

ISMAB2024 Oral Presentation

Presentation Program (September 27th, 2024)

Room 1: The Denpasar Ballroom-1

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	PT-R1	Portable fluorescence spectroscopy equipped with LED-based excitation lamps for authentication of Indonesian stingless bee honey <i>Diding Suhandy, Kusumiyati Kusumiyati, Dimas Firmanda Al Riza, Mareli Telaumbanua, Meinilwita Yulia, Hirotaka Naito</i> <i>The University of Lampung</i>
13:45 - 14:00	PT-R2	Evaluation of internal and external quality of chestnuts using VIS/NIR spectroscopy and deep learning methods <i>Gyumin Kim, Sang-Yeon Kim, Sungjay Kim, Xianghui Xin, Harin Jang, Ghiseok Kim</i> <i>Seoul National University</i>
14:00 - 14:15	PT-R3	The potential of fluorescence spectroscopy to assess lignin content in pineapple leaves <i>Maulidia Hilaili, Takahiro Hayashi, Panintorn Prempree, Bodin Na Jinda, Yuichi Ogawa, Naoshi Kondo</i> <i>Kyoto University</i>
14:15 - 14:30	PT-R4	Laboratory analysis of brix in sugarcane juice from different extraction methods using near-infrared spectroscopy <i>Akeme C. Njume, Yumika Naomasa, Yoshiaki Shinzato, and Eizo Taira</i> <i>Kagoshima University</i>
14:30 - 14:45	PT-R5	Fast discrimination of arabica and robusta green coffee beans by portable fluorescence spectroscopy and chemometrics <i>Meinilwita Yulia, Slamet Widodo, Analiasari Analiasari, Diding Suhandy, Hirotaka Naito</i> <i>Lampung State Polytechnic</i>
14:45 - 15:00	PT-R6	Injury of bacterial spores treated by high hydrostatic pressure processing and its evaluation of the related substances by FT-NIR <i>Seishiro Ariyoshi, Mai Eguchi, Satoshi Sekimoto, Daisuke Hamanaka</i> <i>Kagoshima University</i>
15:00 - 15:15		Coffee Break
Chairman:		
15:15 - 15:30	PT-R7	Android-based avocado ripeness prediction system: Revolutionizing fruit quality assessment <i>Gusti Bagus Eka Chandra, I Made Anom S. Wijaya, Ida Bagus Putu Gunadnya</i> <i>Udayana University</i>
15:30 - 15:45	PT-R8	Persimmon disease detection and severity assessment using semantic segmentation analysis <i>Seokha Hwang, Eungchan Kim, Chang-Hyup Lee, Jiwon Ryu, Seung-Woo Roh, Min-Gyu Baek, Ghiseok Kim</i> <i>Seoul National University</i>
15:45 - 16:00	PT-R9	Detection of foreign material in powdered parsley by pattern analysis in millimeter-wave transmission images <i>Tetsuhito Suzuki, Kensuke Nakasuka, Ho Jinyama</i> <i>Mie University</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
16:00 - 16:15	PT-R10	Effects of α -lipoic acid treatment on volatile compounds of fresh-cut fruits and vegetables <i>Hyuga Minamoto, Takahisa Nishizu, Kohei Nakano, Manasikan Thammawong, Tadasu Teramoto, Teppei Imaizumi</i> <i>Gifu University</i>
16:15 - 16:30	PT-R11	Screening of quality indicator substances in Chinese yams by GCMS-based metabolomics <i>Tatsuya Koide, Masao Sakurai, Thammawong Manasikan, Masayasu Nagata, Kohei Nakano</i> <i>Gifu University</i>
16:30 - 16:45	PT-R12	Prediction of strawberry ripeness by image and ranking method <i>Yukihisa Nagaki, Shige Koseki, Kento Koyama</i> <i>Hokkaido University</i>
Chairman:		
16:50 - 17:05	PT-R13	Comparative analysis of hyperspectral imaging systems for detecting various external abnormalities in citrus fruits <i>Seo-Young Kim, Ye-Na Kim, Haeun Kim, Byoung-Kwan Cho</i> <i>Chungnam National University</i>
17:05 - 17:20	PT-R14	Fluorescence indices for estimating water loss in 'Pione' grapes during storage <i>Panintorn Prempree, Sohta Inoue, Solomon Mehretie, Takahiro Hayashi, Hiroshi Nakashima, Kimiaki Toshikiyo, Motomi Nishimoto, Yuichi Ogawa, Naoshi Kondo</i> <i>Kyoto university</i>
17:20 - 17:35	PT-R15	Feasibility study of time-series spectral image analysis for assessing spinach freshness <i>Kanon Tsuru, Amani Kahandawa, Hiromichi Itoh, Shinichiro Kuroki</i> <i>Kobe University</i>
17:35 - 17:50	PT-R16	Development of a quantitative analytical method for NAD-related metabolites in harvested fruits and vegetables <i>Keito Ito, Manasikan Thammawong, Masayasu Nagata, Kohei Nakano</i> <i>Gifu University</i>
17:50 - 18:05	PT-R17	Dynamic changes in bacterial flora diversity due to inter-varietal differences and ultraviolet irradiation during storage of tomato fruit <i>Risa Kuramoto, Haruka Sameshima, Daisuke Hamanaka</i> <i>Kagoshima University</i>

Presentation Program (September 27th, 2024)

Room 2: The Denpasar Ballroom-2

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	PM-R1	Comparison of potato cultivation status in the United States and the South Korea <i>Jeong-Hun Kim, Moon-Kyeong Jang, Yun-Jeong Yang, Ju-Seok Nam</i> <i>Kangwon National University</i>
13:45 - 14:00	PM-R2	Research on double-bedder green onion transplanter <i>Jun-Yan Liu, Li-Cheng Hsieh</i> <i>National Chung Hsing University</i>
14:00 - 14:15	PM-R3	Developing vehicle work mode and power distribution control algorithm for electric agricultural tractor to maximize field operation time <i>Seong-Jun Kim, In-Su Kim, Seo-Jung Byeon, Jong-Woo Ha, Jin-Kam Park, Chan-seok Ryu, Jin-Woong Lee</i> <i>Korea Institute of Industrial Technology</i>
14:15 - 14:30	PM-R4	Maximum static friction force prediction model for front-end loaded tractor <i>Kwang-Mo Kim, Moon-Kyeong Jang, Jeong-Hun Kim, Ju-Seok Nam</i> <i>Kangwon National University</i>
14:30 - 14:45	PM-R5	Driving force control of nonlinear dynamics in agricultural tractor <i>Masahisa Watanabe, Kenshi Sakai</i> <i>Tokyo University of Agriculture and Technology</i>
14:45 - 15:00	PM-R6	Validation of DEM model for corn threshing through kernel distribution in the threshing chamber of a combine harvester for multi-crops <i>Nozomi Otsuka, Yasumaru Hirai, Koichiro Fukami, Takashi Okayasu, Kimiyasu Takahashi, Muneshi Mitsuoka</i> <i>Kyushu University</i>
15:00 - 15:15		Coffee Break
Chairman:		
15:15 - 15:30	PM-R7	Threshing energy efficiency of rice harvested by a head-feeding combine <i>Yasumaru Hirai, Shotaro Kubo, Saki Tsukida, Takashi Okayasu, Muneshi Mitsuoka</i> <i>Kyushu University</i>
15:30 - 15:45	PM-R8	Analysis of lateral overturning and backward rollover of implemented agricultural tractor <i>Moon-Kyeong Jang, Yun-Jeong Yang, Kwang-Mo Kim, Ju-Seok Nam</i> <i>Kangwon National University</i>
15:45 - 16:00	PM-R9	Analysis of reaction force of operator's arms when a walking tractor passes through a level-difference <i>Saki Tsukida, Yasumaru Hirai, Hiroaki Kubodera, Yuya Aoyagi, Takashi Okayasu, Muneshi Mitsuoka</i> <i>Kyushu University</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
16:00 - 16:15	PM-R10	Application of particle image velocimetry for grain tank of combine harvester during rice discharge <i>Ango Inoue, Kenji Hiyoshi, Keishiro Nagano, Toshinori Gejima, Taichi Kobayashi</i> <i>University of Miyazaki</i>
16:15 - 16:30	PM-R11	Type determination of agricultural machinery warehouse based on space analysis and farm's using status <i>Byounggap Kim, Jeongmin Lee</i> <i>National Institute of Agricultural Sciences</i>
16:30 - 16:45	PM-R12	Configuration design and power analysis of 55kw electric tractor powertrain with a planetary gear <i>Kyeongdae Kim, Wongun Kim, Ganghyun Kim, Siyoung Lee</i> <i>Korea Institute of Industrial Technology</i>
16:45 - 17:00	PM-R13	Agricultural electric vehicles BLDC and PMSM are used for comparison <i>Yi-Jen Kao, Chia-Hsing Chuang, Huaang-Youh Hurng</i> <i>National Chiayi University</i>

