

IS3C2020 Poster Presentation List

Poster			
Nov. 13 09:00- 12:00	Paper No	Paper Title	Authors
	#1071	Complexity Distribution and Control for the Coding Tree Unit in High Efficiency Video Coding	Jiunn-Tsair Fang, Ju-Kai Chen
	#1097	ROI Detection Based on Deep Neural Network for Gauge Images	Chao-Chuan Chang, Jen-Yung Lin, Amdy S. Chiou, Guo-Shiang Lin
	#1124	A Convolutional Neural Network for Predicting the Visual Acuity in Angio Retina Images	Hong-Heng Ke, Yi-Ting Hsieh, Yu-Yi Lin, Ying-Hui Lai, Chung-Yen Su
	#1219	The management control system for plant factory that uses the IoT technology in combination with Augmented Reality technology	Tai-Hung Wang, Xue-Ru Dai, Pei-Yu Wang, Yu-Xiang Hong, Zi-Xiang Su, Sheng-Wei Gao, Shi-Lun Wang
	#1281	Relation between Environment Color and Image Processing Performance at Design Development Stage	Eva Chang, Rain Chen, Chien-Yu Lin, Pin-Yun Hsiao
	#1309	A realization of transform domain distributed video coding on Raspberry Pi	Yih-Chuan Lin, Bang-Yao Deng

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	Paper No	Paper Title	Authors
Nov. 13 09:00- 12:00	#1427	A Gesture Controlled Music Playback System Using Convolutional Neural Network	Hung-Kuang Chen, Che-Chia Chuang
	#1036	Tennis Match Tracking by Mobile Robot with Signal Analysis of Ultrasonic Sensor	Da-Wei Wang, You-Yang Lin, Burransetty Hemanth Kumar, Cheng-Yu Peng
	#1017	Applying Internet of Things (IoT) Technology to Automatic Fire-extinguishing System in Machine Rooms	Meng-Hui Wang, Shiue-Der Lu, Po-Yi Ho, Shao-En Wei, Cheng-Che Hsieh
	#1207	A Novel Single-Stage High-Power-Factor LED Power Supply with Soft-Switching Feature for Streetlight Applications	Chun-An Cheng, Hung-Liang Cheng, Chien-Hsuan Chang, En-Chih Chang, Wei-Shiang Hung, Long-Fu Lan
	#1349	Intuitive Criteria for Site Selection and Performance Evaluation of PV Systems in Southern Taiwan	Min-Chuan Lin, Zih-Syuan Lin, Che-Wei Chang
	#1038	Using Ultrasonic Sensors and a Knowledge-based Neural Fuzzy Controller for Mobile Robot Navigation Control	Cheng-Hung Chen, Shiou-Yun Jeng, Cheng-Jian Lin, Hsueh-Yi Lin, Cheng-Yi Yu
	#1067	Integrated Image Sensor and Hyperparameter Optimization of Convolutional Neural Network for Facial Skin Detection	Cheng-Hung Chen, Yu-Wen Chou, Shiou-Yun Jeng, Hsueh-Yi Lin, Cheng-Yi Yu

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	Paper No	Paper Title	Authors
Nov. 13 09:00- 12:00	#1129	A Study of Embedding Codes Using q-ary Convolutional Codes	Jyun-Jie Wang, Chi-Yuan Lin, Sheng-Chih Yang, Hsi-Yuan Chang, Yin-Chen Lin
	#1187	Research on the Application of Jigsaw Generative Adversarial Network to Face Generation	Zhen-Jie Yu, Sheng-Chih Yang
	#1278	Chi-Square Detection for PVD Steganography	I-Hui Pan, Kung-Chin Liu, Chiang-Lung Liu
	#1292	Using Improved Rapid Automatic Keyword Extraction for Voice-based Mechanical Arm Control	Cheng-Hung Chen, Shiou-Yun Jeng
	#1302	Design of AB Broker-Based Bio-Signal Analysis System to Secure Interoperability	Moon-Il Joo, Tae-Woong Kim, Youl-Ga Cho, Hee-Cheol Kim
	#1172	Chatbot Application in Laboratory Equipment Management and e-assistant	Shih-Hsiung Lin, Ray-Shine Run, Jun-Yuan Yan
	#1212	Development and Application of Intelligent Agricultural Planting Technology - The Case of Tea	Mei-Yu Wu, Chih-Kun Ke
	#1226	Readmission Prediction for Patients with Ischemic Stroke after Discharge	Chi-Hsun Lien, Fu-Hsing Wu, Po-Chou Chan, Chien-Ming Tseng, Hsuan-Hung Lin, Yung-Fu Chen

