

Let the Plants do the Talking: Climate-Smart Agriculture by the messages received from Plants and Soil

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IoT application in agriculture is exponentially increasing, proving that Climate-Smart Agriculture (CSA or Precision/Smart Agriculture) is a very fast-growing research field, where more controlled quality production, water use optimisation, and a lower spreading of pesticides and fertilisers are some key issues, serving the improvement of food quality, but also helping the respect of agriculture for the environment. In the talk, an overview of electronics for CSA will be presented, analysing the possible solutions that can bring important innovations, advancing the actual strategies based on remote or indirect measurements instead of in-place measuring the plant and soil parameters (a.k.a. Let the Plants do The Talking). This new and disruptive technology, related to Wearable Sensors for Plants, the World Economic Forum has recently identified it as one of the “Top five technologies about to change the world”, indicating it as one of the key solutions to increase food production by 70% by 2050 to be able to feed the world population. Application scenarios for crop monitoring, water control, information communication and decision support will be presented.