Presentation Program (September 27th, 2024)

Room 3: The Denpasar Ballroom-3

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	GT-R1	Motion analysis of a robot that performs tasks by running randomly <i>Tadashi Chosa, Tomoyuki Sasaki, Yuzu Umezaki, Yuki Mizutani</i> <i>Tokyo University of Agriculture and Technology</i>
13:45 - 14:00	GT-R2	Integrating hybrid system of battery and ultracapacitors for electrification agricultural machinery <i>Yulian Fatkur Rohman, Muhammad Bilhaq Ashlah, Sean Wu-Yang</i> <i>National Chung Hsing University</i>
14:00 - 14:15	GT-R3	Performance of vacuum–fractional distillation reactor to develop crude palm oil as a renewable electrical insulator <i>Muhamad Mustangin, Bambang Purwantana, Chusnul Hidayat, Radi</i> <i>Mechanical Engineering and Technology in Plantation Industry</i>
14:15 - 14:30	GT-R4	Savonius turbine integrated with triboelectric nanogenerator for wind energy harvester <i>Yao-Yu Tsai, Wei-Cheng Chen, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
14:30 - 14:45	GT-R5	Effect on plant growth in different light conditions under glass and transparent solar panels <i>Ryosuke Miyata, Seongmin Park, Muneshi Mitsuoka, Yasumaru Hirai, Yukio Ozaki, Takashi Okayasu</i> <i>Kyushu University</i>
14:45 - 15:00	GT-R6	Effectiveness of adding compost material on soil to conserve water on tomato cultivation <i>Nuril Istiqomah, Idah Andriyani, Sri Wahyuningsih, Ning Puji Lestari</i> <i>Jember University</i>
15:00 - 15:15	Coffee Break	
Chairman:		
15:15 - 15:30	BR-R1	Approach strategy for achieving high success rate in a tomato harvesting robot <i>Takuya Fujinaga, Tsuneo Nakanishi</i> <i>Osaka Metropolitan University</i>
15:30 - 15:45	BR-R2	Development of detection of classification system for cherry tomato harvesting robot <i>Aeron R. Mojica, Sakir Kanmis, Ping-Lang Yen</i> <i>National Taiwan University</i>
15:45 - 16:00	BR-R3	Development of workflow understanding collaborative robot for citrus harvesting <i>Yoshinari Morio, Mitsuki Shigeoka, Haruna Shimizu, Natsumi Mine, Seiya Yokoe, Takuya Yoshine, Shin Nakashima, Hirotaka Naito</i> <i>Mie University</i>
16:00 - 16:15	BR-R4	AMR navigation for tomato harvesting robot in greenhouse <i>Huan-Hsuan Peng, Shang-Wei Hsu, Hao-Cheng Zuo, Ping-Lang Yen</i> <i>National Taiwan University</i>
16:15 - 16:30	BR-R5	Preliminary design of oil palm FFB elevator with counting feature to reduce worker workload <i>Andreas Wahyu Krisdiarto, Eko Aris Budi Cahyono, Teddy Suparyanto, Irya Wisnubhadra</i> <i>Instiper Agricultural University</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
16:35 - 16:50	BR-R6	Performance comparison between classification and object detection approaches in Cucurbitaceae pests, diseases, and disorder identification <i>Wen-Fang Yen, Wei-Chun Gao, Yu-Lun Dai, Chu-Ping Lin, Jin-Hsing Huang, Yan-Fu Kuo</i> <i>National Taiwan University</i>
16:50 - 17:05	BR-R7	Improvement of object detection in rice field environment with a fisheye camera for robot combine <i>Sikai Chen, Michihisa Iida, Jiajun Zhu, Masahiko Suguri, Ryohei Masuda</i> <i>Kyoto University</i>
17:05 - 17:20	BR-R8	Development and integration of small robots with advanced plant sensing systems <i>Sutan Muhamad Sadam Awal, Koichi Nomura, Masaharu Kitano, Daisuke Yasutake, Takashi Okayasu</i> <i>Kochi University</i>
17:20 - 17:35	BR-R9	Automatic mowing control of electric agricultural machine <i>Michihisa Iida, Hsiu-Yu Hsu, Haruto Iwata, Kazuyoshi Nonami, Masashi Ishii, Masahiko Suguri</i> <i>Kyoto University</i>
17:35 - 17:50	BR-R10	Deep learning for monitoring honeybee activity and pollen-bearing behavior <i>Hsin-Yu Hsieh, Han-Bin Chang, Cheng-Ying Chou</i> <i>National Taiwan University</i>

Presentation Program (September 27th, 2024)

Room 4: The Denpasar Ballroom-4

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	OET-R1	Preliminary study: Image augmentation and CNN for Profenofos detection on red pepper <i>Zulfa Hana Maulida, I Putu Gede Budisanjaya, I Made Supartha Utama, Chatchawan Chaicana, Wahyu Nurkholis Hadi Syahputra</i> <i>Udayana University</i>
13:45 - 14:00	OET-R2	Deep learning in flavor science: Predicting post-blending sensory attributes in coffee <i>Chih-Yun Tsai, Yu-Tang Chang, Shu-Ping Hung, Chun-Ming Lu, Chia-Hung Peng, Shih Fang Chen</i> <i>National Taiwan University</i>
14:00 - 14:15	OET-R3	Optimization of bacterial growth <i>Hsun-Heng Tsai, Wei-Cheng Chen, Yuan-Gang Lee</i> <i>National Pingtung University of Science and Technology</i>
14:15 - 14:30	OET-R4	Affective virtual design for ready-to-drink spices packaging <i>Duta May Mahendra, Mirwan Ushada, Anggoro Cahyo Sukartiko, Ririn Nur Alfiani</i> <i>Gajah Mada University</i>
14:30 - 14:45	OET-R5	3D printed soy-based meat as alternative for dysphagia diet: Impacts of hydrocolloids manipulation on physicochemical properties <i>Thiraphong Aumasa, Yukiharu Ogawa, Masatsugu Tamura</i> <i>Chiba University</i>
14:45 - 15:00	OET-R6	Reducing muscle activation during stoop activities by using grasshopper-leg-inspired back-type exoskeleton in rice farms <i>Dang Khanh Linh Le, Nhu Tuong An Nguyen, Wei Chih Lin</i> <i>National Sun Yat-sen University</i>
15:00 - 15:15	OET-R7	Optical path analysis and development of portable device for loop-mediated isothermal amplification <i>Yi-Cheng Hsu, Kuei-Ting Chen</i> <i>National Pingtung University of Science and Technology</i>
15:15 - 15:30	Coffee Break	
Chairman:		
15:30 - 15:45	WM-R1	The effect of aeration control on energy saving and gas production in the anaerobic process <i>Isnaeni Nurjanah, Mukhammad Jamaludin, Anisa Fitri Santosa, Sean Wu-Yang</i> <i>National Chung Hsing University</i>
15:45 - 16:00	WM-R2	Development of a commercial kitchen waste treatment machine and its odor-reduction assemblies <i>Li-Cheng Hsieh, Chih-Hsuan Lin, Bo-Chun Fang</i> <i>National Chung Hsing University</i>
16:00 - 16:15	WM-R3	Near infrared spectroscopy analysis for determining the microplastic availability in compost <i>SDS Piyathissa, Yoichiro Kojima, Yasuhiko Nishijima</i> <i>Institute of Livestock and Grassland Science, NARO</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
16:15 - 16:30	WM-R4	Application of ozone fine bubble technology for shrimp pond wastewater treatment <i>Y. Aris Purwanto, Anto Tri Sugiarto, Wendy Tri Prabowo, Sukenda, Allen Kurniawan, Yudi Chadirin, M Bachtiar, Heru Sukoco, Slamet Widodo</i> <i>IPB University</i>
Chairman:		
16:35 - 16:50	WM-R5	Co-pelleting livestock manure and powdered biochar derived from biomass gasification <i>Taiyo Hatagami, Kenichi Furuhashi, Yutaka Kaizu, Masaru Mizoguchi</i> <i>The University of Tokyo</i>
16:50 - 17:05	WM-R6	Unheated anaerobic digestion of agricultural residues in greenhouse <i>Mizuki Hagino, Kenichi Furuhashi, Masaru Mizoguchi, Tetsuya Araki, Yutaka Kaizu</i> <i>The University of Tokyo</i>
17:05 - 17:20	WM-R7	The utilization of fruit waste from religious ceremonies in Bali into fruit leather <i>I Gusti Agung Bulan Mutiara Dewi, I Gede Arie Mahendra Putra</i> <i>Udayana University</i>
17:25 - 17:35	WM-R8	Changes in microbial communities during cow manure composting under low-temperature environment <i>Dai Hanajima, Takeki Maeda, Tomo Aoyagi, Tomoyuki Hori</i> <i>Hokkaido Agricultural Reserch Center, NARO</i>

