	
Benchmark Software Development for Evaluating the Upload Speed Through Mobile Network.....	481
<i>Yuhi Katoh, Shuto Kataoka, Daichi Muramatsu, Takashi Kurimoto, Hiroyuki Kimiyama</i>	
Study on Availability of MPI for Uncompressed 8K-Video Real-Time Processing	483
<i>Yuya Shibata, Yugo Kubota, Naoki Sugiura, Hiroyuki Kimiyama</i>	
Longcut Route of Multiple Autonomous Mobile Robots Forming Ad Hoc Networks to Avoid Interference from Other Networks	485
<i>Risa Takeuchi, Tutomu Murase</i>	
Accuracy Improvement of Stock Price Forecasting Using Prophet	487
<i>Shoi Arata, Yota Kurokawa, Masaru Fukushi</i>	
Performance Evaluation of Video Classification Method for Learning Data Using Parametric Eigenspace.....	489
<i>Yasuyuki Miura, Maki Miyaura, Tsukasa-Pierre Nakao, Chenchen Shen</i>	
Gradient Bit-Flipping Decoding for QC-MDPC McEliece PKC	491
<i>Yusuke Iiyama, Haruhiko Kaneko</i>	
A Consideration of Averaging the Calculation Cost of CVMA for a Secure Session Based Data Transmission.....	493
<i>Akane Miyoshi, Kazuma Ikesaka, Md. Arshad Ali, Yuta Kodera, Takuya Kusaka, Yasuyuki Nogami</i>	
A Method of Controlling Devices Remotely in Online Embedded System Engineer Training.....	495
<i>Toshiyuki Haramaki, Satoshi Ohtake</i>	
A Profiling Guided Optimization Scheme for Accelerating Quantum Simulations.....	497
<i>Yu-Tsung Wu, Po-Hsuan Huang, Chia-Heng Tu, Shih-Hao Hung</i>	
SRAM-Based Efficiency Memory Model for Quantized Convolutional Neural Networks	499
<i>Ji Wu, Kazuteru Namba</i>	
The Object Detection in Remote Sensing Imagery Based on Mosaic Improvement.....	501
<i>Yi-Ying Chen, Tu-Liang Lin, Hong-Yi Chang</i>	

Identifying the Correlation Between Online Exam Answer Trajectory and Test Behavior Based on Artificial Intelligence and Eye Movement Detection Technology	503
<i>Jian-Wei Tzeng, Cheng-Yu Hsueh, Chia-An Lee, Wei-Yun Shih</i>	
Evaluating Intertwined Effects in Fake News Spreading by Using MCDM Approaches.....	505
<i>Bo Hsiao</i>	
Research on Generating High-Quality News Headlines Based on the GPT-2 Model to Replace Artificial Headlines	507
<i>Wei-Chen Xu, Ying-Song Liao, Huan-Yi Liu, Zhe-Wei Guo, Cheng-Yu Hsueh, Jian-Wei Tzeng</i>	
Breast Cancer Classification on Mammograms Using Extreme Learning Machines.....	509
<i>Jinn-Yi Yeh, Yi-Chen Hou, Yuan-Liang Wang</i>	
A Portable Electrocardiography Arrhythmia Classification Using Time-Series Augmented Signals and Convolutional Neural Network.....	511
<i>Yu-Chieh Chang, Tzu-Shan Chang, Tu-Liang Lin</i>	
A Ultrasonic Examination Simulator Based on Virtual Reality.....	513
<i>Wei-Shen Tai</i>	
10-Bit 45.5Ms/s SAR ADC Based on Multi-Segmentation Split-Capacitive DAC	515
<i>Po-Yu Kuo, Yi-Zhen Chen, Li-An Tsai</i>	
An Output Capacitorless Low-Dropout Regulator Design Based on Cross-Coupled Technique with Extract Power Supply Ripple Technique.....	517
<i>Po-Yu Kuo, Ming-Hsiu Chan, Yi-Zhan Zhuang</i>	
An Approach to Increase Communication Distance of Small Unmanned Boats.....	519
<i>Yuan-Sheng Chen, Ming-Tien Wu, Ming-Lin Chuang, Shu-Min Tsai, Cheng-Hao Lu, Bo-Shin Huang</i>	
Response Wavelength Tunable Photodetector for Solar-Blind NLOS Ultraviolet Communication.....	521
<i>Jyun-Jie Syu, Zhong-Hong Yen, Che-Hao Liao, Ching-Huang Lin, Chien-Sheng Huang</i>	
Some Properties of Well-Balanced Sequences Obtained from Two Logistic Maps Over Integers.....	525
<i>Hiroki Fujii, Satoshi Uehara, Takeru Miyazaki, Shunsuke Araki, Yasuyuki Nogami</i>	
