



Nature-inspired Smart Information Systems

NiSIS
NiSIS

European Symposium on Nature-inspired Smart Information Systems

3 – 5 October 2005
Albufeira, Portugal

1st Announcement & Call for Papers



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A form for your registration and/or announcement of a paper is attached to this Call for Papers. If it has been lost, please contact the Conference Secretariat at

NiSIS Service Centre
c/o ELITE Foundation
Pascalstr. 69, 52076 Aachen, Germany
Tel.: +49 (0)2408 6969
Fax: +49 (0)2408 94582
<http://www.nisis.de>

Introduction to NiSIS 2005

NiSIS 2005 is the first symposium organised by the European NiSIS Co-ordination Group from 3 - 5 October 2005. The symposium will show state-of-the-art presentations as well as new developments in Nature inspired Systems with Intelligent Technologies. The focus will be on **the integration of life and applied sciences/engineering** that address issues on **smart information systems**, preferably with special interest to apply this to other **real-world problems**. The aim is also to investigate **Nature inspired Systems** that coordinate perception, reasoning, and action to pursue multiple goals while functioning autonomously in dynamic environments. NiSIS is covering Nature-inspired Data Technology (NiDT), Nature-inspired Networks (NiN), Nature-inspired Systems Modelling, Optimisation and Control (NiMOC). NiSIS 2005 will have parallel sessions where experts present their newest developments and applications in different areas.

Special Topics of interest are (include but are not limited to):

- **Autonomic Systems**
 - **Self-organising**
 - **Self-monitoring**
 - **Self-repairing**
 - **Self-design**
 - **Self-managing**
- **Auditory/Vision models and architectures**
 - **Visualisation concepts**
- **Intelligent Systems**
 - **Swarm Intelligence**
 - **Social behaviours**
 - **Learning and adaptive systems**
- **Intelligent devices**
 - **Adaptive/Evolvable hardware**
 - **Neuromorphic hardware**
 - **Evolutionary and self-organising sensors**
- **Intelligent design**
 - **Optimisation**
- **Structures**
 - **Modularization/Decomposition/Hierarchies**
 - **Spatial temporal structures**
 - **Morphological Structures**
 - **Developmental structures**
 - **Artificial Immune Systems**
- **Modelling**
 - **Reverse Engineering of Networks**
 - **Collaborative/deceptive systems**
 - **Large scale robustness and stability**
 - **Attention/perception modelling**
 - **Large scale identifiability/controlability**
- **Holistic Systems Engineering**
 - **Heterogeneous Databases**
 - **Evolvable Interfaces**
 - **Evolvable hardware**
- **Tutorial Papers**

Special Application areas of interest are (include but are not limited to):

- **Computing**
- **Pharmaceutical Industry**
- **Medical Services**
- **Chemical/BioTech**
- **Security**
- **Finance and Trade**

Promoting inter-networking activities, NiSIS is aiming to co-organise sessions with other relevant communities and activities like:

- AgentLink
- Exystence
- Neuro-IT

if you are an active member of such a network or community and wish to co-organise a session during NiSIS 2005 please contact us.

During NiSIS 2005 the participants will have the opportunity:

- to discuss and exchange new ideas and application experiences face to face
- to establish business or research relations with those people who are important in the area of the symposium to find European partners for future collaboration

Who will benefit?

- Practitioners interested in the benefits of applying nature-inspired systems to solve their problems
- Consultants, applied researchers and people in industry who are already running projects with nature-inspired systems and want to exchange their experience in successful projects
- Researchers wanting to identify important research problems for the coming years
- Individuals wanting to keep up to date with recent developments
- Those who have recently entered this rapidly expanding field, requiring a complete perspective of the subject and its applications.

Why attend?

NiSIS 2005 provides you with the opportunity to:

- Keep up to date with the state-of-the-art in this rapidly advancing and expanding field
- Meet consultants, researchers and people from industry to discuss possible applications of nature-inspired systems
- Get to know successfully exploited technical as well as management applications of nature-inspired systems in different industrial sectors
- Exchange your experiences in successful projects with other practitioners
- Make out future research problems
- Gain new perspectives on the relevance of nature-inspired systems to commercial and industrial requirements, through the example of commercially-established applications
- Be part of a forum for industry and academia, and ensure improved collaboration on future developments

Focus Groups

General Chairman: Derek Linkens

Programme Committee:

