

"Cyber-Physical Systems for Future Industry"

The Theme: The very recent development of Cyber-Physical Systems (CPS) provides a vision of interconnectedness between the physical world with the cyber world, allowing for robust and flexible systems with multi-scale dynamics and integrated wired and wireless networking for managing the flows of mass, energy, and information in a coherent way through integration of computing and communication capabilities with the monitoring and/or control of entities in the physical world in a dependable, safe, secure, efficient and real-time fashion. CPS is in the forefront of frontier technology in bringing about industrial revolution through closer integration between the cyber world and physical world. Building CPS is not a trivial task. It requires a new ground-breaking theory that models cyber and physical resources in a unified framework. The solution to CPS must transcend the boundary between the cyber world and the physical world by providing a unified infrastructure that permits integrated models addressing issues from both worlds simultaneously. Topics of interest of this Special Section include, but are not limited to:

- Architectures and theoretical foundations of Cyber-Physical Systems
- Cyber-Physical Systems design, modeling and evaluation
- Sensor and actuator network protocols, models and architectures in Cyber-Physical Systems
- Distributed computing and control in Cyber Physical Systems
- Quality of Service (QoS), reliability, dependability, accountability and safety
- Robustness, Adaptation, Reconfiguration of Cyber Physical Systems
- Privacy, Trust, security, and Risks in Cyber Physical Systems
- Verification, Testing and Certification of Cyber Physical Systems
- Intelligent data processing in Cyber Physical Systems
- Cyber-Physical Systems networking and communication
- Distributed, self-organized, autonomous and multi-agent systems, swam-intelligence
- Cyber-Physical Systems as part of System of Systems
- Real-world applications of Cyber-Physical systems

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 submitting page #1 in popup menu of manuscript type, select: SS on Cyber-Physical Systems
Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal.. 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** **January 31, 2011**

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