An Attack for a 116bit ECDLP for a Barreto-Naehrig Curve.....	527
<i>Takuro Manabe, Ken Ikuta, Sho Joichi, Hiromasa Miura, Shota Kanzawa, Yasuyuki Nogami, Yuta Kodera, Takuya Kusaka</i>	
A Study on a Full-Node Problem of the Domain Name System Based on Ethereum	529
<i>Shihcheng Peng, Shunsuke Araki, Ken'Ichi Kakizaki</i>	
A Study on Guessing Plaintexts by Neural Network Against Data Encryption Standard (DES)	531
<i>Maki Kawano, Shihcheng Peng, Shunsuke Araki, Ken'Ichi Kakizaki</i>	
A Study on Robustness Evaluation of Weave Filters Against Reverse Image Search Attacks on CAPTCHA	533
<i>Natsuo Hayashi, Takashi Satoh, Satoshi Uehara</i>	
A Secure and Reliable Private Key Recovery Method.....	535
<i>Wei-Hsin Chang, Ren-Song Tsay</i>	
VLSI Design of Number Theoretic Transform for BGV Fully Homomorphic Encryption.....	537
<i>Kuan-Yu Chen, Ming-Der Shieh</i>	

How to Construct Pseudorandom Bit Sequences from Mazes by a Method Digging Out Walls.....	539
<i>Takeru Miyazaki, Shunsuke Araki, Satoshi Uehara</i>	
A Proposal for Efficient Multiplication and Inverse Calculation in Streamlined NTRU Prime.....	541
<i>Masakazu Awakiahra, Jun Miura, Md. Arshad Ali, Takuya Kusaka, Yasuyuki Nogami, Yuta Koderu</i>	
A Classification for Commutative Three-Element Semigroups with Local XOR Structure and Its Implementability of Card-Based Protocols	543
<i>Yuji Suga</i>	
Deep Learning Multi-Objective Optimization for Smart Manufacturing Via Elitist Genetic Algorithm	545
<i>Jehn-Ruey Jiang, Si-Han Chen</i>	
Method of Generating Non-Contact Photoplethysmography	547
<i>Shih-Hung Huang</i>	
Improvement of Vascular Stenosis Detection by Screening Uncertain Data	549
<i>Keisuke Nishijima, Ken'Ichi Furuya</i>	
Accurate Pulse Transit Time Acquisition Method for Multi-Point Photoplethysmography	551
<i>Shih-Hung Huang</i>	
Multiple Object Detection Architecture-Based Comparative Performance for Safe Construction Scenario	553
<i>Noorman Rinanto, Jirayu Petchhan, Shun-Feng Su</i>	
A Lavatory Space Designed for a User-Friendly Experience and Sterile Condition	555
<i>Tang-Jen Liu, Yung-Ming Tsao, Guan-Qi Chen</i>	
Mental Illness Prediction by Refined-Attention Transformer Encoder with Mental RoBERTa.....	557
<i>Oscal Tzyh-Chiang Chen, Wen-Chao Huang, Chun-Hsiang Chang</i>	
Credit Card Fraud Detection Based on DeepInsight and Deep Learning	559
<i>Jehn-Ruey Jiang, Chien-Kai Liao</i>	
Transfer Learning for Fingerprint-Based Indoor Localization Calibration	561
<i>Jehn-Ruey Jiang, You-Lin Chen</i>	
A Transformer-Based Object Relationship Finder for Object Status Analysis	563
<i>Po-Ying Huang, Po-Yung Chou, Cheng-Hung Lin</i>	
3D Hand Mesh Reconstruction from Monocular Image by Using Intermediate Representations.....	565
<i>Tsung-Han Tsai, Jia-Yang Jiang</i>	
Establishing Suitable Lighting Conditions and Perception Models for Beauty Aromatherapy Using Colored Light Sources.....	567
<i>Hung-Chung Li, Chun-Hsun Huang, Pei-Li Sun</i>	
Design of Coffee Yield Estimation System Using Computer Vision by Crowd Counting Model.....	569
<i>Kuei-Chung Chang, Yu-Lung Lin</i>	
Enhancing Incremental Learning of CNN Model Using Filtered New Added Samples Assisted with XAI.....	571
<i>Kuei-Chung Chang, Chun-Yu Kuo</i>	

Application of Beach Trash Detection System Based on Deep Learning.....	573
<i>Shu-Min Tsai, Ming-Lin Chuang, Jheng-Yong Gao, Cheng-Han Liu</i>	
The Impact of COVID-19 on the Development of Online Stores in Cross-Border Operations - Amazon as an Example	575
