Special Issue

Performance, Reliability and Scalability of IoT Systems

Message from the Guest Editors

The development of IoT systems poses serious problems in terms of quality of service (QoS) assurance. The availability of massive amounts of data collected by heterogenous sensors, the need for their analysis, and the demand of quick reactions at the occurrence of certain events make the design of such systems quite challenging. In many cases, these requirements conflict with the need for low-cost and low-power consumption of most of the devices. Furthermore, the scalability of the devised solutions must be considered, since workloads may depend on many unpredictable factors that can generate peaks of resource demands. This can undermine the availability of the services due to saturation of the system's service capacity. For these reasons, performance and reliability modeling, analysis, and simulation as well as on-field measurements play crucial roles in the design of IoT systems.

- IoT;
- performance evaluation;
- reliability analysis;
- sensor networks;
- fog computing

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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