

CALL FOR PAPERS

IEEE Transactions on Systems, Man, and Cybernetics Part C: Applications and Reviews Special Issue on Industrial Applications of Holonic Systems

The *IEEE Transactions on Systems, Man, and Cybernetics – Part C: Applications and Reviews* is seeking original, high-quality manuscripts for a Special Issue on Industrial Applications of Holonic Systems for publication in mid 2010.

Holonic Systems grew out of research into the application of multi-agent systems and distributed artificial intelligence in the manufacturing domain, and since 1992 was primarily organized around the Intelligent Manufacturing Systems Program's Holonic Manufacturing Systems (HMS) Consortium. In very general terms, HMS is a marriage between a general philosophy (of living organisms and social organizations) and an emerging software approach (distributed AI) that is intended to lead to a better understanding of how next-generation manufacturing systems should be designed. HMS can be regarded as a distributed intelligent systems paradigm for manufacturing enterprises that is built on a strong foundation of collaborative multi-agent systems and distributed AI techniques.

Although HMS research initially focused on all areas of the manufacturing enterprise ranging from product design to supply chains, the holonic systems concept has also been successful in commercial domains including air traffic control, health-care, environmental protection, defense, and humanitarian missions.

This special issue is intended to cover the broad range of holonic systems applications since the emergence of HMS in the early 1990's. Original, high-quality contributions are solicited from researchers and practitioners that address both applications and reviews of holonic systems. Topics of interest include but are not limited to the following topics:

- Holonic/agent concepts
- Industrial applications of holonic and multi-agent systems (case-studies are especially appreciated)
- Holonic and agent-based architectures and design methodologies
- Modeling and simulation tools
- Reconfiguration tasks, coalition formation, coordination strategies, knowledge ontologies
- Future trends for holonic and multi-agent systems
- Standards, security issues, industrial needs
- Obstacles and barriers to industrial and commercial applicability

PAPER SUBMISSION DETAILS

Authors are invited to submit original research contributions in PDF format to <http://mc.manuscriptcentral.com/smcc-ieee>. Authors should state in their cover letter to the EiC that "This manuscript is submitted for the special issue on Industrial Applications of Holonic Systems (Editors: R. Brennan, W. A. Gruver, E. van Leeuwen, K. Hall)". Submission instructions can be found under "Information for Authors" at <http://www.ieee-smc.org/publications/index.html>.

IMPORTANT DATES

1. Submission deadline: **16 Nov. 2009**
extended
2. First notification: 15 Feb. 2010
3. Revised submission: 15 Mar. 2010
4. Acceptance notification: 30 Jun. 2010
5. Publication: end of 2010

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