Presentation Program (September 27th, 2024)

Room 5: The Denpasar Ballroom-5

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	PA-R1	Sensor data fusion algorithm of lidar and thermal camera for autonomous spraying robot in orchard <i>Ailian Jiang, Tofael Ahamed</i> <i>University of Tsukuba</i>
13:45 - 14:00	PA-R2	3D obstacle detection based on LiDAR SLAM for agricultural robots <i>Depeng Chen, Michihisa Iida, Satoshi Okamoto, Masahiko Suguri, Ryohei Masuda</i> <i>Kyoto University</i>
14:00 - 14:15	PA-R3	Greenhouse remote control system based on serial communication using Lora® technology <i>Bambang Marhaenanto, Bayu Taruna Widjaja Putra, Dedy Wirawan Soedibyo</i> <i>Jember University</i>
14:15 - 14:30	PA-R4	The optimal dataset size for improving YOLOV8 performance in agricultural object detection <i>Jisu Song, Jaesung Park, Dongseok Kim, Eunji Jeong</i> <i>Pusan National University</i>
14:30 - 14:45	PA-R5	Plant management feasibility based on fruit identification using image acquisition cart and precision grading system <i>Jean Keiko Putri, Shinichi Nagaoka, Hiroshi Nakashima, Takahiro Hayashi, Keiichiro Shiraga, Naoshi Kondo</i> <i>Kyoto University</i>
14:45 - 15:00	PA-R6	Development of an autonomous spraying vehicle with enhanced ultra-wideband navigation for papaya greenhouse <i>Cong-Chuan Pham, Wei-Chih Lin</i> <i>National Sun Yat-Sen University</i>
15:00 - 15:15	Coffee Break	
Chairman:		
15:15 - 15:30	PA-R7	Deep learning method for analyzing microgreen germination rates over 48 hours <i>Ping-Yi Chou, Chen-Kang Huang</i> <i>National Taiwan University</i>
15:30 - 15:45	PA-R8	Tomato maturity and yield prediction system based on machine learning and image-processing from smartphone video <i>Rui-Xiang Zhou, Pin-Rong Lu, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
15:45 - 16:00	PA-R9	Machine learning-based image recognition for bagged mango maturity detection <i>Ying-Ti Weng, Hsiao-Chieh Wang, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
16:00 - 16:15	PA-10	Deep learning applied to pineapple maturity monitoring <i>Jia-Hao Wang, Ying-Jen Huang, Huaang-Youh Hurng</i> <i>National Chiayi University</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
16:20 - 16:35	PA-11	Predicting tomato sap flow rates using machine learning and infrared thermography <i>Ryo Koyama, Taro Nishimae, Hiroshi Fukuoka, Kenichi Iida, Atsushi Suda</i> <i>National Institute of Technology (KOSEN), Nara College</i>
16:35 - 16:50	PA-12	Development of tomato ripeness prediction system using deep learning <i>Ssu-Chi Chen, Ya-Ping Lin, Shih-Fang Chen</i> <i>National Taiwan University</i>
16:50 - 17:05	PA-13	Using machine vision for the development of muskmelon flower identification model and flower development model <i>Kai-Chun Liang, Shih-Fang Chen</i> <i>National Taiwan University</i>
17:05 - 17:20	PA-14	Development of cocoa bean classification system based on computer vision technology and robotic arm <i>Muhammad Arif Ihsanudin, Radi, Makbul Hajad</i> <i>Gadjah Mada University</i>

Presentation Program (September 28th, 2024)

Room 1: The Denpasar Ballroom-1

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
8:30 - 8:45	PA-R15	Development of the sprinkler irrigation system for precise feedback control <i>Hao-Ting Lin, Zong-Cheng Zou</i> <i>National Chung Hsing University</i>
8:45 - 9:00	PA-R16	Analysis of travel time in the primary canal of Sapon irrigation system with variations of gate openings <i>Bondan Satria Pamungkas, Murtiningrum Murtiningrum, Hanggar Ganara Mawandha</i> <i>Gadjah Mada University</i>
9:00 - 9:15	PA-R17	Design and development of model for estimating water requirement of pakcoy plant (<i>Brassica rapa</i> L.) based on weight sensors <i>Harmanto, A. Ghani Aziz, R.H. Anasiru, Rahmat dan A. Wicaksono</i> <i>Indonesian Polytechnic of Agricultural Engineering (PEPI)</i>
9:15 - 9:30	PA-R18	Comparative study on potential evapotranspiration using random forest and backpropagation algorithms (A case study in Tungklub irrigation area, Mengwi, Bali) <i>Luh Made Putri Apriliani, Ni Nyoman Sulastri, I Putu Gede Budisanjaya, I Wayan Widia</i> <i>Udayana University</i>
Chairman:		
9:35 - 9:50	PA-R19	Analysis of crop pattern suitability based on irrigation water requirement in Kedungputri irrigation area, Purworejo <i>Arya Jaya Kusuma, Murtiningrum Murtiningrum, Sigit Supadmo Arif</i> <i>Gadjah Mada University</i>
9:50 - 10:05	PA-R20	Development of a fuzzy logic-based automatic irrigation system utilizing hybrid moisture and environmental sensors for open field horticulture farming <i>Andri Prima Nugroho, Astriati Hamidah, Lilik Sutiarmo, Sigit Supadmo Arif, Takashi Okayasu</i> <i>Gadjah Mada University</i>
10:05 - 10:20	PA-R21	Development of automatic water gate control system for optimizing water management in secondary irrigation channel <i>Muhammad Farhan Hidayat, Andri Prima Nugroho, Murtiningrum, Ardan Wiratmoko, Lilik Sutiarmo, Sigit Supadmo Arif, Takashi Okayasu</i> <i>Gadjah Mada University</i>
10:20 - 10:35	PA-R22	Optimizing motor speed variations for automatic water gate control in secondary irrigation channels <i>Rio Hatta Prayogi, Andri Prima Nugroho, Murtiningrum, Ardan Wiratmoko, Lilik Sutiarmo, Sigit Supadmo Arif, Takashi Okayasu</i> <i>Gadjah Mada University</i>
10:35 - 10:50		
10:50 - 13:30		Break & Lunch (Poster Discussion Time)
10:55 - 12:10		Poster Discussion Time (Odd Number)
12:10 - 13:25		Poster Discussion Time (Even Number)

