



## CALL FOR PAPERS

**Third International NAISO Symposium on  
ENGINEERING OF INTELLIGENT SYSTEMS (EIS 2002)  
University of Malaga  
Malaga, Spain  
September 24 - 27, 2002**

**And the ISMC 2002 Workshop  
Workshop on Information Systems for Mass Customization**

**KEYNOTE SPEECH** by Prof. David E. Goldberg  
Prospects for a Golden Age of Computational Innovation:  
How Competent, Efficient Genetic Algorithms Will Change Our Future

More details on the website under  
<http://www.icsc-naiso.org/conferences/eis2002/indexsp.html>

### **PLENARY SPEECHES**

Artificial Immune Systems- A new Computational Paradigm  
Speaker Dipankar Dasgupta

Dynamic Fuzzy Systems and Control - Recent Advances  
Speaker Robert Babuska

Fast Fuzzy Hardware  
Speaker Ivan Kalaykov

Also a plenary speech has been confirmed by Annibal Ollero

### **TUTORIAL SPEECH**

Knowledge Discovery in Databases- Principles Applications, and Perspectives  
By Vladan Devedzic

SUBMISSION also open to the following special events:

**SPECIAL TRACK** within the EIS 2002

**CHAOS and COMPUTATION**  
organized by Prof. Nigel T. Crook  
and Dr Tjeerd Olde Scheper

More information at <http://www.icsc-naiso.org/conferences/eis2002/indexsp.html>

### **Please note**

Submission deadline for Chaos And Computation: January 15th 2002



### Introduction

The purpose is to give people the opportunity to share their research on how they are using chaos in the context of computation and information processing. More specifically, we are interested in how people are taking advantage of the properties of chaos (e.g. sensitivity to initial conditions, ability to synchronise, space filling, etc) when addressing computational or information processing problems.

Our target audience will primarily include researchers from intelligent systems, communications, information systems and neuroscience. We are not aiming this specifically at Chaoticians who are contributing to the mathematics of chaos, rather than how it may be used in information processing.

### Topics (not exhaustive) include:

#### Chaotic neural networks

- the application of globally coupled chaotic maps to information processing
- dynamic memory states as stabilised orbits embedded in chaotic attractors
- memory states corresponding to "wings" of attractors
- using chaos to as a search mechanism (chaotic itinerancy)
- learning and adaptation in chaotic neural networks
- generalisation and capacity issues with chaotic neural networks
- using synchronisation as a means of communication between distinct network modules

#### Chaos and synchronisation

- Applications of chaos to secure, noise tolerant secure communications

#### Control of chaos in the context of information processing

- direct control of chaos (e.g. OGY method)
- continuous delayed feedback method
- chaotic control of chaos

#### Chaos and neuroscience

- Evidence of the presence and use of chaos in natural intelligence

#### Applications

- the application of chaos to information systems/intelligent systems problems

## **WORKSHOP**

### **Hybridization of Neural Networks and Genetic Algorithms (HyNNGA)**

Organized by Dr Miguel Rocha and Dr Paulo Cortez

More information at <http://www.icsc-naiso.org/conferences/eis2002/indexsp.html>

### **Please note**

Submission deadline for HyNNGA: January 15th 2002

### Introduction

Living creatures improve their adaptation capabilities to a changing world by means of two orthogonal processes: evolution and lifetime learning. Within Artificial Intelligence, both mechanisms inspired the development of non-orthodox problem solving tools, namely Genetic Algorithms (GAs) and Neural Networks (NNs). Both methods have



been combined in several ways, in order to gain improved performances in various Machine Learning tasks. Typically, GAs are used to provide optimisation for the NN learning process. The workshop is intended to gather people investigating in this field, providing room for debate of the different approaches.

