

Fernando Silveira,

Professor at Universidad de la Republica, Uruguay

Design and Deployment of Wireless Sensor Networks for Smart Agriculture Applications

Abstract

The talk will present an overview of the design and deployment of wireless sensor networks for agriculture in fruit production environments already done and being prepared by our group. Applications include networks for microclimate monitoring (temperature, ambient and soil humidity) and networks including image acquisition, processing and transmission for pest control. Platform and protocols selection and optimization as well as tools for in-field characterization of the network, particularly energy consumption, shall be discussed.

Biographical Sketch

Fernando Silveira received the Electrical Engineering degree from Universidad de la República, Uruguay in 1990 and the MSc. and PhD degree in Microelectronics from Université catholique de Louvain, Belgium in, respectively, 1995 and 2002. He is currently Professor at the Electrical Engineering Department of the School of Engineering of Universidad de la República, Uruguay. His research interests are in design of ultra low-power analog and RF integrated circuits and systems (including wireless sensor networks), in particular with biomedical application. In this field, he is co-author of one book and many technical articles. He has had multiple industrial activities with CCC Medical Devices and NanoWattICs, including leading the design of an ASIC for implantable pacemakers and designing analog circuit modules for implantable devices for various companies worldwide. He was a Distinguished Lecturer of the IEEE Circuits and Systems Society for 2011 – 2012 and received the Distinguished Engineer award by the Uruguayan Association of Engineers in 2007.