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	PA-R23	IoT-based intelligent control systems development in dryland agriculture: Opportunities and challenges in Timor Island-East Nusa Tenggara <i>Folkes Laumal, Erniati, Edwin Hattu, Nina J. Lapinangga, Hariawan Ledo</i> <i>State Polytechnic of Kupang</i>
13:45 - 14:00	PA-R24	Smart control system based on internet of things for dry land agriculture: Real-time monitoring of environmental parameters using sensors <i>Folkes E. Laumal, Erniati, Hen Umbu Laiya Sobang</i> <i>Politeknik Negeri Kupang</i>
14:00 - 14:15	PA-R25	Exploring the potential and feasibility of a drone-based approach to smart strawberry cultivation management <i>Tokihiko Fukatsu, Shogo Tsubota, Ken-Ichiro Yasuba, Hiroyuki Okamoto, Sakurako Kurihara, Taku Nakano, Fumihiko Kato</i> <i>National Agriculture and Food Research Organization</i>
14:15 - 14:30	PA-R26	Detection of rice lodging area by using UAV images <i>Shijing Cheng, Michihisa Iida, Sikai Chen, Jiajun Zhu, Masahiko Suguri, Ryohei Masuda</i> <i>Kyoto University</i>
14:30 - 14:45	PA-R27	Application of GPS-RTK technology in agriculture measurement and positioning <i>Ren-Horng You, Hsun-Heng Tsai, Wei Cheng Chen, Chen-Che Hong</i> <i>National Pingtung University of Science and Technology</i>
14:45 - 15:00	PA-R28	Research of 3D spatial map on paddy field in south Korea using UAV images <i>Jinho Won, Dae-Cheol Kim, June-Young Han, In-Seop Jang, Yongjin Cho</i> <i>Jeonbuk National University</i>
15:00 - 15:15	PA-R29	Data-driven agriculture for rice production -Data interoperability between smart rice transplanting and tilling operation- <i>Eiji Morimoto</i> <i>Kobe University</i>
15:15 - 15:30	Coffee Break	
Chairman:		
15:30 - 15:45	PA-R30	Precise cabbage counting under Korean field condition using deep learning with RGB image <i>Md Nasim Reza, Sun-Ok Chung, Samsuzzaman, Kyu-Ho Lee</i> <i>Chungnam National University</i>
15:45 - 16:00	PA-R31	Detection of soybean pods using deep learning-based crowd counting network with UAV-RGB imagery <i>Gyujin Jang, Dong-Wook Kim, Hak-Jin Kim</i> <i>Seoul National University</i>
16:00 - 16:15	PA-R32	Growth quantification for individual sweet peppers in a greenhouse with computer vision <i>Junyoung Park, Taewon Moon, Tae In Ahn, Soo Chung</i> <i>Seoul National University</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
16:15 - 16:30	PA-R33	Analysis of various 3D reconstruction algorithms and phenotypic indicator extraction for new pepper cultivar classification <i>Seong-hawn Lee, Dokyun Jung, Yeong-Jin Kim, Woojoo Choi, Myongkyoon Yang</i> <i>Jeonbuk National University</i>
16:30 - 16:45	PA-R34	3D modeling and phenotypic analysis of crops for digital twin implementation <i>Dokyun Jung, Seong-hawn Lee, Yeong-Jin Kim, Woojoo Choi, Myongkyoon Yang</i> <i>Jeonbuk National University</i>
16:45 - 17:00	PA-R35	Assessment of chlorophyll content based on environmental parameters in different strawberry varieties grown in greenhouses <i>Junghoo Kook, Seung-Hyun Shin, Sijan Karki, Ogundele Oluwasegun Moses, Hyeon-Tae Kim</i> <i>Gyeongsang National University</i>

Presentation Program (September 28th, 2024)

Room 2: The Denpasar Ballroom-2

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
8:30 - 8:45	PA-R36	Integrating deep learning technology to develop chicken eyes early warming system <i>Jen-Hung Huang, Hsiu-Yun Hu, Ying-Chieh Chen, Hung-Kai Liao, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
8:45 - 9:00	PA-R37	Integration of deep learning with panoramic image on mobile vehicle for assessing poultry health status <i>Chin-Ching Liu, Jen-Hung Huang, Ming-Wen Wu, Hao-Ting Lin and Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
9:00 - 9:15	PA-R38	Machine learning models for poultry houses: Optimizing conditions to reduce mortality <i>Suhendra, Hao-Ting Lin, Vincentius Surya Kurnia Adi</i> <i>National Chung Hsing University</i>
9:15 - 9:30	PA-R39	Core AI model integrated by image recognition applied in determining poultry health and potato sprouts <i>Yu-Tong Jian, Hsin-Chang Chen, Wu-Yang Sean, Kuang-Wen Hsieh</i> <i>National Chung Hsing University</i>
Chairman:		
9:35 - 9:50	PA-R40	Development of a ceiling suspended system for chicken monitoring using deep learning <i>Kai-Rong Chang, Yan-Fu Kuo</i> <i>National Taiwan University</i>
9:50 - 10:05	PA-R41	Development of an in-situ live fish volume measurement system using Helmholtz resonance <i>Xianhe Yang, Tomoo Shiigi, Hitoshi Yoshitomi, Akio Watanabe, Yasushi Kohno, Daichi Yobo, Ryosuke Yurugi, Naoshi Kondo</i> <i>Kyoto University</i>
10:05 - 10:20	PA-R42	A real-time individual yak heifer live body weight estimation model base on the YOLOV8 network and body parameter extraction <i>Yingqi Peng, Zhaoyuan Peng, Yuxiang Yang</i> <i>Sichuan Agricultural University</i>
10:20 - 10:35	PA-R43	Automated identification of defective native Taiwanese chicken using convolutional neural networks <i>Wen-Liang Chu Wang, Yan-fu Kuo</i> <i>National Taiwan University</i>
10:35 - 10:50		
10:50 - 13:30		Break & Lunch (Poster Discussion Time)
10:55 - 12:10		Poster Discussion Time (Odd Number)
12:10 - 13:25		Poster Discussion Time (Even Number)

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	PA-R44	Deep learning-based detection of seedling weeds at different growth stages <i>Harin Jang, Sang-Yeon Kim, Chang-Hyup Lee, Seung-woo Roh, Gyumin Kim, Ghiseok Kim</i> <i>Seoul National University</i>
13:45 - 14:00	PA-R45	Application of deep learning techniques in laser weed control modules <i>Jia-Gong Gu, Yu-Kai Weng, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
14:00 - 14:15	PA-R46	Soil phosphorus mapping for precision fertilization on paddy fields in South Korea <i>June-Young Han, Dae-Cheol Kim, Jinho Won, In-Seop Jang, Woo-Jae Cho, Yongjin Cho</i> <i>Jeonbuk National University</i>
14:15 - 14:30	PA-R47	Robust modeling of soil properties estimation using diffuse reflectance spectroscopy <i>In-Seop Jang, Dae-Cheol Kim, Jinho Won, June-Young Han, Yongjin Cho</i> <i>Jeonbuk National University</i>
14:30 - 14:45	PA-R48	Sooty mold detection on citrus tree canopy using various YOLO-based deep learning models <i>Bryan Apacionado, Tofael Ahamed</i> <i>University of Tsukuba</i>
14:45 - 15:00	PA-R49	Virtual plant doctor: Deep learning approaches for vegetable crop disease identification in urban agriculture <i>Chiao-Chi Hsu, Ting-Ting Li, Shih-Fang Chen</i> <i>National Taiwan University</i>
15:00 - 15:15		
15:15 - 15:30		Coffee Break
Chairman:		
15:30 - 15:45	PA-R50	Development of a small-scale household cultivation platform with ventilation and precision light control <i>Jung-Sun Gloria Kim, Siun Lee, Sehyun Jeon, Jungseung Bae, Soo Chung</i> <i>Seoul National University</i>
15:45 - 16:00	PA-R51	Enhancing secondary metabolites in microgreens through optimized home hydroponic systems <i>Ping-Yi Chou, Chen-Kang Huang</i> <i>National Taiwan University</i>
16:00 - 16:15	PA-R52	Development of an intelligent cart used in horticulture and verification of its validity <i>Hyuga Shinkai, Masafumi Horimoto, Yasumaru Hirai, Muneshi Mitsuoka, Takashi Okayasu</i> <i>Kyushu University</i>
16:15 - 16:30	PA-R53	Updating deep-learning segmentation for paprika-yield prediction in large-scale greenhouses <i>Nozomu Ohta, Kota Shimomoto, Mitsuyoshi Shimazu, Tokihiro Fukatsu</i> <i>Institute of Agricultural Machinery, NARO</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
16:30 - 16:45	PA-R54	Analysis of data collection cycle for carbon dioxide control in strawberry greenhouse <i>Seung Hyun Shin, Junghoo Kook, Sijan Karki, Ogundele Oluwasegun Moses, Hyeon-Tae Kim</i> <i>Gyeongsang National University</i>
16:45 - 17:00	PA-R55	Evapotranspiration rate monitoring of tomatoes in hydroponic greenhouse for precision irrigation <i>Sung Kwon Park, Min-Seok Gang, Sanghyun Lee, Hak-Jin Kim</i> <i>Seoul National University</i>
Chairman:		
17:05 - 17:15	PA-R56	Longitudinal characterization of fluorescence properties in the wax on avocado skin during maturation using excitation emission matrix <i>Tianqi Gao, Yoshito Saito, Makoto Kuramoto, Miao Zhang, Atsuhiko Yamamoto, Shintaro Hashiguchi, Tetsuhito Suzuki, Naoshi Kondo</i> <i>Kyoto University</i>
17:15 - 17:30	PA-R57	Reconstruction of 3D plant model with the fusion of RGB and fluorescence imaging system <i>Jiun-Wei Yi, Cheng-Hao Lin, Hsiao-Mei Wu</i> <i>National Taiwan University</i>
17:30 - 17:45	PA-R58	Detection of water stress in tomato leaves using frequency-domain chlorophyll fluorescence lifetime imaging system <i>Cheng-Hao Lin, Jiun-Wei Yi, Hsiao-Mei Wu</i> <i>National Taiwan University</i>