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	Paper No	Paper Title	Authors
Nov. 13 09:00- 12:00	#1231	Designing AI Models for Predicting Ischemic Stroke Using Administrative Healthcare Database	Wai-Fai Tung, Fu-Hsing Wu, Po-Chou Chan, Hsuan-Hung Lin, Yung-Fu Chen, Chih-Sheng Lin
	#1268	Smart Home Trash Can based on Artificial Intelligence Technologies	Yu-Huei Cheng, Hong-Kai Ruan, Jiun-Jian Liaw, Che-Nan Kuo
	#1048	A Fuzzy Neural Network Approach to Daily Fish Catch Prediction with Capacity Analysis	Chih-Chiang Chen, Sheng-Jui Wang, Huan-Wei Liu
	#1237	High Precision Machine Learning Based Maximum Lyapunov Exponents Prediction Model of Spherical Porous Gas Bearing System	Ping-Huan Kuo, Cheng-Chi Wang
	#1295	Integration of IoT and modified LSTM framework for water-cooled chiller COP forecasting	Chao-Wei Yu, June-Wei Chen, Yen-Lin Chen
	#1296	Automatic Adjustment Method for Rotor Dynamic Balance System	Yi Hao Chung, Chao-Wei Yu, Bo-Rui Wen, Yen-Lin Chen
	#1341	Wireless Indoor Positioning and Navigation of AGV with Measurement Uncertainties	Che-An Liao, Shu-Hao Liang, Po Ting Lin
	#1342	Identification Machining State and Specimen Quality by Using Digital Image Correlation	Ching-Yuan Chang, En-Chieh Chang

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	Paper No	Paper Title	Authors
Nov. 13 09:00- 12:00	#1411	An Improved Mode-Switched Grid-Based Architecture Combined FLC with Taguchi Method in Wireless Sensor Networks	Young-Long Chen, Gun-Wen Xiao, Hsin-Chuan Lu
	#1110	Real-Time THD Minimization Algorithm for Cascade Multilevel Inverter	Yu-Chi Wu, Chia-Huang Li
	#1434	A research on the Taipei MRT passenger traffic prediction model	You-Shyang Chen, Su Fen Chen, Chien-Ku Lin, Shang-Hung Chen
	#1435	A Research on Image Captioning by Different Encoder Networks	Jieh-Ren Chang, Tsun-Ta Ling, Ting-Chun Li

IS3C2020 Paper Presentation Schedule

Friday, November 13

Session Track 1_1 (LC601): Computer			
	Paper No	Paper Title	Authors
Nov. 13 13:10- 14:50	#1024	Applied the Software of MATLAB to Calculate the Balanced Three-Phase Fault Using Impedance Matrix	Ming-Jong Lin
	#1033	SSD I/O Scheduling with Elastic Striping Design	Chang-Wei Chen, Yung-Feng Lu, Chin-Fu Kuo, Chun Chen
	#1066	Fog detection application in basin	Jia-Xian Jian, Chuin-Mu Wang
	#1069	AI-based College Course Selection Recommendation System: Performance Prediction and Curriculum Suggestion	Yu-Hsuan Wu, Hsiao-Kuang Wu
	#1206	Equality NoC: A Novel NoC Topology for High Performance and Energy Efficiency	Chun-Ho Cheng, Hong-Lin Wu, Chi-Hsiu Liang, Chao-Chin Li, Chun-Ming Chen, Po-Lin Huang, Sang-Lin Huang, Chi-Chuan Hwang
	#1229	The Design and Implementation of an Integrated Building Environment for Android Systems	Yi-Kuan Wu, Jing Chen

Session Track 2 (LC602): Multimedia & Intelligent Computing

	Paper No	Paper Title	Authors
Nov. 13 13:10- 14:50	#1029	DDSnet: A Deep Document Segmentation with Hybrid Blocks Architecture Network	Jing-Ming Guo, Li-Ying Chang, Hao Hsuan Lee
	#1106	An Analysis for Motivating Sketching Practice with Augmented Reality in Da Vinci Eye	Shih-Chieh Liao, Ming-Ju Kuo
	#1133	Early Intervention VR Sporting Games for Motor Skill Developmental Delay Children	Shiu-Hau Tsai, Ying-Hao Hsieh, Ting-Hao Chao, Shih-Ching Yeh, Hsiao-Kuang Wu, Hsiao Wen Kao
	#1232	Vehicle Distance Estimation Method Based on Monocular Camera	Tzu-Yun Tseng, Jian-Jiun Ding
	#1374	Learning Based Age Estimation Using Joint Loss and Facial Landmarks	Min Chen Hsu, Jian-Jiun Ding

Session Track 3 (LC603): Communication Application

	Paper No	Paper Title	Authors
Nov. 13 13:10- 14:50	#1046	A Deployment Management of High-Availability Microservices for Edge Computing	Hung-Ming Chen, Shih-Ying Chen, Zhong-Xiang Zheng, Ti-Wei Huang, Chen-Yu Huang
	#1057	A New Type 3D Printing Microwave Resonant Cavity for Materials Moisture Sensing	Wei-Chen Cheng, Jwo-Shiun Sun, Guan-Yu Chen, Chi-Fan Liao, Kelvin Cheng, Chu-Hsien Cheng
	#1099	Using SDN to Construct Network Slicing Like Platform for 5G Service	Hung-Chin Jang, Yu-Chiao Hsu, Han-Hsuan Lin
	#1103	A Novel Turbo Scheme Combining PTS with Adaptive TR for PAPR Reduction in OFDM systems	Yung Ping Tu, Feng Hsu Wu, Yung-Fa Huang
	#1200	Robotic Arm Combined with the Visual Images in a Transparent Object Recognition	Chun-Kuan Chao, Shang-Ya Wu, Zhi-Tong Yan, Min-Long Tsai, Chia-Chi Hsu, Ully Raihany, Cheng-Yu Peng
	#1204	Sound Detection of CNC Milling Machine by Embedded System	Shu-Wei Kuo, Ully Raihany, Cheng-Yu Peng

