



Journal of Sensors

Special Issue on
**Selected Papers from International Workshop on
Micro-Nano-Bio-ICT Convergence**

CALL FOR PAPERS

Worldwide, scientific and technological research to develop, manufacture, and sell systems that employ nano- and microstructures is at the forefront of economic competition. In this context, Micro-Nano-Biosystems (MNBS) devices that provide peculiar intelligent functionality by combining microelectronic components with physical, chemical, and biological sensors and actuators on fully integrated systems envisage an increasing technology development on a broad range of powerful applications addressing societal challenges. These fast technology developments have contributed to the growth in many areas of research (health, food, environment, etc.) where they can bring about significant impact.

Moreover, the inclusion of sensors and MNBS on systems that combine biological functionality with the ubiquitous sharing of information through networks is also receiving particular attention. Nevertheless, in order to take full advantage of the current technologies, more efforts have to be addressed to improve the link between MNBS and a new concept of Information Communication Technology. The full integration of MNBS and ICT will allow combining data processing with sensing, reasoning, actuating, and communication and will allow analysing complex situations, taking autonomous decisions, and interacting with the environment and with other “intelligent” systems.

The objective of the workshop is twofold: (a) to share the progress in the field and (b) to identify the technological orientation and future challenges offered by the connection between MNB and ICT technologies. The involvement of representatives of key research disciplines will offer a podium to enable community building and networking, the sharing of progress in both technology and application development, and the identification of common interests. The distance to market, the translation of a technology success into a market success, and how it is reflected on the Horizon 2020 programs will be discussed in a specific session of the workshop.

Potential topics include, but are not limited to:

- ▶ **Materials and technologies**
 - ▶ New materials and advanced technologies for sensors and smart systems integration
 - ▶ Biophotonics
 - ▶ Printed, flexible, biodegradable, and biocompatible sensors and electronics
 - ▶ Energy harvesting technologies for sensors
 - ▶ Biosignals processing
- ▶ **Sensors and microsystems**
 - ▶ Lab-on-a-chip & micro-nano-optofluidics
 - ▶ MEMS/NEMS sensors and systems
 - ▶ Wearable and implantable sensors and devices and other miniaturized systems interacting with the human body
- ▶ **Applications**
 - ▶ Sensors for smart objects and Internet of Things
 - ▶ Sensor networks and UAVs based remote sensing
 - ▶ Applications in health, food, ambient assisted living, and environment

Lead Guest Editor

Leandro Lorenzelli, Bruno Kessler Foundation, Trento, Italy
lorenzeli@fbk.eu

Guest Editors

Elisabeth Smela, University of Maryland, College Park, USA
smela@umd.edu

Christos Tsamis, National Center for Scientific Research "Demokritos", Athens, Greece
c.tsamis@inn.demokritos.gr

Luca Francioso, Institute for Microelectronics and Microsystems, Lecce, Italy
luca.francioso@le.imm.cnr.it

Manuscript Due

Friday, 14 August 2015

First Round of Reviews

Friday, 6 November 2015

Publication Date

Friday, 1 January 2016

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/js/mina/>.