

IEEE Transactions on Industrial Informatics

CALL FOR PAPERS

for Special Section on



"New perspectives on Wireless Communications in automation: From industrial monitoring and control to cyber-physical systems."

The Theme: Wireless communication is steadily increasing in many automation applications and there is a further need for communication protocols able to meet requirements such as bounded latencies, high reliability, energy efficiency, security, dependability, and adaptivity. This need is especially driven by the industry interest in enabling large-scale wireless deployments for the sake of flexible, competitive and cost-efficient production. Wireless communication is also steadily penetrating other application areas in automation, such as cyber-physical systems, in which network-related effects, such as jitter, packet loss and resource contention, can affect the stability and dynamics of the physical subsystems. For this reason, there is a need to disseminate, streamline and investigate research findings coming from several different application domains. The challenge is exploiting the similarities between the different domains, while coping with the peculiar requirements of each automation application.

The goal of the Special Section is to attract papers tackling with the main research issues in the development, adoption and application of wireless communications for a broad range of automation applications, such as traffic, environmental, building, and structural monitoring, factory automation, industrial process monitoring and control, mobile robotics, vehicular communication, energy management, smart grids, avionics, healthcare applications, and many others.

Topics of interest include, but are not limited to:

- Architectures, protocols and algorithms for wireless communication in automation applications.
- Security and safety for wireless automation systems.
- Reliable and time-critical wireless communications for automation applications.
- Techniques for adaptive wireless communication in dynamic environments.
- Performance evaluation, simulation, RF measurements, and modeling of wireless networks.
- Deployment, integration and case studies of wireless sensor and actuator systems in automation.
- Wireless communications in Cyber-Physical systems: Design, deployment, evaluation, and case studies.

Papers discussing new application areas and new developments of wireless networks are especially welcome. All contributions must focus on wireless communications. Results obtained by simulations must be validated in bounds by experiments or analytical results.

Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics <http://tii.ieee-ies.org/>. Please submit your manuscript in electronic form through Manuscript Central web site: <http://mc.manuscriptcentral.com/tii>. On the submission page #1 in popup menu of manuscript type, select: SS on New Perspectives on Wireless Communications in Automation.

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Extended versions of papers previously published in conference proceedings may be eligible for consideration if conditions listed in <http://tii.ieee-ies.org/o/PC.pdf> are fulfilled. Before submitting manuscript check the review criteria (<http://tii.ieee-ies.org/o/RC.pdf>) and other information (<http://tii.ieee-ies.org/o/DI.pdf>)

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
Expected publication date (tentative)

January 31, 2016
December 2016

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