

IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

J-BHI Special Issue on “Applications of Intelligent Environments to Health”

Intelligent environments (IEs) refer to physical spaces in which different techniques, methods and technologies, coming from artificial intelligence, human-computer-interaction, networks of sensors and actuators, distributed processing, information and communication systems, and/or robotics, among other computer science fields, are woven in order to create smart, proactive and interactive spaces. In particular, IEs in the area of health (both within the hospital and home) aims to provide personalized solutions under complex conditions and constraints, using innovative approaches based on a number of cutting-edge pervasive technologies.

These solutions aim to provide strategies and tools to monitor the health status of patients and improve their quality of life, as well as state-of-the-art tools that allow hospital staff (doctors and nurses) to carry out their work more effectively and efficiently. It is also important to optimize available resources, even through the integration of existing solutions. Additionally, the processing of information (both in real time and offline) is required to understand health-related processes and scenarios in greater depth, as well as provide solutions that allow improving the quality of medical care, while optimizing available resources. Undoubtedly, all this will contribute to saving costs for the health system of the corresponding country, as well as helping to maintain an adequate state of health and well-being for its citizens, especially for the most vulnerable ones (chronically ill, people with disabilities, etc.).

This Special Issue (SI) is proposed with the intention of inviting the authors of selected papers among those accepted and presented at the *19th International Conference on Intelligent Environments (IE'23)* to submit extended versions of their papers (considering the journal instructions to do this) to be considered for its eventual publication in it, after the corresponding review process. Nonetheless, an open call for papers will be announced so that other researchers and practitioners working in the topics addressed in this SI, even if they have not participated in IE'23, can submit their papers to this SI.

Topics of interest include, but are not limited to, the following ones:

- Smart healthcare tech
- Ambient assisted living
- Smart hospitals
- Virtual/mixed reality applied to health
- Wearable sensor systems
- Mobile health monitoring
- Next generation telehealth/telecare
- Ambient intelligence applied to health and social care
- Machine learning and other AI techniques applied to healthcare
- Companion robots
- Robotics applied to health
- Health-enabling technologies

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Key Dates

Deadline for Submission: 30 September 2023

First Reviews Due: 5 November 2023

Revised Manuscript Due: 15 December 2023

Final Decision: 25 January 2024