Medical Measurements & Applications
June 26-28, 2019 | Istanbul, Turkey

IEEE INSTRUMENTATION & MEASUREMENT SOCIETY

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TÜBİTAK UME

KADİR HAS ÜNİVERSİTESİ

CALL FOR PAPERS FOR THE SPECIAL SESSION

Wearable and unobtrusive monitoring systems for medical applications

ABSTRACT

Over the past decade, we have seen considerable developments in smart wearable devices and unobtrusive monitoring systems. Such systems are rapidly emerging and accepted in the healthcare field, exercise activity monitoring, and performance assessment. New accurate systems may find application in the measurement of a range of physiological parameters (from heart rate and respiratory pattern to movement and food intake) in numerous scenarios (from hospital bed to home and daily living environments) and at different scopes (monitoring, prevention, etc.).

The proliferation of devices has been fostered by a combination of advances in materials, fabrication techniques, electronic engineering, IoT technologies, wireless networks. However, there remain numerous challenges in a broad range of areas that require research effort to further the technology.

TOPICS

- ❑ Wearable sensing systems (including flexible and tattoo sensors and electronics)
- ❑ Unobtrusive sensing systems, techniques and methods
- ❑ Metrological characterization of smart wearable devices and unobtrusive monitoring systems, techniques and methods.
- ❑ Healthcare and medical prototypes and applications (as -but not limited to- cardiopulmonary, bioelectrical signal, motion and rehabilitation, temperature, blood substances, and nutrition estimation)
- ❑ Sensor miniaturization and manufacturing techniques
- ❑ Sensor signal processing
- ❑ Internet of things for wearables and unobtrusive monitoring systems, networking and interoperability
- ❑ Innovative applications and case studies
- ❑ Reliability, validity, accuracy of wearables
- ❑ Data fusion or processing for accurate signal estimation
- ❑ Regulations

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