Presentation Program (September 28th, 2024)

Room 3: The Denpasar Ballroom-3

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
8:30 - 8:45	BR-R11	Adaptive target following autonomous electric vehicle based on transfer learning technology <i>Guan-Hua Chen, Hao-Ting Lin, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
8:45 - 9:00	BR-R12	Development of parking system for recharging system of an agricultural electric vehicle <i>Hsiu-Yu Hsu, Michihisa Iida, Haruto Iwata, Masashi Ishii, Kazuyoshi Nonami, Masahiko Suguri</i> <i>Kyoto University</i>
9:00 - 9:15	BR-R13	Mobile robot poultry house automatic docking and charging system based on camera and lidar sensor <i>Akhmad Azhar Firdaus, Chiao Yin Tu, Sean Wu-Yang</i> <i>National Chung Hsing University</i>
9:15 - 9:30	BR-R14	Analysis of characteristics for E-powertrain of 55-kW tractor using agricultural workload data <i>Seung-Min Baek, Yong-Joo Kim</i> <i>Chungnam National University</i>
Chairman:		
9:35 - 9:50	BR-R15	A pig foot detection and tracking approach for gait evaluation <i>Cheng-En Chiang, Hsiao-Han Huang, En-Chung Lin, Yan-Fu Kuo</i> <i>National Taiwan University</i>
9:50 - 10:05	BR-R16	A study on weed mapping and robotic weeding operations in organic spinach farming <i>Yuichi Kobayashi, Yasunari Miyake, Masayuki Kogoshi</i> <i>National Agriculture and Food Research Organization</i>
10:05 - 10:20	BR-R17	Yaw rate feedback-based tracking of curved path on sloping ground <i>Jungun Lee, Yong-Hyun Kim, Chulwhan Yoon, Hak-Jin Kim</i> <i>Seoul National University</i>
10:20 - 10:35	BR-R18	Development of the small robot management system using a network camera <i>Nguyen Van Dieu, Tadashi Chosa</i> <i>Tokyo University of Agriculture and Technology</i>
10:35 - 10:50	BR-R19	Wood species identification using deep learning and line bot <i>Pei-Chi Yang, Chin-Mei Lee, Yan-Fu Kuo</i> <i>National Taiwan University</i>
10:50 - 13:30		Break & Lunch (Poster Discussion Time)
10:55 - 12:10		Poster Discussion Time (Odd Number)
12:10 - 13:25		Poster Discussion Time (Even Number)

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	BR-R20	Development of a rail-guided vehicle and platform for monitoring multiple planting rows in greenhouses <i>Kota Shimomoto, Mitsuyoshi Shimazu, Hiroki Naito, Tokihiro Fukatsu</i> <i>Institute of Agricultural Machinery, NARO</i>
13:45 - 14:00	BR-R21	Selection and evaluation of spray nozzle for pollination robot <i>Zaifei Jiang, Takashi Okayasu, Muhammad Rashed Al Mamun, Yasumaru Hirai, Muneshi Mitsuoka</i> <i>Kyushu University</i>
14:00 - 14:15	BR-R22	An automated spraying robot for cultivating papaya in greenhouses <i>Nhu Tuong An Nguyen, Dang Khanh Linh Le, Wei-Chih Lin</i> <i>National Sun Yat-sen University</i>
14:15 - 14:30	BR-R23	Force control strategy for a tomato pruning task by a manipulator equipped with a hedge trimmer <i>Masakazu Kashino, Tokihiro Fukatsu, Nozomu Ohta, Hideto Kurosaki</i> <i>National Agriculture and Food Research Organization</i>
14:30 - 14:45	BR-R24	Development and performance evaluation of rotational cutting mechanism on end-effector for tomato de-leafing <i>Tomoaki Kaneko, Tokihiro Fukatsu, Hiroshi Yamaura, Hideharu Takahashi</i> <i>Tokyo Tech</i>
14:45 - 15:00	BR-R25	Development of multi-purpose trolley for greenhouse cultivation <i>Kazuya Fujimoto, Masahiro Ohtani, Hiroshi Fukuoka, Kenichi Iida</i> <i>National Institute of Technology (KOSEN), Nara College</i>
15:00 - 15:15	BR-R26	Implementation of the precise Pneumatic Servo control system for vegetable seeding in plug trays <i>Hao-Ting Lin</i> <i>National Chung Hsing University</i>
15:15 - 15:30	Coffee Break	
Chairman:		
15:30 - 15:45	BE-R1	Enhancing material decomposition in CT imaging via deep learning on simulated dual-layer spectral CT data <i>Shaghayegh Afshari, Cheng-Ying Chou</i> <i>National Taiwan University</i>
15:45 - 16:00	BE-R2	A laser projection system integrated deep learning technology for promoting chicken flock movement <i>Rih-Hua Shen, Chia-Wei Su, Chun-Chen Huang, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
16:00 - 16:15	BE-R3	The impact of ultrasonic cavitation on skin cleansing and irritation <i>Hong-Ye, Chou, Hui-Chuan, Hung, Huaang-Youh, Hurng</i> <i>National Chiayi University</i>

Presentation Program (September 28th, 2024)

