Call for papers – First announcement

The International Symposium on Agricultural and Biosystem Engineering 2013 (ISABE 2013)

August 28-29, 2013
Venue: Yogyakarta, Indonesia

The call for papers is now open!
Send your submission to: 2013.isabe@gmail.com

This symposium is arranged to bring researcher and experts together to share ideas how to improve the role of agricultural and biosystem engineering toward food & energy self-sufficiency and sustainable agriculture. Invited speakers and papers will underline topics related to engineering and technology of food, energy, land and water, as well as the environment.

The symposium is organized by the Indonesian Society of Agricultural Engineering (ISAE) or Perhimpunan Teknik Pertanian Indonesia (PERTETA) and the Faculty of Agricultural Technology, Universitas Gadjah Mada (UGM). The organizers of this symposium are looking forward to welcome you to Yogyakarta for this important meeting.

THEME

Improving the role of agricultural and biosystem engineering toward food & energy self-sufficiency and sustainable agriculture

SUB-THEMES

- **Postharvest and food engineering :** agricultural and food process engineering, postharvest engineering, physical and engineering properties, modeling and simulation.
- **Energy and agricultural machinery :** bioconversion engineering, renewable energy development, rural electricity and energy sources, life-cycle assessment, energy audit, precision agriculture, sensor and control.
- **Land and water resources engineering :** land management, irrigation engineering and management, soil properties engineering, watershed management, water and soil conservation engineering.
- **Agricultural structures and environmental engineering :** microclimate engineering, environment control design, construction and analysis of agricultural structures.
- **Biophysics engineering :** quality evaluation of food and agricultural products , physical chemistry of agricultural materials, physical properties of the soil-plant-atmosphere system, modelling of the water and energy exchange.
- **Other agricultural and biosystem engineering topics**

IMPORTANT DATES

January 21, 2013	: Opening of the pre-registration
May 1, 2013	: Deadline for extended-abstracts submission
May 30, 2013	: Notification to authors
August 1, 2013	: Deadline for full registration

GUIDELINES FOR ABSTRACT SUBMISSION

1. Please prepare your abstract in English using the provided template (see 2nd page of this flyer), in one (1) page maximum of A4 paper, Times New Roman 10, single space, margin 2.5.
2. Abstracts will be reproduced in the book of abstracts. Full papers will be compiled in a separate proceeding.
3. Please send your abstract to: 2013.isabe@gmail.com

FOR MORE INFORMATION, PLEASE CONTACT
Rudiati Evi Masithoh (Mrs) +62-85743596391
Arifin Dwi Saputro (Mr) +62-81229438000
Fax: +62-274-563542; +62-274-589797
E-mail: 2013.isabe@gmail.com

Title: Development Of A Simple Computer Vision System To Determine Tomato Quality

Rudiati Evi Masithoh[1] Given Family[2] and Given Family[1]
[1]Faculty of Agricultural Technology, Universitas Gadjah Mada, E-mail: 2013.isabe@gmail.com
[2]Kasetsart University, Jatujak 10900 Thailand

Abstract (2-3 sentences)

The objective of this work is to develop a simple computer vision system to determine tomato quality based on color. The developed CVS could predict tomatoes quality based on color parameters with relatively high accuracy.

Keywords: computer vision system, tomato, color

Introduction (1 paragraph, 5-8 sentences)

Please express the point why your work is necessary and what is the originality of your work..

Materials and methods

Sample

A total of 150 tomatoes harvested at green-mature stage were obtained from the orchard located in Kaliurang. The samples were transferred to the laboratory; then they were kept in an air-conditioning room of 25°C for 24 hours.

Methods

A computer vision was developed to measure RGB color values of tomatoes. This system consisted of a box to place object, a webcam to capture images, a computer to process images, illumination system, and an image analysis program which was equipped with artificial neural networks technique for determining tomato quality. Images of tomatoes were taken using developed machine vision then the RGB values were calculated. Tomatoes were finaly brought to laboratory for quality determination, in term of vitamin C, total sugar, citric acid, and Brix.

Data analysis

Write a short data analysis if required.

Results and discussion

Write a short, concise, and clear discussion of your work. Enclose only important chart(s) or table(s) or the results to support your discussion.

Conclusion

Please emphasize your finding in short statement.

References

1. Lana, M. M., Tijskens, L. M., de Theije, A., Hogenkamp, M. and van Kooten, O. (2006). Assessment of changes in optical properties of fresh-cut tomato using video image analysis. *Postharvest Biology and Technology* 41: 296-306.
2. Massot, C., Michel Génard, M., Stevens, R. and Gautier, H. (2010). Fluctuations in sugar content are not determinant in explaining variations in vitamin C in tomato fruit. *Plant Physiology and Biochemistry* 48: 751-757.
3. Mendoza, F., Dejmek, P. and Aguilera, J. M. (2006). Calibrated color measurements of agricultural foods using image analysis. *Postharvest Biology and Technology* 41: 285-295.