Anguita, Davide	Universita degli Studi di Genova, DIBE-Department of Biophysical and Electronic Engineering
Bayer, Karl	University of Natural Resources & Applied Life Sciences, Department of Biotechnology
Detyniecki, Marcin	Université Pierre et Marie Curie Paris VI Laboratoire Informatique de Paris - LIP 6
Dounias, Georgios	University of the Aegean, Financial and Management Engineering
Feio Mendonca, Teresa	Faculdade de Ciencias da Universidade de Porto
Gabrys, Bogdan	Bournemouth University Higher Education Corporation, School of Design, Engineering and Computing
Garibaldi, Jon	University of Nottingham, School of Computer Science and IT
Guthke, Reinhard	Hans-Knöll-Institute for Natural Products Research, Dep. for Applied Microbiology
Hernandez, Josefa	Universidad Politecnica de Madrid, Department of Artificial Intelligence
Jantzen, Jan	Danmarks Tekniske Universitet, Department of Automation
Jovanovic, Szezana	Steinbeis GmbH & Co für Technologietransfer
Kaymak, Uzay	Erasmus Universiteit Rotterdam, School of Economics, Dep.of Computer Science
Lankers, Katharina	Schott AG, Dept. of Mathematical Simulation and Optimisation
Leiviskä, Kauko	University of Oulu, Control Engineering Laboratory
Lhotska, Lenka	Czech Technical University in Prague, Dep. of Cybernetics, Faculty of Electrical Engineering
Lieven, Karl	ELITE European Laboratory for Intelligent Techniques Engineering

Linkens, Derek	The University of Sheffield, Dep. of Automatic Control & Systems Engineering
Martin, Trevor	The University of Bristol, Artificial Intelligence Group
Monk, Nick	The University of Sheffield, Department of Computer Science
Nürnbergger, Andreas	Otto-von-Guericke Universität Magdeburg, Knowledge and Language Engineering
Pfaff, Michael	BioControl Jena GmbH
Plahte, Erik	Norwegian University of Life Sciences
Poel, Mannes	University of Twente, Centre for Telematics and Information Technology
Strackeljan, Jens	Otto-von-Guericke Universität Magdeburg, Institut für Mechanik
Tateson, Richard	British Telecommunications plc, Research and Venturing, Future Technologies Group
Westra, Ronald	Universiteit Maastricht, Dept. of Mathematics, Faculty of General Sciences

Organisation Committee:

Chairman:

Lieven, Karl; ELITE Foundation, Germany

Members:

Faust, Sabina, NiSIS Service Centre, Germany

Lenart, Eva-Maria; NiSIS Service Centre, Germany

Conference Secretariat:

NiSIS Service Centre

c/o ELITE Foundation

Pascalstr. 69, 52076 Aachen

Germany

Tel.: +49 (0)2408 6969

Fax: +49 (0)2408 94582

info@nisis.de

<http://www.nisis.de>

Call for Papers

Authors are invited to submit papers including clear concluding remarks. After acceptance for presentation the papers will be published in the proceedings on CD-ROM.

Proposals for sessions/workshops are welcome. Persons interested in organising a session/workshop should contact the organiser as soon as possible.

We intend to publish

- the papers on CD-ROM and additionally
- a booklet containing abstracts (max. 1 DIN A4 page) of the papers.

Instructions for Authors

Please visit www.nisis.de for submission via internet!

If you have no internet access, please follow the instructions below:

1. The papers and abstracts should be prepared in the following format:

Paper for the CD-ROM

We prefer that the paper (including all figures) will be saved in Microsoft Word for PC or PDF format. A template file in Word 97 for PC with instructions for authors can be downloaded on <http://www.nisis.de/nisis/servicecenter/forms/instructions.zip>

One-page extended abstract for the booklet

The abstract should be saved in Microsoft Word for PC or ASCII-format and it shall not contain any illustrations, figures, or graphics nor any special characters. A template file in Word 97 for PC with instructions for authors can be downloaded on <http://www.nisis.de/nisis/servicecenter/forms/instructions.zip>

2. The papers and abstracts can be saved on the following FTP Server:

Server Name: <ftp://ftp.mitgmbh.de/nisis/nisis2005/paper-upload/>

User name: nisissubmit

Password: Available at the Service Center: Eva-Maria.Lenart@nisis.de or call +49 (0)2408 6969

Name of the files: Papers: P_AuthorName.fileformat (e.g. P_Smith.doc, P_Jones.ps etc.)

Abstracts: A_AuthorName.fileformat (e.g. A_Smith.doc, A_Jones.ps etc.)