Room 4: The Denpasar Ballroom-4

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
8:30 - 8:45	ST-R1	Comparative study of spectrometer sensors for corn moisture content prediction based on corn husk <i>Harki Himawan, Muhammad Dzakky Alghifari, Moch. Bagus Hermanto, Sandra, Nazmi Mat Nawi, Ken Abamba Omwange, and Dimas Firmanda Al Riza</i> <i>Brawijaya University</i>
8:45 - 9:00	ST-R2	Early detection multi-stress conditions in lettuce using time-series hyperspectral image with deep learning <i>Min-Gyu Baek, Eung chan Kim, Sungjay Kim, JiWon Ryu, Xianghui Xin, Subin Lee, Ghiseok Kim</i> <i>Seoul National University</i>
9:00 - 9:15	ST-R3	Cross calibration of soil comprehensive sensor RS485 with wet sensor and Takemura DM-5 in Bogor <i>Budi Priyonggo, Muhammad Hafidz, Jati Nucholis, Muharfiza</i> <i>Politeknik Enjiniring Pertanian Indonesia</i>
9:15 - 9:30	ST-R4	Honey adulteration detection using reflectance-fluorescence spectroscopy and machine learning <i>Rach Ayyu Zanierey Aisyah Yahya, Sucipto, Dimas Firmanda Al Riza</i> <i>Brawijaya University</i>
Chairman:		
9:35 - 9:50	ST-R5	Evaluation of weed growth in various vegetation types by 3-D point cloud <i>Jaehwan Lee, Eiji Morimoto, Mayu Ota, Nguyen Van Dieu, Tadashi Chosa</i> <i>Kobe University</i>
9:50 - 10:05	ST-R6	Evaluation of automatic irrigation system implementation for rice cultivation <i>Nova Anika, Lukman Wijaya, Ridwan</i> <i>Institut Teknologi Sumatera</i>
10:05 - 10:20	ST-R7	Wheat feature characterization using lidar sensing technique <i>Md Rejaul Karim, Sun-Ok Chung, Shahriar Ahmed, Md Nasim Reza, Mohammad Ali, Joonjea Sung</i> <i>Chungnam National University</i>
10:20 - 10:35	ST-R8	Rapid analysis of total phenolic and flavonoid content in Purwoceng (<i>Pimpinella pruatjan</i> Molk.) leaf powder using portable UV-induced fluorimeter <i>Slamet Widodo, Shahfaturrahman Fatahilah, Sutrisno, Irmanida Batubara, Eni Sumarni, Herry Suhardiyanto, Mohamad Solahudin, Supriyanto, Eti Rohaeti, Yudiwanti Wahyu</i> <i>IPB University</i>
10:35 - 10:50		
10:50 - 13:30		Break & Lunch (Poster Discussion Time)
10:55 - 12:10		Poster Discussion Time (Odd Number)
12:10 - 13:25		Poster Discussion Time (Even Number)

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	IE-R1	Comparison of Raman probe spectroscopy and near infrared differential reflectance spectroscopy for direct ethanol fermentation monitoring system of sake mash <i>Hirota Naito, Atsushi Wada, Hironori Maruyama, Yoshinari Morio</i> <i>Mie University</i>
13:45 - 14:00	IE-R2	Oral cancer detection: Deep learning-based automated diagnosis and mobile application for early-stage detection <i>Chao-Hung Jeng, Jun-Kai Liao, Shyh-Jye Chen, Yu-Cheng Huang, Yu Hsu, Jang-Jaer Lee, Jun-Ching Lee, Cheng-Ying Chou</i> <i>National Taiwan University</i>
14:00 - 14:15	IE-R3	Machine learning-based sweet basil stress classification using non-destructive bioelectrical impedance equivalent circuit parameters <i>Daesik Son, Junyoung Park, Siun Lee, Sehyeon Jeon, Soo Chung</i> <i>Seoul National University</i>
14:15 - 14:30	FS-R1	Portable lamp-based DNA detection of <i>Assini corii</i> colla with smartphone integration <i>Chung Yu Huang, Jyh Jian Chen</i> <i>National Pingtung University of Science and Technology</i>
14:30 - 14:45	FS-R2	Development of technology for early detection of mold growth based on millimeter wave dielectric sensor <i>Koki Iwasaki, Yoshihisa Yamashige, Siyao Chen, Akihiro Yasuhara, Keiichiro Shiraga, Naoshi Kondo, Yuichi Ogawa</i> <i>Kyoto University</i>
14:45 - 15:00	FS-R3	Rapid microbial detection technique using near-field dielectric sensor and membrane filter <i>Yoshihisa Yamashige, Siyao Chen, Shojiro Kikuchi, Takashi Kawano, Yuichi Ogawa</i> <i>Kyoto University</i>
15:00 - 15:15	GA-R1	Effect of fine bubble water application on the growth of tomato seedlings in nursery stage <i>Indrawan Cahyo Adilaksono, Agus Dana Permana, Mia Rosmiati, Rizki Fauziah Ramadhaini, Chindy Ulima Zanetta</i> <i>Institut Teknologi Bandung</i>
15:15 - 15:30	Coffee Break	
Chairman:		
15:30 - 15:45	LE-R1	Method for estimating actual body weight based on depth images of dairy cow rumps <i>Qun-Wei Chang, Chu-Wun Peng, Wen-Lin Chu, Hsin-I Chiang, Hsiao-Ping Tsai</i> <i>National Chung Hsing University</i>
15:45 - 16:00	LE-R2	Infrared thermal imaging module for dairy cow heat stress prediction based on deep learning technology <i>Po-Chih Chuang, Rui-Xiang Zhou, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>

Time	ID No.	Title, Author's name, and First Author's Affiliation
16:00 - 16:15	LE-R3	Applying the LSTM approach to predict the water consumption of red-feathered Taiwan country chickens <i>Fu-Pang Shih, Yao-Chuan Tsai, Kuang-Wen Hsieh</i> <i>National Chung Hsing University</i>
16:15 - 16:30	LE-R4	Influence of composting conditions in closed vertical composting facilities on the micro-flora of compost <i>Yoichiro Kojima, Hiroshi Yokoyama, Ryoh Nakakubo, Sudeshinie Piyathissa, Akifumi Ogino, Yasuhiko Nishijima, Mitsuyoshi Ishida, Akihiro Tanaka, Kiyoshi Tajima</i> <i>Institute of Livestock and Grassland Science, NARO</i>
16:30 - 16:45	LE-R5	An efficient AIOT framework for image-based behavior monitoring in dairy calves <i>Po-Lin Chen, Rui-Yuan Liao, Jih-Tay Hsu, Ta-Te Lin</i> <i>National Taiwan University</i>
16:45 - 17:00	LE-R6	Detection of stall usage rate and assessment of cattle welfare based on deep learning techniques <i>Hong-Yi Li, Zi-Heng Jian, Jing-Jie Meng, Ze-Min Chen, Xin-Yi Jiang, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>

Presentation Program (September 28th, 2024)

Room 5: The Denpasar Ballroom-5

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
8:30 - 8:45	RE-R1	Wind-driven triboelectric generator integrated cotton structures for enhanced power generation efficiency <i>Yen-Hao Chiu, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
8:45 - 9:00	RE-R2	Milking of hydrocarbon from microalgae for biofuel production by two-phase culture <i>Takaya Mlyazaki, Kenichi Furuhashi, Yutaka Kaizu</i> <i>The University of Tokyo</i>
9:00 - 9:15	RE-R3	Off-grid smart agriculture with PV power generation CROAS_ZERO new tracking mechanism <i>Takaaki Uehara, Hideharu Takahashi, Masahiro Terada, Atsushi Kurita, Kazuhiko Aiga, Tadashi Kawamoto</i> <i>Tokyo Institute of Technology</i>
9:15 - 9:30	RE-R4	Simultaneous production of biogas and high nitrogen concentration liquid fertilizer from anaerobic digestion <i>Kenichi Furuhashi, Tatsuki Hamanaka, Yutaka Kaizu, Kenji Imou</i> <i>The University of Tokyo</i>
Chairman:		
9:35 - 9:50	FE-R1	Relationship between the elongation effect of actin fibers by millimeter-wave irradiation and irradiation intensity <i>Akihiro Yasuhara, Yuusuke Yamaguchi, Keiichiro Shiraga, Yuuichi Ogawa, Naoshi Kondo</i> <i>Kyoto University</i>
9:50 - 10:05	FE-R2	Changes in antioxidant activity and electrical impedance of eggplant pickles (Nukazuke) during pickling process <i>Haruna Kamo, Yukiharu Ogawa</i> <i>Chiba University</i>
10:05 - 10:20	FE-R3	Determining the amylose content in starchy plants by using FT-THZ spectroscopy <i>Jungbin Kim, Han Guo, Naoshi Kondo, Keiichiro Shiraga</i> <i>Kyoto University</i>
10:20 - 10:35	FE-R4	Effects of alpha-lipoic acid treatment on quality retention and electrical properties of fresh-cut avocados <i>Li Wenchao, Takahisa Nishizu, Takashi Watanabe, Tadasu Teramoto, Teppei Imaizumi</i> <i>Gifu University</i>
10:35 - 10:50	FE-R5	Estimation of water content and antioxidant activity in enoki treated with edible coating <i>Kusumiyati Kusumiyati, Mochamad Arief Soleh, Bambang Nurhadi</i> <i>Padjadjaran University</i>
10:50 - 13:30	Break & Lunch (Poster Discussion Time)	
10:55 - 12:10	Poster Discussion Time (Odd Number)	
12:10 - 13:25	Poster Discussion Time (Even Number)	