<i>Chiu-Chin Chen, Chia-Chun Liao</i>	
Integrated Multiple Sensing Nodes for a Three-Dimensional Coordinate Map Positioning System.....	579
<i>Kuang-Hao Lin, Zhi-Hao Zeng, Yu-Lin Chen</i>	
A Brief Survey on Removing Temporal Redundancy in Video Object Detection.....	581
<i>Kuan-Hung Chen</i>	
Implementation of a Quality Evaluation System for Chest Compression Based on OpenPose Model	583
<i>Yan-Heng Lin, Yu-Tse Tsan, Yu-Wei Chan, Chih-Hung Chang, Chia-Chen Lin, Hsuan-Fu Wang</i>	
IoT-Based Smart Home Care Systems with Location Detection.....	585
<i>Chia-Hsin Cheng, Kuo-Ting Huang, Jun-Jie Chen, Tzu-Yuan Chiu</i>	
Performance of Adaptive Offset Cancellation Method for UWB Indoor Positioning System.....	589
<i>Yung-Fa Huang, Shu-Wai Chang, Yung-Hoh Sheu</i>	
LCM Aging Detection and Analysis System Design.....	591
<i>Meng-Chang Wu, Yu-Xiang Wang, Yung-Hoh Sheu, Ching-Lin Li, Teng-Chi Chang, Jen-Yu Shieh</i>	
Target Detection and Recognition in Synthetic Aperture Radar Images Using YOLO Deep Learning Methods.....	593
<i>Tzong-Dar Wu, Hsuan-Fu Wang, Po-Hsun Hsu, Kwong-Kau Tiong, Li-Chi Chang, Chia-Hung Chang</i>	
A Cost-Efficient Hardware Accelerator Design for 2D Sliding Discrete Fourier Transform	595
<i>Wen-Ho Juang, Meng-Chang Wu, Yung-Hoh Sheu, Jen-Yu Shieh, Tung-Hsien Hsieh</i>	
A Bluetooth Low Energy Indoor Positioning Algorithm for an Online to Offline Commerce System	597
<i>Ing-Chau Chang, Chin-En Yen, Yung-Hoh Sheu</i>	
Secure Communication with Physical Layer Coding Scheme	599
<i>Jong-Shin Chen, Cheng-Ying Yang, Jenq-Foung Jf Yao, Chin-En Yen, Min-Shiang Hwang</i>	
Design and Alignment Tolerance Analysis of an E-Band Turnstile Orthomode Transducer.....	601
<i>Chia-Yu Tsao, Tzong-Dar Wu, Kwong-Kau Tiong, Tung-Yi Wu, Li-Chi Chang</i>	
A Study of Learning Perception Towards VR Technology.....	603
<i>Ah-Fur Lai, Cheng-Ying Yang, Ying-An Lai, Jong-Shin Chen</i>	
Distributed Reinforcement Learning Based Adaptive Antenna Pattern Selection for Wireless Communication Networks.....	605
<i>Yu-An Chen</i>	
An Implementation of Feature Selection for Detecting LOIC-Based DDoS Attack	607
<i>Yi-Xian Cai, Shih-Chieh Chen, Chih-Chiang Wang</i>	
A Case Study of Detecting HULK-Based DDoS Traffic with Random Forest Classifier	609
<i>Yi-Xian Cai, Tsu-Chen Chang, Chih-Chiang Wang</i>	

Wearing Mask Detection Based on T-Shaped Face	611
<i>Jing-Wein Wang, Chih-Chiang Wang, Cunwei Lu</i>	
A Ka-Band Asymmetric T/R Switch in GaAs pHEMT Technology	613
<i>Jia-Shiang Fu</i>	
A 28-GHz MMID Frontend in 90-Nm CMOS for Miniature Wireless Sensors	615
<i>Jia-Shiang Fu</i>	
Fusion of Received Signal Strength and Channel State Information for Wireless Human Sensing	617
<i>Hai-Yan Huang, Yu-Jia Chen</i>	
Intention to Use Shared Electric Scooters in Outlying Islands.....	619
<i>Ya-Ling Kao, Ying-Wei Wang, Guan-Hua Yu</i>	
Study on Intelligence in Sea and Air Transportation to Energy Saving and Carbon Emissions.....	621
<i>Chao-Hung Chiang, Wei-Sui Tu, Szu-Yu Kuo, Cheng-Xu Ma, Qi-Hao Wu</i>	
A Production and Marketing Platform Model Based on the AIoT and Blockchain System for Aquaculture	623
<i>Xiang-Rui Huang, Chen-Wei Su, Liang-Bi Chen</i>	
Upgrade of Public Transportation Services for Outlying Island Tourism and Shared Transportation.....	625
<i>Ya-Ling Kao, An-Hui Yang</i>	
Developing a Lightweight Model for Lip-Reading	627
<i>I Wayan Wiprayoga Wisesa, Shanq-Jang Ruan</i>	
Multi-Target Multi-Camera Pedestrian Tracking System for Non-Overlapping Cameras	629
