Editorial

JETSAN: A Reference Workshop of E-Health in France

The concept of telemedicine appeared in ’70 in Nebraska (United States) and North of Norway in order to help regions with large surface areas and low number of medical doctors. The teleconsultation was the first application of telemedicine and the main challenge was to be able to transmit sound and images of good quality. Year after year, new applications were developed and more recently, the telemedicine was extended to E-Health or Digital Health. The new communication possibilities but also the increased power of embedded systems allow applications such as vital sign monitoring, teleconsultation or telesurgery [1,2]. E-Health includes telemedicine but also medical related mobile applications, telemonitoring, smart textiles, patient forum websites, etc.

The JETSAN National Conference was initiated in 2011 at E-GETEL in Fontainebleau in order to have an exchange of views between Physical and Engineering sciences researchers, Life sciences researchers, Social sciences and Humanities researchers, medical staff, industrials and public administration. The conference is divided into classical scientific oral and poster presentations and round tables, allowing debates on specific themes. Initially scheduled each year, then every 2 years since the 2015 edition, the JETSAN conference has known an increased number of participants (110 in 2017). This 2017 edition has taken place in Bourges and has covered three main thematic fields that are reported in this special issue of IRBM: biomedical connected objects, intelligent systems for autonomy and E-Health and robotic applications. Young researchers are invited at each edition and can present their work in progress (PhD thesis or Master of Sciences internships) and can meet senior researchers.

Eleven selected papers from this 2017 edition [3–13] are published in this special issue while three of them have already been published this year, in issue 3 [14–16]. All papers were peer-reviewed according to the general reviewing rules established for IRBM.

This special issue gives an overview of the broad spectrum of E-Health domain including speech analysis [13], hand writing recognition [3], robotics [5,15], biomedical sensors [11], rehabilitation at home [12], patient’s monitoring [7,8]. Applications can concern frail people e.g. through experiences in Ambient Assisting Living (AAL) [4,6,10], preterm birth risk pregnant women home monitoring [7], tissue characterization sensor [11], musculoskeletal disorders telemonitoring [5], data modeling and standardization [14]. The common point of all these papers is the use of automatic techniques (signal processing, pattern recognition) to monitor at distance different types of signals. The acceptability [16], interoperability [13], usability and ethical approach are also important research axes present in each JETSAN edition.

This special issue follows the publication of some papers presented at JETSAN 2014 conference, held in Troyes, related to acceptability and rehabilitation [17,18], and at JETSAN 2015 conference related to ethical approach of E-Health [19].

We would like to thank all organizers, participants and authors for giving a large overview of E-Health in France. The next edition will be in Paris in May 2019, and will provide a specific focus on artificial intelligence (AI) for E-Health (https://jetsan2019.sciencesconf.org/).

Conflict of interest statement

None declared.

References


D. Istrate a, b, F. Frouin b

a Sorbonne University, University of Technology of Compiègne, CNRS, BMBI UMR 7338, 60200 Compiègne, France

b Inserm/CEA/Université Paris Sud/CNRS, CEA/I2BM/SHFJ, Laboratoire IMIV, Orsay, France

E-mail address: dan.istrate@utc.fr (D. Istrate)

* Corresponding author.