Time	ID No.	Title, Author's name, and First Author's Affiliation
Chairman:		
13:30 - 13:45	PM-R14	Safety analysis of the mulching and soil covering machine <i>Inseok Hwang, Wantae Im, Yejin Park, Yeonju Lee, Sungmin Ji, Changseop Shin</i> <i>Chungbuk National University</i>
13:45 - 14:00	PM-R15	3D dynamic simulation model to characterize tractor's overturning and rollover <i>Yun-Jeong Yang, Moon-Kyeong Jang, Kwang-Mo Kim, Ju-Seok Nam</i> <i>Kangwon National University</i>
14:00 - 14:15	PM-R16	MLP-based parameter optimization of four clutch simultaneous shifting control algorithms for agricultural tractor power-shift transmission <i>Insu Kim, Seong-Jun Kim, Jin-Kam Park, Woojae Cho, Jin-Woong Lee</i> <i>Korea Institute of Industrial Technology</i>
14:15 - 14:30	PM-R17	Field evaluation of mechanized cabbage cultivation models <i>Md Nasim Reza, Sun-Ok Chung, Kyu-Ho Lee, Md Razob Ali, Emmanuel Bicamumakuba</i> <i>Chungnam National University</i>
14:30 - 14:45	PM-R18	Operating speed and power analysis of a 2-kW motor-driven semi-automatic cabbage transplanter for biodegradable seedling pots <i>Md Razob Ali, Sun-Ok Chung, Mohammod Ali, Kyu-Ho Lee, Beom-Sun Kang</i> <i>Chungnam National University</i>
14:45 - 15:00	PM-R19	Virtual engineering of computer assisted operation for front loaders <i>Kaito Sonoda, Kaito Mine, Tsuneo Nakanishi, Takuya Fujinaga</i> <i>Avinton Japan K.K.</i>
15:00 - 15:15	PM-R20	Performance evaluation of the traction control model for 100-kW electric tractor with all-wheel independent driving e-axle system based on model-in-the-loop simulation <i>Seung-Yun Baek, Seung-Min Baek, Yong-Joo Kim</i> <i>Chungnam National University</i>
15:15 - 15:30		Coffee Break

ISMAB2024 Poster Presentation

Poster Discussion Time: September 28th, 2024, 10:55 - 13:25

Odd number: 10:55 – 12:10

Even number: 12:10 – 13:25

****Please make a presentation as much as possible in front of your poster during the discussion time****

Poster No.	Poster ID	Title, Author's name, and First Author's Affiliation
1	BE-P1	Effect of ultrafine bubbles priming on seed germination of pennyroyal mint under drought conditions <i>Thuy Linh Ha, Masatoshi Yoshimura, Itaru Sotome</i> <i>The University of Tokyo</i>
2	BE-P2	Laser stimulation chicken flock response evaluate system based on deep learning technology <i>Chun-Chen Huang, Ying-Chieh Chen, Chia-Wei Su, Kuang-Wen Hsieh, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
3	BE-P3	The impact of horticultural therapy on elderly patients healths <i>Jun-Shen Shi, Yu-Min Li, Bo-Lin Jian, Wen-Lin Chu</i> <i>National Chin-Yi University of Technology</i>
4	BE-P4	Light quality effect red romaine baby leaf content Fe, Mg, Ca, Vit.C, NO3, SPAD value, stomatal conductance, and fresh weight in PFAL <i>Chi-Hui Chen, Yi-Chieh Chiu, Chen-Kang Huang, Hsing-Ying Chung, Wei Fang</i> <i>National Taiwan University</i>
5	BE-P5	Exploring bio-material applications of chitosan-PEG conjugates <i>Yeonggeol Hong, Sangbae Park, Kyoung-Je Jang</i> <i>Gyeongsang National University</i>
6	BE-P6	Modeling the prediction of poultry house temperature changes using deep learning neural networks <i>Tzu-Ti Lee, Zhi-Xuan Dai</i> <i>National Chung Hsing University</i>
7	BE-P7	Design and development of a STM32-based control architecture for electrified agricultural cultivator <i>Tejal Gadad, Cheng-Yen Li, Shun-Yan Lu, Ping-Lang Yen</i> <i>Vishwakarma Institute of Technology</i>
8	BR-P1	Development of kimchi cabbage and onion robot object detection model based on YOLO <i>Seongmi Sun, Gangho Seon, Joonmo Kang, Huimin Shin, Sieun Han, Gwanghyeon Jeon, Seonil Kim, Kiteag Lee, Hyuckjoo Kim</i> <i>Sunchon National University</i>
9	BR-P2	Development of an intelligent watering truck for orchid gardens <i>Yu-Ju,Wei, Chao-Wang,Young</i> <i>National Chiayi University</i>
10	BR-P3	Design and implementation of an AI-driven strawberry picking robotic platform for hydroponic greenhouses <i>Chung-Liang Chang, Cheng-Chieh Huang, Rui-Yi Xu</i> <i>National Pingtung University of Science and Technology</i>
11	BR-P4	Developments and validations of smart rotifer aquaculture system <i>Po-Jen Lu, Wen-Wei Chang, Lu-Chan Liu, Ting-Chuan Huang, Kuo-Chi Liao</i> <i>National Taiwan University</i>

Poster No.	Poster ID	Title, Author's name, and First Author's Affiliation
12	BR-P5	A study on intelligent random path planning for autonomous vehicles in orchards cooperative operations <i>Chien-Ying Yang, Yu-Cheng Hsu, Tse-Min Chen</i> <i>National Chung Hsing University</i>
13	BR-P6	Automatic digging depth control of tractor-mounted potato harvester using reinforcement learning model <i>Daehyun Kim, Jung-sang Yoo, JoongYong Rhee</i> <i>Seoul National University</i>
14	BR-P7	Smart robotics system for chicken egg detection and collection <i>Hao-Ting Lin and Bobby Aguilar Gonzales</i> <i>National Chung Hsing University</i>
15	BR-P8	Development of an automated harvester for multiple types of organic sprouts <i>Po-Shao Chen, Jen-Yu Lien, Cheng-Ying Chou</i> <i>National Taiwan University</i>
16	BR-P9	Study of robot driving recognition sensors to ensure worker safety in greenhouse <i>Kyoung-chul Kim, Man-jung Kim, Changju Yang, Youngki Hong</i> <i>National Institute of Agricultural Sciences (Jeonju, Korea)</i>
17	ET-P1	The effect of heat aging and ultraviolet radiation aging on the properties of plastic films used in greenhouses <i>Cheng-Chang Lien, He Wen, Jun-Han Mei</i> <i>National Chiayi University</i>
18	ET-P2	Study on the simulation analysis of torsional performance of spring wire clamps with cross connector for pipe greenhouses <i>Cheng-Chang Lien, Hong-Zheng Zhang, Jun-Han Mei</i> <i>National Chiayi University</i>
19	FE-P1	Effects of vacuum microwave drying on aroma and structural characteristics of crickets <i>Miyu Inoue, Takahisa Nishizu, Kohei Nakano, Teppei Imaizumi</i> <i>Gifu University</i>
20	FE-P2	Effects of blanching treatments on ice crystal structures of frozen potatoes <i>Hinata Fukao, Takahisa Nishizu, Kohei Nakano, Teppei Imaizumi</i> <i>Gifu University</i>
21	FE-P3	Evaluation of mechanical properties of carrot cell walls modified by heat treatments <i>Masako Wada, Akira Umehara, Takahisa Nishizu, Teppei Imaizumi</i> <i>Gifu University</i>
22	GA-P1	Analysis of water losses factors to determine irrigation efficiency in Kedungputri irrigation system, Purworejo <i>Dalfa Zahra, Murtiningrum, Hanggar Mawandha</i> <i>Gadjah Mada University</i>
23	IE-P1	Enhancing microbial species identification through deep learning for metagenomics applications <i>Ming-Ju Yang, Chien-Yu Chen</i> <i>National Taiwan University</i>
24	IE-P2	Identifying targets of microRNA by deep learning <i>Zong-Yan Liu, Hsin-Hsiang Mao, Chien-Yu Chen</i> <i>National Taiwan University</i>

