



Special Session on

**Smart Medical Devices**

Organized and co-chaired by:

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Call for Papers

This special session is devoted to research work covering the field of new trends in research and development of smart medical devices. The session covers a broad spectrum of up-to-date topics on medical imaging/biomedical engineering including: image processing algorithms, bioinformatics, medical records, clinical, epidemiological and multimedia data bases. The need for small, user-friendly and portable medical electronic devices for health monitoring, assessment and diagnosis has been increasing recently. In the heterogeneous field of medical devices, more and more attention is paid to creating smart medical devices with high usability. Keywords such as signal and image processing, data collection and automatization play a major role, but they do not only refer to the medical devices themselves. By creating a smart and customized development process, it is much easier to implement ideas for smart medical devices. This covers the entire development process and all associated steps such as design, prototyping or testing. All the topics mentioned below can therefore be considered applicable to both the medical device and the corresponding development process within the concept of Health 4.0. Topics of interest include, but are not limited to:

- Biomedical smart materials and devices (orthopaedic, dental, cardiovascular, cosmetic, etc.)
- eHealth, IoT and medical web portals
- Personalized medical devices
- Automatization and health monitoring
- Data collection, analyzation and Open Data concepts
- Instrumentation and sensors related to 3d-printed biomedical components and systems
- Biomimetic and bio-inspired technological devices
- Personal data security
- Smart sensors for patient data measurement
- Health 4.0
- Use of augmented and virtual reality in medical devices
- Modern innovation processes for regulated development of smart medical devices

**Submission of papers:** deadline follows the deadline for the regular papers.

All the instructions for paper submission are included in the conference website:

<https://ieeefrance.org/author-guidelines/>