IEEE Transactions on Industrial Informatics

CALL FOR PAPERS
for Special Section on
"Cloud Computing, Edge Computing, Internet of Things and Big Data Analytics Applications for Healthcare Industry 4.0"

Theme Ground All over the world, the number of investments in Information and Communication Technology for health and wellbeing (eHealth) is rapidly increasing. GLOBE NEWSWIRE has predicted that the Global eHealth market is expected to reach 308 billion dollars by 2022. In recent years the rapid advent and evolution of Cloud Computing, Edge Computing, Internet of Things (IoT), and Big Data technologies is revolutionizing eHealth and the whole Industry 4.0 in the field of healthcare. In fact, Healthcare Industry 4.0 allows to increase flexibility in production, speed up both manufacturing and market processes, increase both the product quality and productivity, and change business models modifying the interaction with value chain, competitors and clients. Healthcare Industry 4.0 requires Investments and mind set change for cross industry collaboration, agreements for data ownership and security, solve legal issues, standards for product registration, communication protocols (M2M), and employment/skills development.

In this context, an increasing interest is growing around tele-healthcare that allows the delivery of various kinds of health-related services and applications over telecommunication networks and the Internet including tele-nursing, tele-rehabilitation, tele-dialog, telemonitoring, tele-analysis, tele-pharmacy, tele-trauma care, tele-psychiatry, tele-radiology, tele-pathology, tele-dermatology, teledentistry, tele-audiology, tele-ophthalmology, etc.

Therefore, besides, revoluzionizing the whole healthcare industrial production cycle, healthcare Industry 4.0 allows, on one hand, patients to experience advanced tele-medicine services and applications directly in their homes by means of healthcare IoT devices equipped with sensors interacting with Cloud and Edge computing services able to process clinical big data and connected with Hospitals and clinical centers. On the other hand, clinical operators can remotely provide to patients real-time healthcare assistance dynamically improving therapies.

Topics of interest include, but are not limited to

- Cloud, Edge, IoT and big data based architectures, systems and applications for Healthcare Industry 4.0.
- -Hardware medical devices supporting Healthcare Industry 4.0.
- -Cloud computing, Edge computing, IoT and big data solutions influencing the healthcare industrial production cycle. Cloud, Edge, IoT and big data solutions for improving manufacturing, market processes, product quality and productivity of Healthcare Industry 4.0.
- -Business model for Healthcare Industry 4.0.
- -Cloud, Edge, IoT and big data solutions improving the interaction among competitors and clients.
- -Cloud, Edge, IoT and big data architectures for telemedicine.
- -Cloud, Edge, IoT and big data based applications for cognitive computing
- -Cloud, Edge, IoT and big data based applications for neurovision,
- -Cloud, Edge, IoT and big data based applications for mass customization
- -Cloud, Edge, IoT and big data based services and applications for tele-nursing, telerehabilitation, tele-dialog, tele---monitoring, tele-analysis, tele-pharmacy, tele-trauma care, tele-psychiatry, teleradiology, tele-pathology, tele-dermatology, teledentistry, teleaudiology, tele-ophthalmology.
- -Healthcare signal and data processing for Healthcare Industry 4.0.
- -Computer aided clinical diagnosis and therapies.
- -Decision support and therapy.
- -Cloud, Edge, IoT and big data based solutions for chronic disease management
- -Cloud, Edge, IoT and big data based services for optimization issues in eHealth.
- -Integration of Cloud, Edge, IoT and big data based services among different clinical centers.

Manuscript Preparation and Submission:

Follow the guidelines in "Information for Authors" in **the IEEE- IES website: http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics.** Please submit your manuscript in electronic form through Manuscript Central web site: https://mc.manuscriptcentral.com/tii . On the submitting page #1 in popup menu of manuscript type, select: SS on **Cloud Computing, Edge Computing, Internet of Things and Big Data Analytics Applications for Healthcare Industry 4.0**

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages, additional 4 pages may be allowed for a fee.

Note: The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable: **Deadline for manuscript submissions** **Nov. 30, 2017 (Extended to Jan. 31, 2018)**

Expected publication date (tentative) **July 2018**

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