<i>Ding-Jie Huang, Po-Yung Chou, Bo-Zheng Xie, Cheng-Hung Lin</i>	
Region-Of-Interest Detection Based on Graph Convolutional Network and H.266/VVC Encoded Video	631
<i>Ivane Delos Santos Chen, Chih-Ming Lien, Mei-Juan Chen, Chia-Hung Yeh, Yuan-Hong Lin</i>	
An Efficient Architecture Design of High-Speed Dual-Modulus Prescaler for Frequency Synthesizers.....	633
<i>Devavarshini Arulnambi, Khutiza Afrose Syed, Yue-Fang Kuo, Po-Hsien Wu</i>	
Implementation of Extreme Learning Machine Algorithm for Age-Related Macular Degeneration Detection on OCT Volumes.....	635
<i>Himajah Natarajan, Jie-Yi Ji, Aadhitiyan Sridharan, Cheng-Hung Lin, Cheng-Kai Lu, Jia-Kang Wang, Tzu-Lun Huang</i>	
Multi-Mode AI Accelerator Architecture for Thermal-Aware 3D Stacked Deep Neural Network Design.....	637
<i>Hari Chandhana Varma M, Advaidh Swaminathan, Shu-Yen Lin</i>	
Stripe-Based Airlight Estimation Algorithm for Low Complexity Image Dehazing.....	639
<i>Devibala M., Thrivikram M., Yu-Hsuan Lee</i>	
A SSN Reduction Technique for Single-Ended I/O, Parallel Link System	641
<i>Hung-Wen Lin, Chung-Yen Lin, Tzu-Yu Teng, Chi-Ting Ke</i>	
Node-Based Epidemic Modeling for Countermeasure Strategies Against Future Malware Evolution	643
<i>Yuto Hazama, Hideyoshi Miura, Tomotaka Kimura, Kouji Hirata</i>	

Agricultural Field Monitoring System Using DTN-Based Drone Networks.....	645
<i>Kota Hatajiri, Tomotaka Kimura, Takefumi Hiraguri, Jun Cheng</i>	
Adaptive Antenna Selection for Two-Hop Full-Duplex UAV Relay Networks	647
<i>Takumu Uda, Takahiro Matsuda, Takefumi Hiraguri</i>	
Performance Improvement of Maximum Likelihood Wave Source Localization with LOS/NLOS Identification	649
<i>Takayuki Mori, Shinichi Murata, Takahiro Matsuda, Takefumi Hiraguri</i>	
Countermeasure Against Backdoor Attack for Deep Learning-Based Phishing Detection	651
<i>Koko Nishiura, Tomotaka Kimura, Jun Cheng</i>	
Directional Beam Antenna Control in Response to Drone Tilts	653
<i>Chikayo Hata, Takehumi Hiraguri, Takahiro Matsuda, Tetsuro Imai, Jiro Hirokawa</i>	
Drone Flight Experiment Using RTK Positioning for Pear Pollination.....	655
<i>Naoki Yamada, Takefumi Hiraguri, Hiroyuki Shimizu, Tomotaka Kimura, Tomohito Shimada, Akane Shibasaki, Yoshihiro Takemura</i>	
ICAPD: A Deep Learning-Based Monitoring System for Continuous Ambulatory Peritoneal Dialysis.....	657
<i>Ming-Che Chen, Hsin-Hsu Chou, Hsiang-Chun Chen, Jin-Yi Lin, Ren-Guei Hsu, Jia-Xiang Chen, Yu-Tse Lee, Jung-Yao Zhuo, Wan-Jung Chang, Yang-Kun Ou</i>	
Study of Bioelectrical Impedance Sensor Analysis (BISA) During Hemodialysis	659
<i>Jian-Chiun Liou, Zong-Xuan Hsieh, Zhi-Yu Lin</i>	
An Auxiliary System for Reducing Missed Needles in Acupuncture Using Image Recognition and IoT	661
<i>Tsung-Sheng Cheng, Hsiu-Pei Wang, Jia-Li Lin, Cheng-Siou Wu, Bo-Chen Wang, Ming-Che Chen</i>	
Hardware Implementation of Constant Monitoring System of Fetal Heart Sounds	663
<i>Miyabi Funakoshi, Ohtake Satoshi</i>	
A ² Fitness:An Artificial Intelligent Fitness Assistance System Using a Augmented Reality Smart Glasses for Elderly Health-Promotion.....	665
<i>Wan-Jung Chang, Hong-Wen Chen, Jian-Ping Su, Shu-Ching Liu, Yang-Kun Ou, Ming-Che Chen</i>	
Fast Digit Recognition Using Lightweight Neural Network Model.....	667
<i>Chung-Hsing Chen, Wei-Juei Wu, Ko-Wei Huang</i>	
Muscle Condition Measurement System Using Non-Invasive Electromyography Signal	669