In an accompanying email to nisis2005@nisis.de, authors should specify:

Name of the corresponding author and address

Name of the file saved on the FTP Server

Title of the paper

Software (name and version) and type of computer used the first two choices from the topics of interest as given on page 4 of this call for papers, under which the paper can be classified.

If the files are corrupted we will try to get in contact in order to find a solution. Submitted papers will be reviewed, and all accepted papers will be published on CD-ROM. The abstracts will be published in a booklet. Each participant will receive the CD-ROM and the booklet with the abstracts. A copy of the proceedings will be given to each participant at the conference. After the conference, the proceedings will be available from ELITE. Submission and acceptance of a paper commits one of the authors to present the paper. The paper will be omitted from the proceedings, if the registration fee is not received by 31.08.2005.

Dates and deadlines:

31st of May 2005	Deadline for the submission of the full paper and the one-page extended abstract
7th of July 2005	Confirmation of acceptance
31st of July 2005	Deadline for early registration
15th of August 2005	Deadline for submission of revised papers and abstracts
3 – 5th of October 2005	Symposium

General Information

Language

All papers at the symposium will be presented in English. Simultaneous translation will not be available.

Conference Secretariat

Before and after the Conference: For any questions before or after the symposium, please contact: NiSIS 2005 Conference Secretariat, c/o ELITE Foundation, Pascalstr. 69, 52076 Aachen, Germany, Phone: +49 (0)2408 6969, Fax: +49 (0)2408 94582, email: info@nisis.org

During the Conference:

From October 3 – 5, 2005 the secretariat will be located at the conference site.

Members of the secretariat will support participants with all kinds of information and organisational help.

Venue

Hotel Montechoro

Rua Alexandre O'Neill

8200-343 Albufeira, Portugal

Tel. +351 - 289 583 500

Fax +351 - 289 583 520

web site: www.grupomontechoro.com

Registration

A form for announcing a paper and for your registration is attached to this programme. If it has been lost, please visit www.nisis.de for your online registration or contact the conference secretariat.

The registration includes:

- access to the sessions
- one copy of the proceedings on CD-ROM
- one copy of the booklet containing the abstracts
- coffee during breaks
- lunch during the conference

Registration Fees

	Early Registration until and including 31 July 2005	Late Registration after 31 July 2005
Participants	Industry Rate: € 350 University Rate: € 200	Industry Rate: € 450 University Rate: € 250
Members of NiSIS* and Speakers**	Industry Rate: € 250 University Rate: € 150	Industry Rate: € 350 University Rate: € 200
Undergraduate Students	€ 75	€ 100

* This is valid for all **members** of the project, who have submitted the necessary information by May 31, 2005.

**Speakers having an accepted contribution can participate at the symposium for the condition of NiSIS-Members.

Method of Payment

Delegates are requested to pay their registration fee in advance

- by **bank transfer** to the following account:

Sparkasse Aachen
Bank Code: 390 500 00
Account No. 48315022
IBAN Code: DE27 3905 0000 0048 3150 22
BIC Code: AACSD33

- by **credit card** (Eurocard/Mastercard, VISA or American Express) (3% charges will be added)
- or by sending a **cheque** in € to the conference secretariat.

Please note:

Bank transfers must be made 'free of charge for the beneficiary' (net of bank charges and commission). All bank charges or commissions reducing the amount will have to be paid in cash when registering. To avoid any confusion, participants are requested to indicate clearly their names and addresses on transfer orders and cheques. For early registrations the payments have to be received by 31st of July 2005.

Cancellation Policy

If a participation is cancelled until 4 weeks before the conference, an administration fee of € 50.00 has to be paid. In case of a later cancellation the full registration fee has to be paid.

Accommodation

The HOTEL MONTOCHORO, where the symposium will take place, made a reservation of 60 single rooms and 10 double rooms in advance for the duration of our conference. In case you want to have accommodation at the conference site, please contact the hotel directly, giving your dates of arrival and departure and refer to the NiSIS 2005 Symposia (contact details on page 7).

Important information: As the number of rooms in the hotel is limited, we cannot guarantee your accommodation and recommend early registration. All the registrations will be treated in the order of their receipt. Please do not forget to mention "NiSIS 2005" as booking reference and arrange the payment of the hotel invoice yourself.