Session Track 4-1 (LC604): Integrated Circuits

	Paper No	Paper Title	Authors
Nov. 13 13:10- 14:50	#1010	Analog-Digital Converter with Neural Network and DC-DC Converter for Underwater Solar Charging	Wen Cheng Lai
	#1039	Continuous-Time Low-Pass Sigma-Delta ADC for Ambient Light Sensor Applications	Wen Cheng Lai
	#1060	The effects of different electrodes and surface oxygen plasma treatment for switching behavior on tri-layer Resistive Random Access Memory	Hong Kai Wu, Hsin-Chiang You, Cheng Yen Wu
	#1074	A Hybrid Supply Modulator with Envelop Tracking Technique for RF Power Amplifier	Pao-Hua Liao, Yi-Hsun Yang, Yuh-Shyan Hwang
	#1075	A 10-bit 30MS/s Subranging SAR ADC with a Triple Reference Voltage Technique	Pao-Hua Liao, Wei-Ing Wu, Yuh-Shyan Hwang

Session Track 5_1 (LC605): Consumer Electronics

	Paper No	Paper Title	Authors
Nov. 13 13:10- 14:50	#1026	Automatic login system for forehead temperature measurement	Sheng-Hsiung Lin, Ching-Chun Lin
	#1049	DALI-2 Intelligent Lighting Control System	Man-Lin Wu, Che-Min Kung, Yi-Nan Lin
	#1050	A Programmable Regulation System for Baking Western-style Pastry	Ting-Hsiang Wang, Chi-Pan Hwang
	#1105	The Study of Improving Makeup Tools and the Influence of Messy Dressing Room	Shih-Chieh Liao, Cheng-Yan Shuai, Ming-Ju Kuo
	#1167	A Study on Evaluation for Smart Adaptive Lighting Quality and Zone System	Wen-Pinn Fang, Nai-Tzu Chen

Session Track 1_2 (LC601): Computer

Nov. 13 15:10- 16:50	Paper No	Paper Title	Authors
	#1214	A Systematic Evaluation for Paint Messages and Their Processing among C++/CLI Controls	Gao Wei Chang
	#1223	Exploring Consistency of C++/CLI Programming Models with Migration Design from Hand-Made to Wizard-Readable Codes	Gao Wei Chang
	#1236	Application of Vehicle Detection Based On Deep Learning in Headlight Control	Zi-Han Huang, Chuin-Mu Wang, Wun-Ciang Wu, Wun-Syun Jhang
	#1415	A Two-Stage Feature Extraction Gated Recurrent Unit for Wind Power Prediction	Jung-Bin Li, Yi-Zhu Huang

Session IS-03 (LC602): Advanced Computer Vision

Technologies

Nov. 13 15:10- 16:50	Paper No	Paper Title	Authors
	#1404	Multi-fusion Feature Pyramid for Real-time Hand Detection	Chuan-Wang Chang, Anting Hsieh, Pirdiansyah Hendri, Jun-Wei Hsieh
	#1051	A Posture Evaluation System for Fitness Videos based on Recurrent Neural Network	An-Lun Liu, Wei-Ta Chu
	#1054	End-to-End Deep Learning Model for Steering Angle Control of Autonomous Vehicles	Abida Khanum, Chao-Yang Lee, Chu-Sing Yang
	#1056	6DoF Tracking in Virtual Reality by Deep RNN Model	Yun-Kai Chang, Mai-Keh Chen, Yun-Lun Li, Hao-Ting Li, Chen-Kuo Chiang
	#1092	Automatic Leaf Counting Using Improved YOLOv3	Yi-Lin Tu, Wei-Yang Lin, Yao-Cheng Lin

Session Track 8 (LC603): Digital Signal Processing

Nov. 13 15:10- 16:50	Paper No	Paper Title	Authors
	#1027	Graph Fourier Transform Centrality for Taipei Metro System	Chien-Cheng Tseng, Su-Ling Lee
	#1028	A Temperature Data Denoising Method Using Laplacian Matrix and Neumann Series	Chien-Cheng Tseng, Su-Ling Lee
	#1034	An Easy Wearable Gait Assessment System for Assessing Stroke Patients	Mu-Hsun Tseng, Tain-Song Chen, Ya-Ting Chang
	#1035	Development of an Easy Equipment for Evaluating Sleep Quality	Mu-Hsun Tseng, Tain-Song Chen, Pik-Fei Yee
	#1081	Applying Image Processing to Dynamic Face Detection	Yi-Nung Chung, Chien-Chih Lin, Ming-Sung Chiu, Chia-Sheng Cheng, Ming-Tsung Yeh
	#1220	The detection of bearing incipient fault with maximal overlap discrete wavelet packet transform and sparse code shrinkage denoising	Da-Ming Yang