<i>Shih-Hsiung Lee, Hsuan-Chih Ku, Chia-Hao Tsai, Chu-Sing Yang</i>	
A Stretchable Argentum/Polyurethane Fiber Strain Sensor for Wearable Sensing Devices	671
<i>Lien-Chiang Hung, Shiau-Wu Lai, Ying-Nien Chou</i>	
Egocentric Pedestrian Trajectory Prediction	673
<i>Amar Fadillah, Ching-Lin Lee, Zhi-Xuan Wang, Kuan-Ting Lai</i>	
Military Vehicle Detection for Early Warning and Civil Protection.....	675
<i>Chih-Hsin Chen, Kuo-Chan Sheng, Kuan-Ting Lai</i>	

3D Vehicle Detection for Autonomous Buses	677
<i>Yi-Kai Chiu, Xiu-Zhi Chen, Yen-Lin Chen, Chieh-Sheng Huang</i>	
Compensation Method of Quantized Deep Learning Models for Edge Devices.....	679
<i>Xiu-Zhi Chen, Jhen-Hao Li, Yen-Lin Chen, Chieh-Sheng Huang</i>	
3D Object Detection with Low Resolution Depth Map.....	681
<i>Wei-Ting Huang, Xiu-Zhi Chen, Yen-Lin Chen, Chieh-Sheng Huang</i>	
Multi-Task Deep Learning Model for Autonomous Driving: Object Detection, Semantic Segmentation, and Depth Estimation	683
<i>Yih-Chen Wang, Jhe-Li Lin, Yen-Lin Chen, Chieh-Sheng Huang, Ming-Liang Lai</i>	
An Efficient Light-Weight Federated Learning Framework Implemented on Kubernetes and Docker	685
<i>Rou-Hoa Lu, Shih-Hsuan Yang</i>	
Using Shadow Models to Protect Private Data on Machine Unlearning.....	687
<i>Hsuan-Cheng Lin, Shih-Hsuan Yang</i>	
Design and Development of a Music Game on Smartphone with Three-Axis Gyroscope.....	689
<i>Ming-Tse Tu, Chien-Wen Cheng</i>	
An Empirical Generation Technique on Background Music Using Gated Recurrent Neural Networks	691
<i>Varinya Phanichraksaphong, Wei-Ho Tsai</i>	
Using Multiple AI Classification Models to Predict the Winner of a League of Legends (LoL) Game Based on Its First 10-Minutes of Gameplay.....	693
<i>Kristian Elijah Y. Laurel, Arielle Neena R. Gutierrez, Kean Anderson S. Tan, Renann G. Baldovino</i>	
Design of Violence Event Detection System Based on CCTVs by Human Body Pose Recognition.....	695
<i>Kuei-Chung Chang, Yi-Ching Liao</i>	
Evaluation of Ginga's CC-Web-Service Module.....	697
<i>Sergillam Barroso Oliveira, Andre Ricardo Da Silva Conceição, Eddie Batista De Lima Filho, Lucas C. Cordeiro</i>	
Hardware Architecture of Parallel Video Halftoning for Electronic Papers	699
<i>Wen-Chung Kao, Tsai-Ting Yen, Ji-Lun Ho</i>	
Electronic Paper Driven with LCD Driver Chip	701
<i>Chi-Mao Hung, Shu-Cheng Liu, Pei-Lin Tien, Wen-Chung Kao</i>	
Design of Timing Controller of Electronic Paper with Frame Buffer Reduction	703
<i>Chi-Mao Hung, Shu-Cheng Liu, Hsiao-Lung Cheng, Pei-Lin Tien, Wen-Chung Kao</i>	
A Denoising Method of Bandlimited Graph Signal Without Using GFT Basis	705
<i>Su-Ling Lee, Chien-Cheng Tseng</i>	
A Rational Graph Filtering Method for the Implementation of Heat Kernel Smoothing	707
<i>Chien-Cheng Tseng, Su-Ling Lee</i>	
Real-Time IR Image Processing Interface on FPGA with Histogram Equalization and Non-Uniform Correction.....	709
<i>Tzung-Je Lee, Yu-Wei Liu, Yu-Cheng Lin</i>	

Improving Lighting Quality and Energy Efficiency in Library	711
<i>Song-Bor Chiang, Chih-Hsuan Tsuei</i>	
Intelligent Lighting Control Under AI Architecture	713
<i>Song-Bor Chiang, Chih-Hsuan Tsuei</i>	
A Fusion Algorithm Using Camera and FMCW Radar for Emotion Recognition	715
<i>Ming-An Chung, Sung-Yun Chai, Ming-Chun Hsieh, Chia-Wei Lin, Chia-Chun Hsu, Shang-Jui Huang, Kai-Xiang Chen</i>	
Depth Camera Noise Modeling	717
<i>Chao-Chung Peng</i>	
Depth Camera Point Cloud Sharpening.....	719
<i>Chao-Chung Peng</i>	
Unified Object Detection Model for Image Style Convertible Modalities	721
