CIGR Workshop Organized Session

Sunday, 3rd September (Room B (2F Meeting Room))

Organized Session 1  9:00 – 10:20

Precision measurement and modeling of dynamical plant information
Chair: Assoc. Prof. H. Fukuda (Osaka prefectural University)

CIGR-OS11  Plant in-vivo microsensing
Junghoon Lee*, Sangwoong Baek1, Eunyong Jeon2, Kyung-Hwan Yeo3, Kyoung Sub Park3
(1. School of Mechanical and Aerospace Engineering, Seoul National University, Seoul, Korea; 2. Graduate School of Convergence Science and Technology, Seoul National University, Gyeonggi-do, Korea; 3. Protected Horticulture Research Institute, National Institute of Horticultural and Herbal Sciences, RDA, Haman, Korea)

CIGR-OS12  Growth and environmental change-independent genes associated with clock gene TOC1 in green perilla
Yusuke Tanigaki1, Takanobu Higashii, Atsushi J. Nagano3,4,5, Mie N. Honjo4, Hirokazu Fukuda*1,5
(1. Department of Mechanical Engineering, Graduate School of Engineering, Osaka Prefecture University, Osaka, Japan; 2. Department of Applied Life Sciences, Graduate School of Life and Environmental Sciences, Osaka Prefecture University, Osaka, Japan; 3. Faculty of Agriculture, Ryukoku University, Shiga, Japan; 4. Center for Ecological Research, Kyoto University, Shiga, Japan; 5. Japan Science and Technology Agency (JST), Saitama, Japan)

CIGR-OS13  An image processing pipeline for acquiring 3D morphological information from "noisy" point cloud data
Koji Noshita*, Wei Guo3, Akito Kaga4, Hiroyoshi Iwata2
(1. Japan Science and Technology Agency (JST) Precursory Research for Embryonic Science and Technology (PRESTO), Saitama, Japan; 2. Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan; 3. Institute for Sustainable Agro-ecosystem Services, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan; 4. Genetic Resources Center, National Agriculture and Food Research Organization (NARO), Ibaraki, Japan)
CIGR-OS14 Improvement of steviol glycosides during light stimulations using transcription profile of UGT85C2 in Stevia rebaudiana
Yuki Yoneda¹, Hiroshi Shimizu*¹, Hiroshi Nakashima¹, Juro Miyasaka¹, Katsuaki Ohdoi¹
(1. Graduate School of Agriculture, Kyoto University, Kyoto, JAPAN)

CIGR-OS15 Effect of Quality Color LEDs for Radish Seed Germination and Seedling Growth
In vitro
Md Zohurul Kadir Roni¹*, Md Saiful Islam², Kazuhiko Shimasaki³
(1*. The United Graduate school of Agricultural Sciences, Ehime University, Matsuyama, Japan; 2. The United Graduate school of Agricultural Sciences, Ehime University, Matsuyama, Japan; 3. The Faculty of Agriculture and Marine Science, Kochi University, Kochi, Japan)

Organized Session 2 10:30 – 11:50
Plant biological information for greenhouse crop production
Chair: Assoc. Prof. K. Takayama (Ehime University)

CIGR-OS21 Non-destructive measurement of starch content in saffron corms by analysis of light scattering images
Nao KAJIKAWA¹, Yuichi UNO¹, Shinichiro KUROKI¹, Kanako UMABA¹, Kensei ZAKO¹, Hiromichi ITOH*¹
(1. Graduate School of Agricultural Science, Kobe University, Kobe, Japan)

CIGR-OS22 Iot Based Optimized Wasabi Plant Cultivation System Using Leaf Bioelectric Potential Feedback Characteristics
Bolaji Oguntoyinbo*¹, Junji Hirama¹, Hideyuki Yanagibashi¹, Minoru Saka²
(1. Department of Electrical Engineering, Kanazawa Institute of Technology, Kanazawa, Japan; 2. Saka Techno Science Co., Lt., Kanazawa, Japan)

CIGR-OS23 Development of mobile Spectrometer by Digital Fabrication Techniques and Trial to Apply Multipoint Continuous Spectroscopic Analysis of Light Environment in Greenhouse Tomato Canopy
Takehiko Hoshi*¹, Kenta Ueda², Yoshihiro Takikawa³, Takaya Azuma⁴
(1. Faculty of Biology-Oriented Science and Technology, Kindai University, Wakayama, Japan; 2. Graduate School of Biology-Oriented Science and Technology, Kindai University, Wakayama, Japan; 3. Plant center, Institute of Advanced Technology, Kindai University, Wakayama, Japan; 4. Wakayama
Chlorophyll fluorescence imaging robot based plant growth evaluation

Seitaro Toda¹, Kotaro Takayama*², Eldert J. van Henten³, C. Wouter Bae⁴, Noriko Takahashi², Hiroshi Nishina²

(1. The United graduate school of Agricultural Sciences, Ehime University, Matsuyama, Japan; 2. Graduate school of Agriculture, Ehime University, Matsuyama, Japan; 3. Farm Technology Group, Wageningen University and Research, Wageningen, The Netherlands; 4. TechNature B.V., Waddinxveen, The Netherlands)

Resource use efficiency in plant factories, greenhouses and integrated rooftop greenhouses in different climate regions of the world

Esteban Baeza*¹, Luuk Graamans², Cecilia Stanghellini¹, Ilias Tsafaras ¹, Andy van den Dobbelsteen², Juan Ignacio Montero³

(1. Wageningen UR Greenhouse Horticulture, P.O. Box 644, 6700 AP Wageningen, The Netherlands; 2. Faculty of Architecture and the Built environment, Delft University of Technology, P.O. Box 5043, 2600 GA Delft, The Netherlands; 3. Institute of Food and Agricultural Research (IRTA), Carretera de Cabrils, km 2, 08348 Barcelona, Spain)

Organized Session 3 13:30 – 14:30

Advanced agricultural food/bio-resource technology: Functional food, packaging, utilization

Chair: Assoc. Prof. N. Shimizu (Hokkaido University)

A novel formulation of functional food to dissolve hydrophobic compounds in food

Yuichi Tozuka*

(Osaka University of Pharmaceutical Sciences, Osaka, Japan)

Trends in cushioning packaging for fresh produce in Japan

Hiroaki Kitazawa*¹

(1. Food Research Institute, NARO, Tsukuba, Japan)

Processing of Functional Component from Agricultural Residue by the Reaction System

Naoto Shimizu*

(Research Faculty of Agriculture, Field Science Center for Northern Biosphere, Hokkaido University, Sapporo, Japan)
Improvement of anaerobic digestate for usage as nutrient solution in plant hydroponics

Ryosuke Endo*1

(1. Graduate School of Life and Environmental Sciences, Osaka Prefecture University, Sakai, Osaka, Japan)