Session Track 4-2 (LC604): Integrated Circuits

	Paper No	Paper Title	Authors
Nov. 13 15:10- 16:50	#1239	2+2 Switched-Current Delta-Sigma Modulator with Digital Noise Cancellation Circuit	Guo-Ming Sung, Chun-Ting Lee, Sian-Wei Chao
	#1240	10-Bit Successive Approximation Register Analogto-Digital Converter for BLDC Motor Drive	Guo-Ming Sung, Po-En Wu, Jun-Min Xu
	#1266	All Digital Synchronous Low-Dropout Regular with Multi-phase Trigger	Wei-Bin Yang, Cheng-Wei Lin, Horng-Yuan Shih
	#1276	Effects of direct optical ablation and sequent thermal ablation on an ultrafast pulsed laser microprocessing	Wen-Chieh Wu, Ching-Yen Ho
	#1377	An 8-bit 1.5GS/s Subranging ADC with Level-Shift Operation and Calibration Techniques	Chung-Ming Yang, Tai-Haur Kuo

Session Track 5_2 (LC605): Consumer Electronics

	Paper No	Paper Title	Authors
Nov. 13 15:10- 16:50	#1186	Design and Implementation of a Modular AI-enabled Shovel Weeder	Bo-Xuan Xie, Sheng-Cheng Chung, Chung-Liang Chang
	#1208	A Single-Switch LED Tube Light Driver with Coupled-Inductor and Power-Factor-Correction for Indoor Lighting Applications	Chun-An Cheng, Hung-Liang Cheng, En-Chih Chang, Chien-Hsuan Chang, Su-Wun Lai, Pin-Hao Huang
	#1216	Efficiency analysis of light emitting diodes based on material properties and structures	Wen-Chieh Wu, Ching-Yen Ho
	#1306	Flowmeter Selection for Hygienic Fluid Handling Applications Using Trade-Off Analysis	Fuhua Jen, Ryan Collin De Leon
	#1399	Applying ant algorithm to the automatic control system of freight load	Te-Kwei Wang, Yu-Hsun Lin, Chih-Hao Chuan, Jia-Ming Lin
	#1400	Applying smart cloud in the hospital card swiping and scheduling system	Chih-Ming Lin, Te-Kwei Wang, Yu Hsun Lin, Jin Rong Wu, Chia Ho Chao

IS3C2020 Paper Presentation Schedule

Saturday, November 14

Session Track 6_1 (LC601): Renewable Energy			
	Paper No	Paper Title	Authors
Nov. 14 10:20- 12:00	#1040	Applying Hybrid Passive Current-Sharing Components to Non-Isolated LED Driver	W. Z. Jiang, K. I. Hwu, H. H. Chen
	#1041	Improvement of Light Load Efficiency for Ultrahigh Step-Down Converter	Y. T. Yau, C. W. Wang, K. I. Hwu
	#1042	Smart Active Battery Charger for Prototypal Electric Scooter	Yu-Kun Tai, Yuan-Hua Lin, K. I. Hwu
	#1147	Overview of Frequency Control Technologies for Wind Power Systems	Chung-Han Lin, Yuan-Kang Wu
	#1153	Overview of Reactive Power and Voltage Control of Offshore Wind Farms	Deng-Yue Gau, Yuan-Kang Wu
	#1154	Power-Sharing in a Meshed HVDC Network and Its Application for Frequency Support	Vo Thanh Kien Nguyen, Yuan-Kang Wu, Quoc Dung Phan

Session Track 7 (LC602): Systems and Control

	Paper No	Paper Title	Authors
Nov. 14 10:20- 12:00	#1144	Image Home Care System Based On Artificial Intelligence IoT Architecture	Wen-Tsai Sung, Tsun-Hao Sun
	#1146	Pet Home Monitoring System Based on Internet of Things	Wen-Tsai Sung, Ching-Hao Weng, Jing-An Shih
	#1163	Employing Smart Contract and Blockchain Technologies for Big Data Transmission and Analysis in Wireless Sensor Networks with an Innovative Approach	Sung-Jung Hsiao, Shun-Yuan Wang, Yun-Jung Hsu, Hou-Tsan Lee
	#1345	Comparison of Deep Reinforcement Learning Algorithms in a Robot Manipulator Control Application	Chang Chu, Kazuhiko Takahashi, Masafumi Hashimoto
	#1143	Internet of Things Combined with Solar Monitoring and Management System	Wen-Tsai Sung, Chan Man Him

Session Track 2 + IS-03 (LC603): Multimedia & Intelligent Computing / Advanced Computer Vision Technologies