<i>Mu-Chuan Li, Xiu-Zhi Chen, Yen-Lin Chen</i>	
The Electrical Properties of a-IGZO TFT Prediction Based on Variational Autoencoder Model.....	723
<i>Shih-Shin Hu, Kean-Thye Bea, Wei-Hsuan Lin, Da-Zheng Lin, Xiu-Zhi Chen, Ting-Ru Lin, Hsin-Hui Hu, Yen-Lin Chen, Kun-Ming Chen, Wai Khuen Cheng</i>	
Comparison of Conventional I-Type and T-Type FinFET	725
<i>Ying-Ru Xiong, Yu-Hsien Lin</i>	
Humidity Sensors Based on 1-D ZnO Nanostructure.....	727
<i>Sheng-Joue Young, Yu-Jhih Chu, You-Ru Huang</i>	
Into 3D-Reconstructed Apparel Over Virtual Try-On with Virtual Reality	729
<i>Surasachai Doungtup, Jirayu Petchhan, Varinya Phanichraksaphong, Jenq-Haur Wang</i>	
Implementation of an Energy-Saving Mechanism for 5G Green Communications	731
<i>Shu-Feng Cheng, Wen-Hsiu Chen</i>	
Simultaneous Localization for Wireless Environments Using Leaky Coaxial Cables	733
<i>Yafei Hou, Erika Kouda, Kawai Yusuke, Satoshi Denno</i>	
A Speedup Method for Iterative Computation of Pagerank Centrality.....	735
<i>Chien-Cheng Tseng, Su-Ling Lee</i>	
Influential Station Identification of Taipei Metro Network Based on Laplacian Centrality.....	737
<i>Chien-Cheng Tseng, Su-Ling Lee</i>	
Self-Attention Mechanism and Pyramid Feature Fusion for Point Cloud Segmentation	739
<i>Jing-Ming Guo, Hoang-Chuong Vo, Wei-Tse Wang</i>	
Fast Inter Coding Algorithm Using Conditional Probability and Correlation Analysis for H.266/VVC.....	741
<i>Chen-Rung Lu, Mei-Juan Chen, Chia-Hung Yeh</i>	
Design of a Collaborative Energy-Aware Routing Protocol for UAV-VANETs.....	743
<i>Tz-Heng Hsu, Zhi-Hao Wang, Gwo-Jiun Horng</i>	
A Machine Learning Based Scheme for Indoor/Outdoor Classification in Wireless Communication Networks	745
<i>Yu-An Chen</i>	

Give Drivers a Safe Way Home:Early Warning of Car Accidents Through Deep Learning.....	747
<i>Zhao-Jie He, Ming-Hsiang Su</i>	
Named Entity Recognition for Chinese Healthcare Applications.....	749
<i>Cheng-Yen Lee, Ming-Hsiang Su, Matus Pleva, Daniel Hládek, Yuan-Fu Liao</i>	
How Laparoscopic Surgical Skills Training Impacts Eye Movement Patterns	751
<i>Hung-Jen Chen</i>	
The Effect of Elementary School Parent-Teacher Communication Involved by Chatbot Technology.....	753
<i>Wen-Chuan Wu, Mei-Ying Liu, Ya-Chun Kang</i>	
Developing a Visual IoT Environment Analysis System to Support Self-Directed Learning of Students	755
<i>Tzu-Ning Wu, Kai-Yi Chin, Sing-Tong Yeh</i>	
Object Detection-Driven System for Healthy Eating Recommendations.....	757
<i>Yu-Hsuan Wu, Sheng-Wei Huang, Sung-Ting Chiou, Ying-Chun Lo, Hsin-Yun Hsu, Jheng-Long Wu</i>	
DeepEye: Design and Implementation of Embedded System for Environment Perception and Navigation of Visually Impaired People.....	759
<i>Shou-Hsuan Chen, Hsing-Yi Chen, Ya-Mien Cheng, Ru-Ying Li, Pei-Xuan Wang, Yu-Hao Teng</i>	
Electronic Nose with Augmented Reality Visualization for Odor Classification	761
<i>Shou-Hsuan Chen, Hsing-Yi Chen, Ru-Ying Li, Pei-Xuan Wang, Min-Hsuan Yan</i>	
Optimizing Transaction Fee for Different Decentralized Applications in Ethereum.....	763
<i>Wei-Tsung Su</i>	
Collection Platform for Audience Sensor Data in Live Music Performances Using Mobile Lines and Clouds.....	765
<i>Kohichi Ogawa</i>	
Red Light, Green Light Game System Based on IoT Devices	767
<i>Yu-Chiao Kuo, Chieh-Ling Li, Wei-Chih Yin, Chia-Yu Lin</i>	
The Accuracy Rate of the Aging Lifestyle Survey Game.....	769
<i>Karuna Yampray</i>	