#### Topics

- Training methods for NNs based on GAs
- NN topology optimization via GAs
- Genetic Data filtering for NN feeding
- Lamarck vs Baldwin evolution
- Reinforcement learning
- Artificial life environments
- Practical applications of hybrid GA/NN methods

#### Workshop chairs and organizers

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#### **EIS 2002 Organizing Committe**

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University of Maribor, Slovenia

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Faculty of Mechanical Engineering  
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## **TOPICS THEORY**

Artificial Immune Systems; Artificial Life; Case based Reasoning; Data Mining; Chaos; Clustering; Constraint Satisfaction and Constraint Programming; Expert Systems; Evolutionary Computation; Fuzzy Clustering; Fuzzy Control; Fuzzy learning; Fuzzy Modelling; Genetic Algorithm; Genetic Programming; Hybrid Systems; Intelligent Agents; Reasoning with Intervals; Knowledge Extraction; Machine Learning; Model based Reasoning; Multi Agent Systems; Neural Networks; Qualitative Reasoning; Wavelets

## **TOPICS APPLICATIONS**

Concurrent Engineering; Condition Monitoring and Control; Damage Assessment; Data Mining and Knowledge Extraction; Design; Emerging Organizational Forms; Fault Detection; Hardware Implementations; Image Processing and Computer Vision; Industrial Diagnostics; Management; Medicine Robotics; Mobile robots; Monitoring and Control; Multimedia; Natural Language Processing; Pattern Recognition; Product Development; Resource Allocation; Remote Sensing; Robotics; Security; Sensors fusion; Signal Processing; Speech Processing and Recognition; Teledetection; Teleoperation

## **INTERNATIONAL PROGRAM COMMITTEE**

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K. Zreik, University of Caen, France



### **Important Dates**

Submission Deadline December 20th, 2001 (extended)

Notification Deadline February 28, 2002

Final Manuscripts

And Early bird registration April 15, 2002

Registration May 30, 2002

### **Conference Organizer**

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For any information on submissions we refer to the website at:

<http://www.icsc-naiso.org/conferences/eis2002/indexsub.html>

## **ISMIC'2002**

### **Workshop on Information Systems for Mass Customization**

Second Workshop on Information Systems for Mass Customization  
(ISMIC 2002)

(<http://www-wi.cs.uni-magdeburg.de/mc/ismc2002/>)

as part of the

Third International ICSC Symposium on  
Engineering of Intelligent Systems (EIS 2002)  
Malaga, Spain, 24.09.-27.09.2002

One of the big challenges of the upcoming century is the realization of mass customization which means obviously changes to nearly all areas of business. For example, sophisticated marketing concepts, organizational issues, logistics, and manufacturing strategies are required. However, mass customization is not an "add-on" to conventional business concepts and strategies. It means a deep cut into all parts of an operational enterprise. Therefore business processes, company organization structure, information systems, production strategies, logistics, production technology etc. have to be reconsidered. Furthermore, all subsystems of a



company have to work together in a continuously integrated manner. The workshop aims to provide researchers and practitioners from academia and industry with a forum to report on the latest developments in topics concerning mass customization as well as managing mass customization strategies.

Besides reports on practice cases and research results, the workshop provides broad room for discussion. For this reason, interested people not contributing a report, but being engaged in the topic are especially welcome to deepen the discussion.

#### Topics

- \* Product configurators for mass customization, product catalogues
- \* Ad hoc generating of product data, ad hoc planning
- \* IT support for inter-company communication and coordination
- \* Web-based techniques, E-Commerce approaches, XML, XML/EDI
- \* Virtual enterprises for mass customization
- \* Procurement automation
- \* Supply chain management
- \* Production networks
- \* Intelligent planning/coordination, multi-agent systems
- \* Case studies
- \* Service individualization
- \* Mass customization concepts

#### Submissions

Prospective authors are requested to either send a draft paper (maximum 7 pages) or an extended abstract for review. All submissions must be written in English and must include the title of the workshop. We refer to the congress web page <http://www.icsc-naiso.org/conferences/eis2002/index.html> for further details concerning the submission procedure.

#### Workshop Chair and organization

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