Introduction

The ultimate goal of control engineering is to implement an automatic system that could operate with increasing independence from human actions in an unstructured and uncertain environment. Such a system may be named autonomous or intelligent. It would need only to be presented with a goal and would achieve its objective by learning through continuous interaction with its environment through feedback about its behavior.

Advances in artificial intelligence (Artificial neural networks, fuzzy logic, neuro-fuzzy systems, evolutionary algorithms, hybrid bio-inspired systems, among others), have brought new opportunities and challenges for researchers to deal with complex and uncertain problems and systems, which could not be solved by traditional methods. The use of artificial intelligence techniques in control systems can significantly increase system effectiveness and efficiency, reduce the downtime and maintenance so that increase the productivity of various applications.

This special issue aims to bring together the latest research work in the area of intelligent control (theory and applications) in order to investigate the novel solutions and discuss the future trends in this field.

Topics

The paper may focus on of intelligent control: theory and applications. Both review paper and technical paper are expected. The topics include but are not limited to

Adaptive, self-tuning and learning control systems
Artificial Intelligence and expert systems
Artificial neural networks in control
Intelligent control-based on neuro-fuzzy models
Biological learning control systems
Distributed/decentralized intelligent control
Evolutionary computation in control
Artificial intelligence in fault detection and isolation, supervision and control reconfiguration
Hybrid dynamical systems control, pattern discovery
Intelligent control of networked dynamic systems
Next generation intelligent control architectures and methods
Swarm intelligence, learning and control
Real-time intelligent control
Artificial intelligence for system identification, parameter estimation, modeling and simulation

This special issue of the journal will target high quality papers selected from the 2012 World Automation Congress (WAC 2012), but not exclusively from WAC 2012. The selected papers must be significantly extended by at least 50% and improved to meet the standards of the journal. Each paper will undergo 3 or more new reviews. The special issue welcomes also high quality regular papers beyond the above mentioned Congress.
Submission

Concerning the preparation of the manuscript, please refer to the "Instructions for Contributors" page at the journal website, http://wacong.org/autosoft/auto/. Further, the manuscript must be submitted in the form of PDF file to one of the guest editors. The submission must include the title, abstract of your paper, and the corresponding author's name and affiliation. All papers will be rigorously reviewed based on the quality: originality, high scientific quality, well organized and clearly written, sufficient support for assertions and conclusion.

Please note that AutoSoft Journal has a nominal page charge of US $500 per 12 final pages and $100 per page afterwards. This contribution to expenses of the journal will bring with it two years e-subscriptions starting in 2014, 15 reprints. AutoSoft is the world’s first technical journal on soft computing (computational intelligence) and it is now indexed by Science Citation Index Expand (SCI-E), Elsevier Publishers in Amsterdam, EBSCO, Geobase, Scopus, Mosby Yearbooks, EMBASE, Compendex, etc.

Important Dates

Submission deadline: January 31, 2013
First round review date: May 15, 2013
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