Call for Papers

The 6th International Workshop

Applications of Computer Image Analysis and Spectroscopy in Agriculture

Special Parallel Conference of the
INTERNATIONAL CONFERENCE OF
AGRICULTURAL ENGINEERING, CIGR - AgEng 2016
http://conferences.au.dk/cigr-2016

Sponsored by
CIGR – AgEng – University of Aarhus

CIGR Working Group on Image Analysis for Agricultural Products and Processes
http://cigr-imageanalysis.com

June 26 – 29, 2016
Aarhus, Denmark

Submission is now open. You are kindly invited to submit your abstract through the CIGR - AgEng 2016 conference site, and selecting the topic 11 Image Analysis for Agricultural Products and Processes.

Important dates:

- 1 Dec. 2015: Abstract submission opens
- 1 Jan. 2016: On-line registration opens
- 15 Feb. 2016: Abstract submission deadline
- 15 Apr. 2016: Notification of oral and paper acceptance
- 30 Apr. 2016: Early bird registration deadline
- 15 May 2016: Full paper submission deadline
- 26 June 2016: The conference starts.

For further information contact to Jose Blasco (blasco_josiva@gva.es)

THEME

The CIGR Working Group on Image Analysis for Agricultural Products and Processes is organizing the conference to increase the collaboration between institutions, academia, government, industry and individuals in the field of computer vision and image analysis for food and agriculture.

This conference is open to all researchers interested in optical systems for agricultural products and processes. Imaging technology has been growing considerably in recent years for the diverse applications from remote sensing to microscope imaging with improvement of equipments from single band monochrome imaging to hyperspectral imaging.

Machine vision systems allow processing automation for food and agricultural industry with powerful electromagnetic spectra with ultra-violet (UV), visible, near-infrared (NIR) and short wavelength infrared (SWIR) that are capable of monitoring processes and inspecting products with a high speed that would otherwise not be possible.

The recent advances of imaging technology open lines of research: hyperspectral imaging, multispectral imaging, spectroscopy, microscopic imaging, real-time inspection, infrared thermography, etc. These cause constant needs to develop new methods, systems and algorithms capable of deal with the large amount of information provided by these systems, and to create innovative developments that can be transferred to the industry for a practical use.

The V International Workshop on Computer Image Analysis in Agriculture is a forum for scientists, engineers and managers involved in the development of new techniques of computer vision and spectroscopy for agricultural applications in order to share knowledge in this field and achieve an improvement in productivity.

In addition to the publication of the proceedings, selected authors attending the workshop will be invited to submit extended versions of their papers for publication in a Special Issue of Biosystems Engineering on Image Processing for Agricultural Products and Processes. With your participation, we are confident that the Conference will be a great success.

TOPIC AREAS

Monitoring

- Remote sensing
- Remote inspection of farms, greenhouse, fish farm
- Changes of recognized parameters in on-site monitoring as a function of time
- Crop monitoring and weed detection
- Early disease and pests detection
- Internet imaging

Process Management

- Applications of machine vision and image processing in the agricultural and food industry
- Image processing with respect to geometric and structure analyses
- Development of phantoms (gold standards)
- Influence of outdoor light conditions
- Inspection of internal quality
- Colour analysis
- Automatic inspection of fresh and processed agricultural products

Techniques

- Spectroscopy and optics for online applications
- Hyperspectral and multispectral imaging
- Thermography
- Microscopic imaging
- Magnetic Resonance imaging
- Data mining, segmentation techniques, feature selection, etc.
- Real-time image processing
- Tools and libraries for image processing
- Low-cost imaging systems
- Chemical imaging
- High-throughput spectral imaging
- Biosensors

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Morten Dam Rasmussen (Denmark)

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