	Paper No	Paper Title	Authors
Nov. 14 10:20- 12:00	#1375	Dynamic Motion Vector Searching Algorithm Using Window Adjustment, Global Motion Information, and Direction Priors	Chun-Hung Lin, Jian-Jiun Ding, Yi-Shang Lu
	#1235	Advanced Superpixel-Based Features and Machine Learning Based Saliency Detection	Heng-Sheng Lin, Jian-Jiun Ding, Jin-Yu Huang
	#1378	Automated Optical Inspection System for O-ring based on Photometric Stereo and Machine Vision	Fu-Sheng Yang, Chao-Ching Ho
	#1398	Diseases Classification Utilizing Tooth X-ray Images Based On Convolutional Neural Network	Lawrence Y. Deng, See Sang Ho, Xiang Yann Lim
	#1429	Attention-LSTM Fused U-Net Architecture for Organ Segmentation in CT Images	Pin-Hsiu Chen, Cheng-Hsien Huang, Shih-Kai Hung, Liang-Cheng Chen, Hui-Ling Hsieh, Wen-Yen Chiou, Moon-Sing Lee, Hon-Yi Lin, Wei-Min Liu

Session IS-01 + Track3 (LC604): Soft Computing and its Applications / Communication Application

	Paper No	Paper Title	Authors
Nov. 14 10:20- 12:00	#1128	A Big Data–Based Target Cost Management System	Yin-Chen Lin, Jyun-Jie Wang, Sheng-Chih Yang, Chi-Yuan Lin
	#1190	Cargo Delivery Itinerary Management and Inspection System	Wei-Ting Kuo, Sheng-Chih Yang, Chi-Yuan Lin
	#1227	Using deep learning improve the aerial engine nondestructive radiographic tests	Zhi-Hao Chen, Jyh-Ching Juang
	#1416	A Hybrid CNN and LSTM-Based Deep Learning Model for Abnormal Behavior Detection	Chuan-Wang Chang, Chuan-Yu Chang, You-Ying Lin
	#1213	Beyond the performance of 3D-Torus: Equality topology with low radix	Hong-Lin Wu, Chun-Ho Cheng, Chi-Hsiu Liang, Chao-Chin Li, Chun-Ming Chen, Po-Lin Huang, Sang-Lin Huang, Chi-Chuan Hwang
	#1391	The Development of LoRa Image Transmission Based on Time Division Multiplexing	Ching-Chuan Wei, Jia-Kai Huang, Chia-Chi Chang, Kuan-Chun Chang

Session IS-04 (LC605): Power Quality and Energy System

	Paper No	Paper Title	Authors
Nov. 14 10:20- 12:00	#1077	Analysis of Low-Carbon Building	You Cheng Lu, Xuan Jie Gong, Cheng You Yao, Jhe Wei Jhuang, Cheng I Chen, Chung Jen Tseng
	#1083	Power Quality Disturbances Classification Based on Wavelet Compression and Deep Convolutional Neural Network	Sunneng Sandino Berutu, Yeong-Chin Chen
	#1107	Using Multi-Mode PV-STATCOM System for Steel Plant Power System Voltage Fluctuation Mitigation	Yu-Jen Liu, Yi-Fon Pai, Cheng-Chieh Lee, Yih-Der Lee, Jheng-Lun Jiang
	#1109	Energy Management between Power Generation, Storage, and Consumption for Building Microgrid	Cheng-I Chen, Yeong-Chin Chen, Chung-Hsien Chen
	#1262	One-hour Ahead Solar Irradiance/Power Forecasting Using Radial Basis Function Neural Network with Fuzzy Activation Function	Ying-Yi Hong, Yu-Hsuan Chan, Ching-Wei Yu

Session Track 6_2 (LC601): Renewable Energy

	Paper No	Paper Title	Authors
Nov. 14 13:10- 14:50	#1182	Short-term Photovoltaic Power Forecasting Based on Improved Firefly Algorithm to optimize support vector machine	Cyprien Nsengimana, XinTong Han, HaiYu Wang, Xiu Jun Shen, Lingling Li
	#1273	Estimation of Power System Inertia Using Traditional Swing Equation, Polynomial Approximation and RV methods	Yuan-Kang Wu, Khoa Le, Thien-An Nguyen, Quoc-Dung Phan
	#1310	An Efficiency-Optimized Totem-pole Bridgeless Power Factor Correction Regulator using eGaN HEMTs	Nguyen-Nghia Do, Bing-Siang Huang, Tan-Tung Nguyen, Jian-Hong Wu, Yu-Chen Liu, Huang-Jen Chiu
	#1368	Hybrid MPPT Controller Based on the Ant Colony Optimization and Genetic Algorithm for Photovoltaic Systems under Partial Shading Conditions	Muhammad Nursyam Rizal, Kuei-Hsiang Chao
	#1417	Module Rearrangement Technique Using Switching Logic for Photovoltaic Systems under Partial Shading Conditions	Kuei-Hsiang Chao, Swami Nath Maurya
	#1425	Wind Turbulence Characteristic Under Typhoon Conditions	Michel Paurus, Jiun-Jih Miao, Yng-Ru Chen

