IEEE

2020 IEEE INTERNATIONAL WORKSHOP ON

Metrology for Industry 4.0 & IoT

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CNR - NATIONAL RESEARCH COUNCIL
HEADQUARTERS - **Piazzale Aldo Moro**

METROIND4.0&IoT

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CALL FOR PAPERS for the Special Session on

PHYSIOLOGICAL SENSORS AND TECHNIQUES FOR MONITORING SPORT AND PHYSICAL ACTIVITY

The importance of monitoring physiological responses during sport and physical activity is well recognized. The main goals of physiological monitoring are: performance improvement and assessment, exercise prescription and monitoring, prevention of illnesses and injuries, physical activity quantification, the detection of sedentary lifestyles and the identification of safe exercise regimens and working conditions. A variety of populations would benefit from physiological monitoring, ranging from elite athletes to patients and old individuals. The growing interest in this area has been fostered by a combination of advances in materials, fabrication techniques, electronic engineering, IoT technologies, and wireless networks. Beyond typical physiological measures (e.g. respiratory frequency, heart rate, and glycaemia), it is now recognized that parameters obtained from mechanical measures (e.g. accelerometer data) may serve as "biomarkers" and play a key role in the detection of physiological and pathophysiological conditions related to movement.

This special session welcomes original contributions aiming at improving physiological monitoring with the use of innovative sensors, measuring systems, metrics, algorithms or IoT technologies.

ORGANIZERS

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Submissions are welcomed on (but not limited to):

- Wearable devices
- Contact-less measurement systems
- Metrological characterization of sensors for physiological monitoring
- Metrics, algorithms and signal processing techniques
- Physiological variables, signals, and techniques

- Movement-related "biomarkers"
- Internet of things for wearables and unobtrusive monitoring systems, networking and interoperability
- Innovative applications and practical solutions
- Reliability, validity, and accuracy of sensors and measuring systems
- Data fusion or processing for accurate signal estimation

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