The IADIS International Conference Intelligent Systems and Agents 2010 was held in Freiburg, Germany, 29 – 31 July, 2010, co-organized by Albert-Ludwigs-Universität Freiburg.

This conference was part of the Multi Conference on Computer Science and Information Systems 2010, 26 - 31 July 2010, which had a total of 1237 submissions.

The IADIS Intelligent Systems and Agents (ISA) 2010 conference addresses in detail two main aspects: intelligent systems and agents. The conference has the intention to provide a contribution to academics and practitioners. So, both fundamental and applied research are considered relevant.

The IADIS Intelligent Systems and Agents 2010 conference received 70 submissions from more than 18 countries. Each submission has been anonymously reviewed by an average of four independent reviewers, to ensure that accepted submissions were of a high standard. Consequently only 12 full papers were approved which means an acceptance rate below of 17%. A few more papers were accepted as short papers, reflection papers, posters and doctoral consortium. An extended version of the best papers will be published in the IADIS International Journal on Computer Science and Information Systems (ISSN: 1646-3692) and/or in the IADIS International Journal on WWW/Internet (ISSN: 1645-7641) and also in other selected journals, including journals from Inderscience.

The topics for the conference submissions included the following:

**Intelligent Systems**
- Algorithms
- Artificial Intelligence
- Automation Systems and Control
- Bio Informatics
- Computational Intelligence
- Expert Systems
- Fuzzy Technologies and Systems
- Game and Decision Theories
- Intelligent Control Systems
- Intelligent Internet Systems
- Intelligent Software Systems
- Intelligent Systems
- Machine Learning
- Neural Networks
- Neurocomputers
- Optimization
- Parallel Computation
- Pattern Recognition
- Robotics and Autonomous Robots
- Signal Processing
- Systems Modelling
- Web Mining

**Agents**
- Adaptive Agent Systems
- Agent Applications
- Agent Communication
- Agent Development
- Agent middleware
- Agent Models and Architectures
- Agent Ontologies
- Agent Oriented Systems and Engineering
- Agent Programming, Languages and Environments
- Agent Systems
- Agent Technologies
The Conference comprised the presentation of full papers, short papers, reflection papers and posters, and also one keynote presentation by Professor Xin Yao, Director of the Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), The University of Birmingham, UK an internationally distinguished researcher.

**Keynote Presentation:**

**K1 - EVOLVING, TRAINING AND DESIGNING NEURAL NETWORK ENSEMBLES** by Professor Xin Yao, Director of the Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), The University of Birmingham, UK

**Abstract:**

Previous work on evolving neural networks has focused on single neural networks. However, monolithic neural networks are too complex to train and evolve for large and complex problems. It is often better to design a collection of simpler neural networks that work cooperatively to solve a large and complex problem. The key issue here is how to design such a collection automatically so that it has the best generalization.

This talk introduces work on evolving neural network ensembles, negative correlation learning, and multi-objective approaches to ensemble learning. The links among different learning algorithms are discussed. Online/incremental learning using ensembles will also be presented briefly.

**Conference Best Papers:**

**- LEARNING ARGUMENT SELECTION PREFERENCES IN ARGUMENTATION-BASED NEGOTIATION** by Ariel Monteserin and Analía Amandi, ISISTAN, Fac. Cs. Ex., UNCPBA – CONICET, Argentina

**Abstract:**

Argument selection is considered the essence of the strategy in argumentation-based negotiation. An agent, which is arguing during a negotiation, has to decide what arguments are the best to persuade the opponent. In fact, in each negotiation step, the agent must select an argument from a set of candidate arguments by applying some selection criterion. For this task, the agent observes some factors of the negotiation context, for instance trust in the opponent, expected utility, among others. Usually, argument selection mechanisms are defined statically. However, as the negotiation context varies from a negotiation to another, defining a static selection mechanism is not useful. For this reason, we present in this paper a novel approach to personalize argument selection mechanisms in the context of argumentation-based negotiation. The selection mechanism defines a set of preferences that determine how preferable it is to utter an argument in a given context. Our approach maintains a hierarchy of preferences in order to learn new preferences and update the existing ones as the agent experience increases. We tested this approach in a simulated multiagent system and obtained promising results.
A complete version of this paper and also of all the other papers published in the IADIS International Conference Intelligent Systems and Agents 2010 can be accessed by IADIS Members at our Digital Library (http://www.iadis.net/dl/).


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