Preface

Soft computing has been highly successful individually from the perspective of its bedrock constituents: fuzzy logic (FL), neurocomputation (NC), evolutionary computation (EC) and probabilistic computing (PC) as well as in a hybridized environment. Hybrid intelligent systems are becoming a very important problem solving methodology affecting researchers and practitioners in areas ranging from science, technology, business and commercial. We are already aware of several hybrid combinations like EC-NC, NC-FL, FL-EC, NC-FL-EC etc.

HIS 2001, the First International Workshop on Hybrid Intelligent Systems, took place in Adelaide (Australia), December 11-12, 2001. The theme of the workshop was focussed on the hybridization of different soft computing technologies and their interactions with hard computing techniques, other intelligent computing frameworks, agents etc as listed below.

1. ***Genetic–neurocomputing:*** Artificial neural networks, evolutionary algorithms and other global optimization procedures.

2. ***Neuro-fuzzy systems:*** Artificial neural networks and fuzzy inference systems.

3. ***Genetic-fuzzy systems:*** Fuzzy inference systems and evolutionary algorithms.

4. ***Genetic-fuzzy-neurocomputing:*** Artificial neural networks, fuzzy inference systems and evolutionary algorithms.

5. ***Hybrid optimization techniques:*** Interaction between evolutionary computation, and other global optimization techniques like simulated annealing, tabu search etc. and local search techniques.

6. ***Interaction with Intelligent agents:*** Architectures, environments, adaptation/ learning and knowledge management.

7. **Fusion of soft computing and hard computing techniques**

8. ***Other intelligent systems:*** support vector machines, rough sets, Bayesian networks, probabilistic reasoning, minimum message length etc.

9. ***Hybrid systems applications***

The technical papers presented here correspond to talks delivered at the conference. HIS'01 attracted 77 full papers from more than 26 countries and each paper was peer reviewed by two independent referees. These papers have been contributed by researchers from academic institutions as well as industries. After the evaluation process and based on the recommendation of the reviewers, 53 papers were finally included in the workshop program.

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