

Smart and Secure Integration of Heterogeneous 5G-enabled Industrial IoT Applications

Smart manufacturing based on Cyber-Physical Manufacturing Systems (CPMS) is becoming a driving factor of modern industrial development processes. Nowadays, CPMS are one of the key elements of the Industrial Internet of Things (IIoT), where a large amount of data is being generated continuously by different sources, such as distributed smart devices, environmental monitoring and control systems.

In this context, smart, efficient and secure integration of heterogeneous networks and data sources is of paramount importance. However, the design of self-organizing and smart protocols for such integration is critical. Again, this problem is even more magnified since state of the art technologies, i.e., 3G, 4G, etc., are not able to satisfy requirements such as low latency, high coverage, high reliability and high data rate, which are pivotal for the massive development and implementation of CPMS.

The fifth generation mobile networks (5G) was proposed to solve the above mentioned issues, with the challenging aim of providing networking capability to mobile users everywhere and anytime, thus giving a significant potential to widely promote IIoT and CPMS.

This special issue encourages the submission of original research and review articles that will bring the emerging area of smart and secure integration of heterogeneous 5G-enabled IIoT applications to the attention of the academic and industrial research community. The goal of this special issue is to promote the submission of articles proposing innovative protocols, techniques, algorithms and technologies, based on 5G-enabled equipment, to advance existing solutions for smart, efficient and secure integration of heterogeneous networks and data sources within the IIoT context.

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

- 5G Communication/network infrastructures, architectures and protocols for IIoT
- Algorithms and protocols for Low-Power Wide-Area Networks (LPWANs)
- Computing/storage infrastructures for IIoT such as clouds, edge services and virtualization
- Integration and interoperability of modern industrial devices
- Big Data analytics, preprocessing, cleaning, management and mining
- Applied Artificial Intelligence and Deep learning in context of Industrial IoT Applications
- Decision making for smart manufacturing

- Intelligent sensors-to-infrastructure integration
- Smart integrated grids
- Smart monitoring and control using artificial and computational intelligence systems
- Agent technologies
- Intelligent infrastructures
- System architecture and middleware for intelligent industrial environments
- Reliability, security, timeliness, and robustness considerations in IIoT systems

Information for Authors

Submitters have to specify that the manuscript is for the “Smart and Secure Integration of Heterogeneous 5G-enabled Industrial IoT Applications” Special Issue. This can be done either inserting a proper note within the manuscript or through a comment in the submission form.

Manuscripts must be prepared according to the JHSN Information for Authors defined in: <http://www.iospress.nl/journal/journal-of-high-speed-networks/>

Manuscripts must also be uploaded through JHSN's electronic submission system: <http://mstracker.com/submit1.php?jc=jhsn>

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