

Special Issue on Industrial Internet of Things

Internet Technology Letters

Call for Papers

More than one decade ago emerged the Internet of Things (IoT), setting the basis for innovative applications for our everyday life. We have now a large variety of both wired (e.g. IEEE802.1TSN, IEEE802.1Qbu, IEEE802.1Qbv, Detnet) and wireless (e.g. IEEE802.15.4, 6TiSCH, WirelessHART, Z-Wave, WiSUN, WirelessMBUS, Bluetooth, IEEE 802.11 RTA, LoRa, ETSI LTN, mmWave) technologies to connect more and more smart and uniquely identifiable objects.

After providing best-effort connectivity, the Industrial Internet of Things (IIoT) requires a network infrastructure which supports real-time communications. Most critical applications require high-reliability, and an upper-bounded end-to-end latency has to be respected.

The Industrial Internet of Things is expected to support many critical applications. Industry 4.0 will rely on wireless and wired infrastructure to interconnect all the actuators, sensors and controllers, even for the control loops. To a greater extent, IIoT is particularly relevant also for e.g. robot control loops, reliable industrial monitoring, critical operation/actuation, etc.

Topics of interest include, but are not limited to:

- Resilient Systems, Dependable networking, Automated Diagnostics and Predictions;
- Quality of Service, Quality of Experience, Service Level Agreements;
- Implementation details and benchmarking of Industrial IoT protocols;
- Efficient communication protocols for industrial IoT;
- 5G: architecture, medium access, virtualization;
- Performance Bounds, Soft/Hard Real-time, Formal Methods;
- Security: privacy, policy management, IDS;
- OS and Middleware, industrial cloud;
- Real-world deployments, Lessons Learnt;
- Standards-based solutions, Interoperability and Integration;
- Seamless wired and wireless real-time infrastructure;
- Handling mobility in industrial networks;
- Interconnection of legacy and novel network technologies;
- Applications: reliable monitoring, low latency control, automation, robotics, etc.

Manuscript Due	Dec 15, 2019
First Round of Reviews	March 15, 2019
Revised Paper due	May 15, 2019
Final notification	July 15, 2019

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