



Editorial: Smart Objects and Technologies

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Editorial:

Smart objects are entering everyday life and are heavily modifying it. Healthcare, communication, art, entertainment, safety, environment, education, democracy, and human rights, are just a few examples of scenarios that are radically changing thanks to the use of smart objects and technologies.

In this context, the popularity of portable computing devices, such as smartphones, tablets, or smart watches combined with the emergence of many other small smart objects with computational, sensing and communication capabilities coupled with the popularity of social networks and new human-technology interaction paradigms is creating unprecedented opportunities for each of us to do something useful, ranging from a single person to the whole world. Furthermore, Internet of Things, Smart-cities, distributed sensing and Fog computing are representative examples of modern ICT paradigms that aim to describe a dynamic and globally cooperative infrastructure built upon objects intelligence and self-configuring capabilities. These connected objects are finding their way into our pockets, vehicles, urban areas and infrastructure, thus becoming the very texture of our society and providing us the possibility, but also the responsibility, to shape it.

This special issue features six selected high quality papers in the fields of IoT technologies, health communication, community networks, online education, artificial intelligence, and wearable sensor networks.

The first article, titled “Smart Campus: fostering the community awareness through an intelligent environment” presents a case study where IoT technologies have been used to design and develop a system able to bring benefit to communities of students, making them actively involved as central players of such an intelligent environment.

The second article, “Towards Using Scientific Publications to Automatically Extract Information on Rare Diseases” focused on rare diseases and proposed a new software tool for automating the extraction of information related to rare diseases from scientific publications.

The third article titled “A low-cost and low-power messaging system based on the LoRa wireless technology” described a low-cost and low-power consumption messaging system based on LoRa technology. The proposed system falls in the category of community networks, where users build their own network where no commercial infrastructure is available.

The fourth article titled “An Online Education System to Produce and Distribute Video Lectures” focused on online learning and the authors shared their experience building ONELab, a system designed to capture, record, edit and stream video lectures. The system supported 1251 students and produced 2064 h of video lectures, and its evaluation showed that students who used ONELab acquired more credits (+119%) and had better grades (+9.4%) than those who did not use the system.

The fifth article titled “Intelligent and good machines? The role of domain and context codification” reported reflections and technical aspects of Artificial Intelligence technologies. The authors shows that an inaccurate or incomplete codification of the context where the ANNs will have to operate may result into AI failures.

The last article titled “Safety first? Users’ perception of Wearable Sensor Networks for aging”, the authors evaluate the acceptability and usability of a system designed to silently monitor the activity and condition of older adults, with a particular focus on the elderly affected by cognitive decline. By using sensors and various wearable objects, the authors’ goal is to improve safety and independence of older adults.

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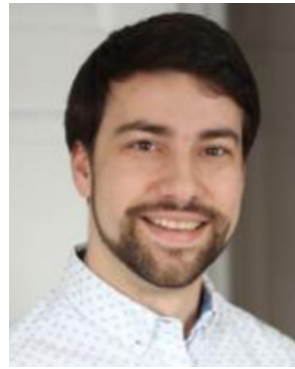
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