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25	IE-P3	Disease detection of pepper based on multispectral images mounted on UAV <i>GangIn Je, ChangHyeok Park, JongChan Jeong, Chanseok Ryu</i> <i>Gyeongsang National University</i>
26	LE-P1	Poultry disease consultation and management evaluation system <i>Jia-Siang Chen, Wen-Lin Chu</i> <i>National Chin-Yi University of Technology</i>
27	LE-P2	Development of poultry vocal monitoring system for heat stress and disturbance behavior analysis <i>Li-Yun Huang, Jun-Qian Zhu, Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
28	LE-P3	Determination of goat behaviors using vibration time series data from inertial sensor <i>Tadafumi Sugi, Muneshi Mitsuoka, Kazuyuki Namihira, Takeshi Eto, Yuya Aoyagi, Eizo Tira</i> <i>University of the Ryukyus</i>
29	LE-P4	A dairy cow visual recognition system based on YOLOX <i>Jun-Ye Luo, Hong-Yi Xie, Wen-Lin Chu, Hsin-I Chiang, Hsiao-Ping Tsai</i> <i>National Chung-Hsing University</i>
30	OET-P1	High-voltage electrostatic field: A new technique to replace phosphate in emulsified meat products <i>Hui Zhen Yan, Wei Cheng Chen, Fu Yuan Cheng</i> <i>National Pingtung University of Science and Technology</i>
31	OET-P2	A 3D realistic strawberry plant model for phenotyping based on the point cloud data <i>Tsuyoshi Okayama, Tsuneyo Sekido, Masaki Mitsuyoshi, Yuya Mochizuki</i> <i>Ibaraki University</i>
32	PA-P1	Applying depth imaging and machine learning to estimate goose weight <i>Yu-Ming Su, Kuang-Wen Hsieh</i> <i>National Chung Hsing University</i>
33	PA-P2	Bio-speckle analysis to evaluate stress response focusing on plant leaf dynamics <i>Shogo Mitsumura, Kenji Takisawa, Takashi Fukushima</i> <i>Mie University</i>
34	PA-P3	Deep learning technology integrated with controllable camera for chicken abnormal comb detection <i>Ming-Wen Wu, Hsiu-Yun Hu, Kuang-Wen Hsieh, and Yao-Chuan Tsai</i> <i>National Chung Hsing University</i>
35	PA-P4	Development and comparative study on the methods of evaluating turkey activity through visible light fisheye imaging <i>Bing-Heng Zhong, Yi-Tsung Kuo, Yao-Chuan Tsai, Tse-Min Chen</i> <i>National Chung Hsing University</i>
36	PA-P5	Measurement accuracy of CAN data acquired from tractors and correlation analysis under operating conditions <i>Keita Ono, Koichiro Fukami, Senlin Guan, Kimiyasu Takahashi</i> <i>Kyushu Okinawa Agricultural Research Center, NARO</i>
37	PA-P6	Seed counting with density estimation based on deep-learning for performance evaluation of drone seeding <i>Baek-Gyeom Seong, Soo-Hyun Cho, Seung-Hwa Yu, Chun-Gu Lee, Yeongho Kang, Dae-Hyun Lee</i> <i>Chungnam National University</i>

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39	PA-P8	Intelligent asparagus growth management system: Spear height prediction <i>Ci-Ruel Bai, Ting-Jui Huang, Shih-Fang Chen</i> <i>National Taiwan University</i>
40	PA-P9	Pest monitoring system: an application of IoT and deep learning <i>Jen-Yu Lian, Po-Shao Chen, Cheng-Ying Chou</i> <i>National Taiwan University</i>
41	PA-10	Deep learning-based multispectral image reconstruction using RGB images <i>Yeong-Jin Kim, Seong-Hawn Lee, Dokyun Jung, Woojoo Choi, Myongkyoon Yang</i> <i>Jeonbuk National University</i>
42	PA-P11	UAV-based soil surface roughness measurement on point cloud level by roughness index calculation <i>Eunji Jeong, Jaesung Park, Dongseok Kim, Jisu Song</i> <i>Pusan National University</i>
43	PM-P1	Effect of hardness grade of NR, SBR and NR/SBR rubber on mechanical behavior of circular-shaped fenders <i>Chiou, Yung-Chuan</i> <i>National Chiayi University</i>
44	PM-P2	Study on the impact shearing characteristics of Pennisetum stems by serrated blades <i>Cheng-Chang Lien, Zong-Yuan Cai, Jun-Han Mei, Jeng-Liang Lin</i> <i>National Chiayi University</i>
45	PM-P3	Ridge-forming dry direct seeding technology that allows direct sowing of paddy rice even after rainfall <i>Koichiro Fukami, Kimiyasu Takahashi, Keiko Nakano, Naoki Matsuo, Keita Ono</i> <i>Kyushu Okinawa Agricultural Research Center</i>
46	PM-P4	Analysis of power requirement for the attachments of 48HP class agricultural tractor based on soil conditions in Indonesia <i>Seung-Je Cho, Sang-Dae Lee, Jeong-Gil Kim, Kyu-Jeong Choi, Dong-Seok Park, Hyun-Gi Kim</i> <i>Korea Institute of Industrial Technology</i>
47	PM-P5	Analysis of opacity emissions testing for tractor exhaust gas in Taiwan during 2022~2023 <i>Yi-Chich Chiu, Yn-Jen Chiou, Chi-Hui Chen, Xin-Ru Lin</i> <i>Taiwan Agricultural Mechanization Research and Development Center</i>
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49	PM-P7	Automated counting and conveying system applied in <i>Pachira aquatica</i> <i>Meng-Ru Lin, Wen-Lin Chu</i> <i>National Chin-Yi University of Technology</i>
50	PM-P8	Theoretical verification of tractor attitude angle control system using modern control theory on uneven sloping roads <i>Kyo Mishima, Yuya Aoyagi, Takeshi Shikanai</i> <i>University of the Ryukyus</i>

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52	PT-P2	Effects of supercooled storage at -5 °C on quality and sensory evaluation of watercored fresh-cut apples <i>Renna Takimura, Arisa Sato, Takahiro Orikasa, Shoji Koide</i> <i>Iwate University</i>
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59	PT-P9	Basic study on a calibration model for sucrose content in sugarcane juice using FT-IR <i>Miki Horie, Riku Kouchi, Yuya Ishimine, Tetsu Shirakawa, Eizo Taira</i> <i>Kagoshima University</i>
60	PT-P10	Characteristics of clock gene expression associated to cutting manipulation in soybean sprouts <i>Mai Sato, Manasikan Thammawong, Masayasu Nagata, Kohei Nakano</i> <i>Gifu University</i>
61	PT-P11	Effect of ultrasound treatment on expression of cell wall modifying genes in banana <i>Mahiro Yura, Manasikan Thammawong, Masayasu Nagata, Kohei Nakano</i> <i>Gifu University</i>
62	PT-P12	Impact of exogenous melatonin on cucumber fruits during cold storage <i>Manasikan Thammawong, Nanami Sugiyama, Kohei Nakano</i> <i>Gifu University</i>

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64	PT-P14	Biological control of banana crown rot disease by <i>Bacillus</i> sp. isolated from Japanese fermented foods <i>Sena Kawai, Wakana Takahashi, Pongphen Jitareerat, Kohei Nakano, Kasumi Nakagawa</i> <i>Gifu University</i>
65	PT-P15	Effect of storage temperature on bacterial flora and nutrient quality of sweet potato <i>Fukino Yoshikawa, Risa Kuramoto, Kohei Nakao, Daisuke Hamanaka</i> <i>Kagoshima University</i>
66	PT-P16	Feasibility of mems-based spectrometer for assessing the freshness of leaf lettuce <i>Hana Homma, Shigeaki Kurimoto, Manasikan Thammawong, Masayasu Nagata, Kohei Nakano</i> <i>Gifu University</i>
67	PT-P17	Development of a container equipped with electric field for shelf-life extension of fresh produce during transportation <i>Daisuke Hamanaka</i> <i>Kagoshima University</i>
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