Special Session

"Soft Computing for Intelligent Control"

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Description

This Special Session will consist of papers that integrate different Soft Computing (SC) methodologies in the design of hybrid intelligent systems for intelligent control of non-linear dynamical systems. SC methodologies at the moment include Neural Networks, Fuzzy Logic, Genetic Algorithms and Chaos Theory. Each of these methodologies has advantages and disadvantages and many problems have been solved, by using one of these methodologies. However, many real-world complex industrial problems require the integration of several of these methodologies to really achieve the efficiency and accuracy needed in practice. Methods for integrating the different SC methodologies in solving real-world problems of intelligent control are of particular interest. The Special Session will include applications on the following areas: Robotic Dynamic Systems, Non-linear Plants, and Manufacturing Systems.

Topics of interest (not limited to)

1. Successful new applications to real-world problems of soft computing techniques that are found to achieve better results than conventional techniques. In this case, special attention should be given to the metrics used to compare SC techniques with conventional ones.
2. Developments of innovative hybrid methods combining SC techniques and conventional techniques to solve problems related to the control of non-linear dynamical systems. In this case, the problems to be considered in these papers may not be as complex as the ones in the previous point, but the authors have to explain very carefully how their proposed method could be used, in the future, to solve real-world problems.
3. Papers considering original research on new SC techniques are also welcome, but the authors would have to make a detailed description of how their proposed approach is compared with other related techniques.

Papers must be submitted using the online system of WSC 2009 and the session has to be selected before the paper is uploaded. Please follow the instructions for preparing your paper at the WSC 2009 website. If you have any questions about the session please contact the organizers.