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*[1], Sangwoong Baek[1], Eunyong Jeon[2], Kyung-Hwan Yeo[3], Kyoung Sub Park[3]

(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 Tanigaki[1], Takanobu Higashi[2], Atsushi J. Nagano[3,4,5], Mie N. Honjo[4], 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*[1, 2], Wei Guo[3], Akito Kaga*[4], Hiroyoshi Iwata[2]

(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 Yoneda[1], Hiroshi Shimizu*[1], Hiroshi Nakashima[1], Juro Miyasaka[1], Katsuaki Ohdoi[1]

    (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 Roni[1]*, Md Saiful Islam[2], Kazuhiko Shimasaki[3]

    (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 KAJIKAWA[1], Yuichi UNO[1], Shinichiro KUROKI[1], Kanako UMABA[1], Kensei ZAKO[1], 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 Hirama[1], Hideyuki Yanagibashi[1], Minoru Saka[2]

    (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 Ueda[2], Yoshihiro Takikawa[3], Takaya Azuma[4]

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Agricultural Experiment Station, Wakayama, Japan)

CIGR-OS24   Chlorophyll fluorescence imaging robot based plant growth evaluation
Seitaro Toda[1], Kotaro Takayama*[2], Eldert J. van Henten[3], C. Wouter Bac[4], Noriko Takahashi[2], Hiroshige Nishina[2]
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CIGR-OS25   Resource use efficiency in plant factories, greenhouses and integrated rooftop greenhouses in different climate regions of the world
Esteban Baeza*[1], Luuk Graamans[2], Cecilia Stanghellini[1], Ilias Tsafaras [1], Andy van den Dobbelsteen[2], Juan Ignacio Montero[3]
(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*)

CIGR-OS31   A novel formulation of functional food to dissolve hydrophobic compounds in food
Yuichi Tozuka*
(*Osaka University of Pharmaceutical Sciences, Osaka, Japan*)

CIGR-OS32   Trends in cushioning packaging for fresh produce in Japan
Hiroaki Kitazawa*[1]
(1. *Food Research Institute, NARO, Tsukuba, Japan*)

CIGR-OS33   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*)

CIGR-OS34   Improvement of anaerobic digestate for usage as nutrient solution in plant hydroponics

Ryosuke Endo[*1]

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