Session IS-05 (LC602): IoT Sensing and Artificial Intelligence

	Paper No	Paper Title	Authors
Nov. 14 13:10- 14:50	#1160	Using Blockchain Technology for Data Analysis in Wireless Sensor Networks with an Innovative Approach	Shun-Yuan Wang, Yun-Jung Hsu, Sung-Jung Hsiao, Ming-Ting Chen
	#1161	Employing a Mobile Web Server Based on Innovative WOT Technology	Sung-Jung Hsiao, Wei-Chuan Lin, Han-Tzu Chiang
	#1162	Using an intelligent control system to improve the traditional fish and vegetable symbiosis system	Sung-Jung Hsiao, Yu-Chen Chang, Chi-Chieh Chang, Kai-Min Chang, Shun-Kai Shi
	#1180	Particulate Matter 2.5 Machine Learning Estimation System Based on Internet of Things Architecture	Shun-Yuan Wang, Wen-Bin Lin, Yu-Chieh Shu
	#1192	The Preliminary Design of Water Quality Monitor System for the Ecological Pond based on LoRaWAN	Chang-Wei Hsieh, Yun Ju Tsai, Corine Stefanie, Charles C.N. Wang, Wen-Thong Scott Chang
	#1431	A novel simple light-weight Neural Network for Road Segmentation	Peng-Wei Lin, Chih-Ming Hsu

**Session IS-06+Track 1 (LC603): Informatic System Design
and Implementation / Computer**

	Paper No	Paper Title	Authors
Nov. 14 13:10- 14:50	#1290	Development of a Cloud Tourism Supported Platform with Friendly Interfaces based on Linked Open Data and Big Data Analysis Techniques	Sheng-Yuan Yang, Kune-Yao Chen
	#1052	A novel processing precision maintenance system for smart machine tool	Yu-Chi Liu, Yao-Cheng Tsai
	#1102	A Deep Learning Co-training Framework for e-book Classification	Tsui-Ping Chang, Hung-Ming Chen, Jian-Qun Chen
	#1194	A Traceable Smart Grid Trading System under Blockchain	Ming-Te Chen, Chu Xuan Liang, Chia Chu Chen
	#1312	Vascular Obstruction Detection from Aortic Arch to Left Subclavian Artery Based on MRI	Yung-Kuan Chan, Hui-Han Lin, Wei-Jyun Wang, Wan-Ting Hu, Chuen-Horng Lin, Shyr-Shen Yu

Session IS-07 + Track 5 (LC604): Innovative Applications of Technologies and Data Analysis for Internet of Thing / Consumer Electronics

	Paper No	Paper Title	Authors
Nov. 14 13:10- 14:50	#1062	The Transformation of Relational Database to Wide Column Store Database	Jeang-Kuo Chen, Wei-Zhe Lee
	#1136	The Rehabilitation and Assessment in Virtual Reality Game for the patient with Cognitive impairment	Liang-Yu Chen, Li-Yen Chang, You-Chen Deng, Bing-Che Hsieh, Shih-Ching Yeh, Eric Hsiao-Kuang Wu
	#1217	Personal Driving Behaviour Analysis and Prediction	Meng-Hua Yen, Shang-Lin Tien, Yan-Ting Lin, Zhen-Jie Huang, Chi-Chun Chen
	#1274	Pet cat behavior recognition based on YOLO model	Hsiu-Te Hung, Rung-Ching Chen
	#1401	Optimal Model of Obstacle Avoidance of Two-Wheeled Robots	Jia-Hong Zhou, Chih-Liang Chen, Chi-Wei Sun

Session IS-08 (LC605): Artificial Intelligence and Internet of Things Technologies and Applications

	Paper No	Paper Title	Authors
Nov. 14 13:10- 14:50	#1169	Convolutional Neural Networks Approach for Music Genre Classification	Yu-Huei Cheng, Pang-Ching Chang, Che-Nan Kuo
	#1198	Tidal Water Level Forecasting Model Using Deep LSTM	Cheng-Hong Yang, Chih-Hsien Wu
	#1199	Forecasting enterovirus patient visits using Long Short-Term Memory	Stephanie Yang, Hsueh-Chih Chen, Wen-Ching Chen, Cheng-Hong Yang
	#1300	An Artificial Intelligence-based Proactive Blind Spot Warning System for Motorcycles	Ing-Chau Chang, Wei-Rong Chen, Xun-Mei Kuo, Ya-Jing Song, Ping-Hao Liao, Chunhui Kuo
	#1301	The Performance Evaluation to a Smart Robots Embedded with Machine Learning Schemes	Joy Iong-Zong Chen, Pisith Hengjinda

Session IS-09 (LC601): Forecasting Technique for Renewable Power Generation

	Paper No	Paper Title	Authors
Nov. 14 15:10- 16:50	#1076	Short-Term Wind Power Forecasting by Advanced Machine Learning Models	Yun-Lun Li, Zheng-An Zhu, Yun-Kai Chang, Chen-Kuo Chiang
	#1138	A Comparative Analysis of XGBoost and Temporal Convolutional Network Models for Wind Power Forecasting	Quoc-Thang Phan, Yuan-Kang Wu, Quoc-Dung Phan
	#1149	Analyzing Solar Resource Variability: a Case Study in Taiwan	Thi Bich Phuong Nguyen, Yuan-Kang Wu, Manh-Hai Pham, Ba Long Dong
	#1151	A Review of Methods for Estimating the Power Generation of Invisible Solar Sites	Yi-Hui Lai, Yuan-Kang Wu
	#1159	Probabilistic Wind Power Forecasts Considering Different NWP Models	Sheng-Hong Wu, Yuan-Kang Wu
	#1181	Short-Term Solar Power Forecasts Considering Various Weather Variables	You-Jing Zhong, Yuan-Kang Wu