How DISC Personality Types Influence Video Game Avatar Selection and In-Game Decision Making	771
<i>Karuna Yampray, Kirati Srisuchat</i>	
Scalable Interconnection Between Distributed Metaverse and Physical World	773
<i>Yuki Tanaka, Vincent Kasior, Ge Yang, Keiji Gyohnten, Hidehiro Ohki, Toshiya Takami</i>	
Adaptive Wireless Streaming for Tile-Based 360-Degree Video	775
<i>Chiao-Wen Lin, Yi-Zih Chen, Yong-Siang Wang, Yu-Hsiu Chou, Yu-Ching Yang, Nien-Chen Lin, Wanjiun Liao</i>	
Novel Spatial Interaction Method for Viewing Ancient Chinese Scroll Paintings	777
<i>Nan-Ching Tai, Ming-Shu Tsai, Kuang-Ting Huang</i>	
Quality Assessment of Image Retargeting Based on Importance of Objects.....	779
<i>Chun Tsao, Po-Chyi Su</i>	

Pitch Estimation by Denoising Preprocessor and Hybrid Estimation Model	781
<i>Yu Cheng Hung, Ping-Hung Chen, Jian-Jiun Ding</i>	
An Investigation on Data Augmentation and Multiple Instance Learning for Diagnosis of COVID-19 from Speech and Cough Sound	783
<i>Tomoya Koike, Zhihua Wang, Kun Qian, Bin Hu, Björn W. Schuller, Yoshiharu Yamamoto</i>	
Efficient Explanatory Math Animation Generating with the Integration of the Step-By-Step Solver.....	785
<i>Wei-Chia Huang, Tzung-Sheng Yang, I-Wei Lai</i>	
Optimal Contrast Enhancement with Linear Image Fusion and Patch-Based Contrast Quality Index.....	787
<i>William Eric Manongga, Cheng-Hsiung Hsieh, Rung-Ching Chen, Chia-Hsin Cheng</i>	
Sparseness-Aware Data-Selective LMS Algorithm	789
<i>Ying-Ren Chien, Han-En Hsieh</i>	
Activate Your Face in Virtual Meeting Platform	791
<i>Ridwan Salahudeen, Wan-Chi Siu, H. Anthony Chan</i>	
Prediction of Shoot Events by Considering Spatio-Temporal Relations of Multimodal Features.....	793
<i>Ryota Goka, Yuya Moroto, Keisuke Maeda, Takahiro Ogawa, Miki Haseyama</i>	
Binaural Audio Generation with Data Augmentation from 360° Videos.....	795
<i>Masaki Yoshida, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>	
3D Object Recognition Based on PointNet and Sparse Point Cloud.....	797
<i>Chih-Jer Lin, Wu-Qing Lin</i>	
Path Planning of Automatic Guided Vehicle Based on Voronoi Global Planner	799
<i>Chih-Jer Lin, Yi-Hsiang Liu</i>	
Imbalanced Data for Knowledge Tracing.....	801
<i>Jyun-Yi Chen, I-Wei Lai</i>	
Augmented Reality for Real Object Detection.....	803
<i>Wei-Xuan You, Chih-Sheng Huang, Kai-Ming Hu, Tzu-Hsin Liu, Kuan-Ting Lai</i>	
Deep Reinforcement Learning Based on Graph Neural Networks for Job-Shop Scheduling	805
<i>Kuo-Hao Ho, Ji-Han Wu, Fan Chiang, Yuan-Yu Wu, Sheng-I Chen, Ted Kuo, Feng-Jian Wang, I-Chen Wu</i>	
Automatic Deep Compression Based on Simplified Swarm Optimization	807
<i>Yuh Herng Choke, Wei-Chang Yeh</i>	
TrainUsIn – an AI Training User Interface for Custom Models on Coral Edge TPU.....	809
<i>Daniel Krauss, Fabian Otte, Jannis Röglin, Günter Holzbach, Thomas Schumann</i>	
Parameter-Efficient Tuning of a Pre-Trained Model Via Prompt Learning in Cross-Modal Retrieval	811
<i>Huaying Zhang, Rintaro Yanagi, Ren Togo, Takahiro Ogawa, Miki Haseyama</i>	
Proficiency-Level Estimation Using Heterogeneous Features Via Label Dequantized CCA.....	813
<i>Tatsuki Seino, Naoki Saito, Takahiro Ogawa, Satoshi Asamizu, Miki Haseyama</i>	
Enabling Smart Home Energy Management Through Gesture-Based Control and IoT Technology	815
<i>Khairul Hawani Rambe, Chia-Ho Ou</i>	

Occurrence Probability of SNI in Accessing Service for Improving Accuracy of Service Identification	817
