



Radiofrequency Identification against COVID-19: How state of the art RFID Technology and Research may help facing Pandemics

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COVID-19 pandemic is abruptly changing the way we live, starting from social interactions and healthcare, up to transportation and recreation.

While waiting for the massive immunologic effects of the vaccine, whose distribution has recently started revealing sensible logistic issues related to packaging tamper-proof, storage temperature, traceability and adverse effects, worldwide existing technologies as well as discoveries, have been quickly redirecting to mitigate the infection risks and contribute to a rapid recovery of activities and normal daily life.

In particular, the fight against the infection outbreak can benefit from pervasive wireless things, like electronic labels and wearable devices, that can be specialized in a fan of options sharing the same infrastructures, standards, and expertise.

This keynote will show how the assessed pillar of the Internet of Things, namely the Radiofrequency Identification (RFID) technology, and in particular the emerging class of sensor-oriented devices and services, could be used in the short term to support the fight against COVID-19 and the pandemics of the future. Based on the pillars of antiCOVID countermeasures, three macro-topics will be addressed: i) Personal Protective Equipment (PPE) - supply, usage, and management; ii) Access control, contact tracing and indoor ambient quality; iii) Predictive and Preventive Healthcare.

For each topic, the keynote will resume the state of the art of RFID devices and will describe the processes that have been already implemented for that application, as well as those technologies that have been applied to different scenarios but could deserve a try in the fight against pandemics. The overall purpose of the speech is hence to draw a picture of what could be immediately applied, as well as to identify challenges for the finalization of current research based on Radiofrequency Identification.