Session Track 7 + IS-05 (LC602): Systems and Control / IoT

Sensing and Artificial Intelligence

Nov. 14 15:10- 16:50	Paper No	Paper Title	Authors
	#1047	Design of Synchronized Chaotic SHA256 Random Number Generators and Its Application to Image Encryption	Jie-Sheng Chen, Muddineni Raveendra, Jun-Juh Yan, Saravanakumar U, Kuang-Hui Tang
	#1079	Heterogeneous Platooning Vehicle with Robust Sensor Fault Detection and Estimation	Muhammad Rony, Hidayatullah, Jyh-Ching Juang, Zhi-Hao Fang, Wei-Hsuan Chang
	#1104	Design of multimode random number generators based on peak value coding	En-Rei Chang, Wen-Yuan Chen, Jun-Juh Yan
	#1141	Water Quality Monitoring Using Physio Chemical Sensors	Wen-Tsai Sung, Fathria Nurul Fadillah
	#1148	Study of Mini Self-Driving Car Deep Image Analysis Based on Architecture of AIoT	Wen-Tsai Sung, Chung-Yen Hsiao
	#1241	IoT-Based Home Monitoring System with FPGA Development Board and Node-RED Software	Guo-Ming Sung, Chong-Cheng Huang, Meng-Lin Ho

Session IS-10 (LC603): Intelligent Systems and Control

	Paper No	Paper Title	Authors
Nov. 14 15:10- 16:50	#1113	Quick implementation of Pulse Width Modulation(PWM), Pulse Frequency Modulation(PFM) and mixed PWM/PFM on FPGA chip	Cheng-Shion Shieh
	#1132	A Biological Automation Incubator System Based on A Single Chip	Yi-Yu Lu, Hau-Chen Yen, Kuang-Kuo Lin, Han-Wei Chen
	#1174	Emotion Recognition from Speech Signals by Neural Network	Shing-Tai Pan, Ching-Fa Chen, Chuan-Cheng Hong
	#1230	Visual-Inertial SLAM Based on Resynchronized Kalman Filter Fusion and Its Markerless Indoor Augmented Reality Path Navigation Device	Chian C. Ho, Guan-Wei Chen
	#1234	RoboRIO-based Crop Harvesting Robot	Kuo-Hsien Hsia, Bo-Jun Yang, Ze-Yu Huang, Jia-Ming Hsiao
	#1260	Development of IoT module and general portal with artificial intelligence function	Jr. Hung Guo, Kuo-Hsien Hsia

**Session IS-11 + IS-12 (LC604): Artificial Intelligence for
Engineering Business Management / Advanced Artificial
Intelligence Technologies for Smart Manufacturing**

Nov. 14 15:10- 16:50	Paper No	Paper Title	Authors
	#1211	Market Profile with Convolutional Neural Networks: Learning the Structure of Price Activities	Chern-Bin Ju, Min-Chih Hung, An-Pin Chen
	#1285	An Intelligent Disease Query System Based on Rasa NLU	Hsiao-Ting Tseng, Chen-Chiung Hsieh, Yi-Wei Lin
	#1298	Based on machine learning for personalized skin care products recommendation engine	Hsiao-hui Li, Yuan-Hsun Liao, Yen-nun Huang, Po-Jen Cheng
	#1299	Exploring Misjudgments in IoT Analytics	Hao-Ting Pai, Szu-Hong Wang, Jian-Xing Wu
	#1403	Bubble Defect Inspection in Tire Shearography Image Using Residual Neural Network	Chuan-Wang Chang, Chuan-Yu Chang, Fu-Ching Wang

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Technologies for Smart Manufacturing

Nov. 14 15:10- 16:50	Paper No	Paper Title	Authors
	#1021	Automatic Torque Controlled Mini-Screwdriver Station with A SCARA Robot and A Machine-Vision Guidance	Wen-Jeng Hsue (Albert), Chiz-Fan Tsai
	#1090	Performance Demands based Servo Motor PI Speed Controller Analytic Formulation and Parameters Design	Chao-Chung Peng, Chia-Ling Lee
	#1091	Object Recognition and Classification of 2D-SLAM using Machine Learning and Deep Learning Techniques	Yu-Fu Lin, Lee-Jang Yang, Chun-Yen Yu, Chao-Chung Peng, Der-Chen Huang
	#1093	Single-Inductor Multiple-Output Converters for Wearable Technology Applications	Wei Wang, Sendren Sheng-Dong Xu, Huang-Jen Chiu
	#1197	Inverted Pendulum System with Taguchi Proportional-Derivative Control Design as Optimized Parameters Implementing on Embedded System	Bagus Alit Prasetyo, Bo-Lin Jian, Her-Terng Yau
	#1343	Evolutionary motion planning of a redundant robot for obstacle avoidance using charge system search and artificial potential field	Chih-Jer Lin, Ting-Yi Hsieh, Hau-Yuan Cheng

