



RETIS Seminars

March 18, 2015 - 15:30 - Yellow Room
Retis Lab – TeCIP Institute
Via Moruzzi, 1 - Pisa

Seminar on

Holistic approach to energy saving in wireless networks of energy-hungry sensors

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Abstract

This talk will present energy-saving techniques in battery-powered wireless networks of energy-hungry sensors, such as video cameras and gas sensors for smart surveillance applications. Power management is performed at three levels: sensor, node and network level. The context-aware multimodal and heterogeneous architecture of the sensor network limits the energy-hungry sensor's active time and area, while wake-up radio ensures time- and energy-efficient communication between sensor nodes. The main goal of combining energy-savings in communication and sensing is runtime prolongation of a wireless sensor node and network, without downgrading quality of service for the user (i.e., maintaining good recognition of interesting events).

Brief Bio of the speaker



Vana Jelacic received her PhD and her Masters (Dipl.-Ing.) degree in Electrical Engineering from University of Zagreb Faculty of Electrical Engineering and Computing, in 2014 and 2009, respectively. She is currently a postdoc researcher at the same Faculty, as a member of Laboratory for Intelligent Sensor Systems and ACROSS (Center of Research Excellence for Advanced Cooperative Systems).

Her research interests are in the field of smart sensors, wireless sensor networks (WSNs), energy harvesting, with the focus on power management in WSNs with high-consuming sensors. From 2010 to 2012, she spent 16 months as a visiting researcher at Micrel Lab, Department of Electronics, Informatics and Systems (DEIS), University of Bologna, Italy, where she performed research in energy-efficient techniques for heterogeneous multimodal WSNs for ambient intelligent applications (smart video surveillance and smart gas monitoring), including wake-up radio.