editorial

Bruno Andò

Dear Readers,

Whether we like it or not, our everyday life is full of sensors!

Let's think of one of the most used objects, which is always in our pocket or purse: the smartphone. This device is full of sensors, which help the smartphone operate and provide services which sometimes may be useful, such as GPS, or allow for fun, such as gaming Apps.

A similar bunch of sensors can be found in many other systems which we use everyday, from the washing machine to our car. Yes, automotives are a very trending topic where electronics, sensors and smart signal processing represent strategic parts of the whole system: airbags, Anti-lock Braking Systems (ABS), parking sensors are just a few examples of the use of sensors in small cars.

Basically, sensing everything and everywhere!

In the Internet of Things (IOT) world, sensors represent one of the most important ingredients, along with advanced signal processing and communication protocols, approaches that guarantee the right degree of reliability and safety. The latter is a mandatory task, if we think about the amount of information travelling everyday around us, through all available communication media, and the content of such information. Sometimes, it is rich in very sensitive data.

Actually, sensors represent the main source of information in several contexts that exploit Information and Communication Technology (ICT), such as automotives, robotics, assistive systems, home appliances, E-health and bio-medical devices.

This being said, the development of advanced sensing methodologies, new sensor architectures and convenient technology for sensor fabrication, well-performing paradigms to appropriately process signals generated by sensors, and approaches to elaborate and combine signals provided by multi-sensor platforms represent real challenges that are currently being tackled by the scientific community.

Providing merit to these systems is the main target of this Special Issue of *Instrumentation & Measurements Magazine* on "Sensors and Signal Processing," which will provide interesting readings about current trends in sensor development and their use in heterogeneous application contexts.

Have a nice time reading,