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SPECIAL ISSUE ON *Cloud-assisted Cyber-Physical Systems for the Implementation of Industry 4.0*

<http://www.springer.com/engineering/signals/journal/11036>

Overview

In recent years, modern industry has been struggling against personalized consumption demands which feature multiple types, small batches, and random orders. The promising solution relies on Cloud-assisted Cyber-Physical Systems (CCPS) that addresses the integration of virtual information systems with physical devices. When combining the big data, cloud computing, internet of things, and even artificial intelligence with industrial automation, we may achieve a flexible, efficient, and transparent industry system. Since German government released the Industry 4.0 initiative, three kinds of integration with the support of cloud technologies have been widely discussed, i.e., 1) horizontal integration through value networks; 2) vertical integration and networked industrial systems; and 3) end-to-end digital integration of engineering across the entire value chain. However, many difficulties exist in integration, e.g., virtualized resource management, high-bandwidth real-time industrial wireless networks, industrial big data analytics, dynamical reconfiguration mechanics, and unified network standards. Therefore, industrial and academic researchers should cooperate to promote the progress of smart industrial technologies and applications.

Topics

This special issue on "Cloud-assisted Cyber-Physical Systems for the Implementation of Industry 4.0" has a wide scope. Topics include, but are not limited to, the following research scope:

- Resource virtualization, management and optimization for industrial cloud
- Real-time industrial wireless networks
- Machine intelligence for enabling Industry 4.0
- Cyber-physical networked systems with cloud support
- Cloud-integrated wireless body area networks
- Cloud-integrated industrial CPS
- Cloud-integrated internet of vehicles
- Monitoring, actuation and navigation of physical components in Industry 4.0
- Signal/information processing, communication and software architectures
- Cloud architectures and integration techniques
- Autonomy, adaptability, manageability, reliability, safety and usability of CCPS
- Mobile and pervasive services for CCPS
- Security, privacy and anonymity in CCPS
- Data acquisition, data analysis, data mining and computational intelligence for CCPS
- Modeling, simulations and empirical experiments for Industry 4.0

Important Dates

- **Manuscript submission deadline:** January 1st, 2017
- Notification of acceptance: March 1st, 2017
- Submission of final revised paper: April 1st, 2017
- Publication of special issue: 2st Quarter, 2017

Submission Procedure

Authors should follow the MONET Journal manuscript format at the journal site:

<http://www.springer.com/engineering/signals/journal/11036>. Manuscripts are submitted on line through <http://www.editorialmanager.com/mone/>. When submitting papers, authors should choose article type as "SM xx – Cloudcomp 2016". A copy of the manuscript should also be emailed to the following email: jiafuwan_76@163.com. The "subject field" of the email must contain "MONET Cloudcomp 2016 Paper - ".

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