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Online	Paper No	Paper Title	Authors
	#1080	Development of Mobile Application for Automatic Identification of Biotic Diseases in Oryza Sativa Using Image Processing Techniques	Ronald M. Pascual, Sarah Grace Canonigo, Lhean Ritchie Cruz, Madel Roque, Jason Nobleza
	#1326	Secrecy Outage Performance and Deep Learning Evaluation of Multihop Energy Harvesting IoT Networks over Nakagami-m Fading Channels	Toan-Van Nguyen, Thong-Nhat Tran, Kyungh Shim, Thien Huynh-The, Beongku An
	#1228	Vehicle Trajectory Prediction based on Social Generative Adversarial Network for Self-Driving Car Applications	Li-Wei Kang, Chih-Chung Hsu, I-Shan Wang, Ting-Lei Liu, Shih-Yu Chen, Chuan-Yu Chang
	#1061	Infrared Temperature Sensor Calibration Study using CMAC Neural Network	Chin-Pao Hung, Jing-Di Lei, Ting-Hang Chen
	#1094	Screw defect detection system based on AI image recognition technology	HangHong Kuo, JunJuh Yan, JuiMing Xu, ChaoTang Yu
	#1275	Deep-learning based automated segmentation of Diabetic Retinopathy symptoms	Hung Yeh, Cheng-Jhong Lin, Chih-Chung Hsu, Chia-Yen Lee
	#1089	Genetic and Fuzzy Fusion Algorithm for Coal-feeding Optimal Control of Coal-fired Power Plant	Danyang Wang, Mei Wang, Yuancheng Li

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Online	Paper No	Paper Title	Authors
	#1096	Adaptive Convolution Neural Network Algorithm of Whole Process Learning Rate for Mine Fire Detection Method	Yunchao Liu, Chi Liu, Mei Wang
	#1100	Emotion Recognition Method of Visual Evoked Potential Based on Broad Learning System	Xuebin Qin, Zhuo Wang, Chenchen Ji
	#1150	Classification of driving fatigue based on EEG signals	Xuebin Qin, Peijiao Yang, Yutong Shen, Mingqiao Li, Jiachen Hu, Janhong Yun
	#1170	Scene Recognition Model in Underground Mines Based on CNN-LSTM and Spatial-Temporal Attention Mechanism	Tianwei Zheng, Chi Liu, Beizhan Liu, Mei Wang, Yuancheng Li, Pai Wang, Xuebin Qin, Yuan Guo
	#1395	An Energy-Balanced Multi-hop Transmission Routing Algorithm for Linear Wireless Sensor Networks	Pai Wang, Zhuo Liu, Mei Wang, Xuebin Qin, Jiaqing Li
	#1432	NAO Robot Limb Control Method Based on Motor Imagery EEG	Yuan Guo, Mei Wang, Tianwei Zheng, Yuancheng Li, Pai Wang, Xuebin Qin

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Online	Paper No	Paper Title	Authors
	#1233	Awareness, Knowledge, and Attitude towards Artificial Intelligence: Perspectives of Vietnamese Information Technology Students	Pei-Ju Chao, Tsu-Hsuan Hsu, Tsai-Pei Liu, Yu-Huei Cheng
	#1152	Interactive Labeling System for Lung Nodules with CT Images	Sota Chatani, Yanhe Ma, Hong Zhang, Ying Chen, Weiwei Du
	#1222	Multiple Linear Regression Based on Stream Homomorphic Encryption Computing	Yi-Zhuo Zhang, Yiwei Liu, Chan-Liang Chung, Chi-Hua Chen, Feng-Jang Hwang
	#1376	Biological Sound Sensor Robust to Air Conduction Noise	Naoto Murakami, Kaede Torii, Shota Nakashima
	#1405	A Road Surface Distinction Method Based on Integral of Reflected Wave Using Ultrasonic Sensors	Hidemitsu Arimura, Masahiro Yamamoto, Shenglin Mu, Shota Nakashima
	#1407	Study on a Differential Evolution Type Neural Network for Intelligent Control of Ultrasonic Motor on a Meal-assistance Robot	Tomohiro Matsumoto, Shenglin Mu, Satoru Shibata, Tomonori Yamamoto, Shota Nakashima, Kanya Tanaka

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Online	Paper No	Paper Title	Authors
	#1409	An Intelligent PID Control using Neural Networks for Pneumatic Servo Systems	Akito Taniguchi, Shenglin Mu, Satoru Shibata, Tomonori Yamamoto
	#1413	Subject posture recognition by Support Vector Machine Using Obrid-Sensor	Yuki Horikawa, Daichi Hamasuna, Atsushi Matsubara, Shota Nakashima
	#1086	Multi-lead Data Extraction Method of ECG Waveform Based on Mobile Device Application	Jun-Ying Chen, Liang-Hung Wang

★ Due to COVID-19, foreigners could present by videos online.

Presentation videos will be viewed online.