<i>Ryo Asaoka, Akihiro Nakao, Masato Oguchi, Saneyasu Yamaguchi</i>	
Mining ESG Semantic Features for Success Prediction in Green-Oriented Crowdfunding Campaigns.....	819
<i>Jen-Yin Yeh, Zi-Ling Wang</i>	
UAV-Assisted Intelligent Traffic Diagnosis System Design	821
<i>Yu-Ying Wang, Chen-Wei Huang, Yi-Hua Huang, Chu-Fu Wang, Yu-Huan Hung</i>	
Experimental Performance of ISO-15118-Based EV Charging Communication.....	823
<i>Tsung-Ju Hsieh, Yi-Yun Li, Yu-Chen Yang, Hung-Yu Wei</i>	
Some Granular Structures for Weighted Digraphs	825
<i>Tse-Yu Lin</i>	
Development of a Security Diagnosis System for Wireless LAN Environment	827
<i>Yuya Izumoto, Yoshiaki Taniguchi</i>	
Voice-Powered 3D Object Generation for the Metaverse.....	829
<i>Pierre Dave Victor Katuhe, An-Chao Albert Tsai</i>	
Oral Cancer Risk Prediction by Using Gray Wolf Optimizer-Based Multifactor Dimensionality Reduction	831
<i>Shih-Yu Hsueh, Ping-Ho Chen, Ding-Chau Wang, Jhih-Ying Chen, Kuo-Chuan Wu</i>	
Adaptive Scale Selection Network for Crowd Counting.....	833
<i>Ting-Hsu Lai, Tsung-Jung Liu, Kuan-Hsien Liu</i>	
MADnet: A Multiple Attention Decoder Network for Segmentation of Remote Sensing Images	835
<i>Kuan-Hsien Liu, Bo-Yen Lin, Tsung-Jung Liu</i>	
Facial Expression Recognition in the Wild from Attention to Vision Transformer Based CNNs	837
<i>Kuan-Hsien Liu, Xiang-Kun Shih, Tsung-Jung Liu</i>	
Implementing Multi-Level Features in a Student-Teacher Network for Anomaly Detection.....	839
<i>Isack Farady, Bhagyashri Khimsuriya, Ruchita Sagathiya, Po-Chiang Lin, Chih-Yang Lin</i>	
Automated Slice Selection and Labeling of Hippocampus Regions for Alzheimer's Disease	841
<i>Elvin Nur Furqon, Isack Farady, Po-Chiang Lin, Chi-Wen Lung, Wen-Thong Chang, John Sahaya Rani Alex, Chih-Yang Lin</i>	
Automatic Detection of Lumbar Disc Herniation Using YOLOv7	843
<i>Ardha Ardea Prisilla, Yori Pusparani, Wen-Thong Chang, Ben-Yi Liao, Yih-Kuen Jan, Peter Ardhiyanto, Chih-Yang Lin, Chi-Wen Lung</i>	
Deep Learning Approach to Predict Alzheimer's Disease Through Magnetic Resonance Images	845
<i>Gilang Titah Ramadhan, Yori Pusparani, Isack Farady, Elvin Nur Furqon, Chih-Yang Lin, Wen-Hung Chao, John Sahaya Rani Alex, Jeetashree Aparajeeta, Chi-Wen Lung</i>	
3D Dense U-Net-ASPP for MRI Imaging Segmentation of Breast Tumors.....	847
<i>Hsiao-Tzu Chang, Jian-Da Li, Mohammad Alkhaleefah, Yang-Lang Chang</i>	
FaceNet-CGAN: A Deep Learning-Based Approach for Masked Face Recognition	849
<i>Mohammad Alkhaleefah, Tan-Hsu Tan, Ming-Kuei Yeh, Yang-Lang Chang</i>	

A Comparative Study of Machine Learning for Classification of Sng and Pain in Mice	851
<i>Hao-En Yen, Chao-Cheng Wu, Cheng-Han Lee, Chih-Cheng Chen, Hsiao-Chi Li</i>	
Single Underwater Image Restoration Via Unsupervised Generative Adversarial Network and Contrastive Learning	853
<i>Yi-Hung Sung, Li-Wei Kang, Chia-Hung Yeh</i>	
Collision Avoidance for AGV Navigation Using the Time Elastic Band Algorithm	855
<i>Pei-En Hsu, Cheng-Hung Lin, Jyun-Hong He, Hsin-Han Chiang</i>	
The Development of an Autonomous Robotic Scanning System with the Laser Rangefinder	857
<i>Hung-Chin Ko, Syuan-Yi Chen, Jyun-Hong He, Hsin-Han Chiang</i>	
Road Damage Detection Using Deep Learning and Cloud Platforms	859
<i>Wei-Cheng Chiang, Hsien-Sung Chiu, Jin-Shyan Lee</i>	
Parametric Optimization of WEDM Process for Machining ANSI Steel Using Soft-Computing Methods	861
<i>Yi-Zhen Chen, Hsin-Han Chiang, Jo-An Liao, Yen-Lin Chen, Hsiao-Chi Li</i>	

Author Index