

The Field Robotics Center

Seminar Series

Friday, August 22



GHC 2109 noon – 1pm

Pizza will be served

Josse De Baerdemaeker

KU Leuven, Belgium

EU-NMP project: Clever robots for crops (cROpS)

Abstract: The main objective of CROPS is to develop a highly configurable, modular and clever carrier platform comprising a carrier plus modular parallel manipulators and “intelligent tools” (sensors, algorithms, sprayers, grippers) that can easily be installed onto the carrier and that are capable of adapting to new tasks and conditions. Both the scientific know-how and a number of technological demonstrators will be developed for the agromanagement of high value crops like greenhouse vegetables, orchard fruits, and grapes for premium wines. The CROPS robotic platform will be capable of site-specific spraying (targeted spraying only on foliage and selected targets) and selective harvesting of fruit (i.e., it will detect the fruit, determine its ripeness, move towards the fruit and grasp it and softly detach it). The rationale for having the different crops in this project is that they share many common research areas, primarily regarding sensing and learning capabilities.

Speaker Bio: Prof. dr.ir. Josse De Baerdemaeker graduated from the Faculty of Agriculture of the KU Leuven, Belgium and later obtained an MSc and PhD degree in Agricultural Engineering at Michigan State University. His main research areas are in the acquisition and exploitation of knowledge on the interaction between physical processes and biological products. While studying the physical properties of agricultural products, several new measurement techniques were developed. This then evolved also in technology for precision agriculture. Improving technology in crop cultivation, harvesting and handling to minimize losses and optimize yield and income for farmers are all part of the activities in precision agriculture. As an Emeritus professor he recently was also a visiting professor at Kyoto University, Japan.



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