Situated in the heart of the Algarve, about 35 minutes from the Faro International Airport and 3 km from the centre of Albufeira Hotel Baia Grande is a new Top quality 4 star resort with a relaxed holiday atmosphere, outside swimming pool as well for children, inside heated pool, Jacuzzi, Sauna, Restaurant Mermaid with buffet service, Restaurant Albufeira "à la carte", Piano Bar, Pool Bar/Restaurant, 1 conference room with capacity for aprox. 350 people and spacious air-conditioning rooms.

Single room: € 60.- per room and night incl. breakfast
Double room: € 75.- per room and night incl. breakfast

Other Hotels:

For information on additional hotels please have a look at the web site of the tourist association of Albufeira at <http://www.cm-albufeira.pt>.

Information about the conference site

The **Algarve**, the southern coastal region of Portugal is a popular tourist centre, being chosen as a holiday destination both by foreigners and the portuguese themselves. A warm climate throughout the year, a coastline of splendid beaches bathed by the Mediterranean and all types of accommodations and diversions for visitors account for this, but you can still avoid the crowds and visit picturesque fishing villages or the ranges of hills in the inland, with its rural way of live and wild vegetation.

Located in the centre of the **Algarve** in Portugal's southernmost region, **Albufeira** is the seat of the county and belongs to the administrative district of Faro which is located 39 km away. Amounting to an area of 14,800 hectares, and with a population of approximately 40,000 residents, this county is divided into five parishes: Albufeira, Ferreiras, Guia, Olhos d'Água and Paderne. The cliff-lined coast is punctuated with beaches of a Mediterranean climate. The summers are hot and the winters are mild with limited rainfall

mainly between the months of October through March, giving an average yearly temperature of 17.5°C. Albufeira is acknowledged as one of the main tourist regions of the country. Once a peaceful fishing village, it keeps its narrow streets in the old town and whitewashed houses perched over a charming beach where you can walk amidst colourful fishing boats ornamented with eyes, animals and stars. A picturesque drive is



leaving Albufeira and visiting the

village of Alte, perched on a hill and with its 16th century church of Nossa Senhora da Assunção and the beautiful decorated tiles of the chapel of São Sebastião. Albufeira has everything for a marvellous stay in order for you to enjoy its golden beaches and clear, warm waters, or else just relax or rest or look for adventure. It has 23 beaches for you to choose from covering 30 km of coast. Look for the blue flags posted on the beaches which signify pure ocean water. If you are looking for more restful activities you may enjoy one of the many boat rides which are available and witness the spectacular wonders of the Albufeira coast seen from the ocean. On the other hand, if you want to take advantage of your holiday to keep in shape, nothing better than to go to the beach and enjoy some thrilling moments while fishing on the high sea, practicing windsurfing, diving, sailing or jet-skiing. A good opportunity for fun and relaxation will be found at the ZOOMARINE where you may examine various species of marine mammals, fish and aquatic birds on display. The aquariums are excellent replicas of the beautiful and modern aquariums found in all World Tourism Centers. On exhibition you may find dolphins, seals, marine lions, sharks, crocodiles, turtles, ducks, flamingos, parrots and cockatoos which are meticulously cared for and displayed in very natural surroundings. This oceanographic center has concentrated on providing visitors with moments and activities of relaxation, education and scientific investigation, being an Albufeira and Algarve symbol, it is definitely worth a visit. For further information please have a look at the website of the tourist association of Albufeira at <http://www.cm-albufeira.pt/> or at <http://viajar.clix.pt>.

How to reach the conference site

Faro Airport (<http://www.ana-aeroportos.pt/eng/>) is 6 km away from Faro and 39 km from Albufeira. Passengers arriving at Faro Airport, bound for any point in the Algarve can do the following:

Catch a taxi right outside the Terminal.

Catch a bus to Faro. Several town busses operate between Faro Airport and various points in downtown Faro. There is also a free service from 1 June to 31 October, except on Tuesdays, on submission of a plane ticket (every hour from 08:00 am to 20:00 pm, but please check the timetable posted near the Information Desk, at the Meeting Point).

From Faro you can take a train to Albufeira (duration between 25 and 40 minutes). The homepage of the Portuguese Railways is <http://www.cp.pt>

Conference Secretariat and NiSIS Service Centre

For further information please visit www.eunite.org or contact the Service Centre at

Conference Secretariat
NiSIS Service Centre
c/o ELITE Foundation
Pascalstr. 69
52076 Aachen
Germany
Tel.: +49 (0)2408 6969
Fax: +49 (0)2408 94582
www.nisis.de



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Registration Form 2005

Fax: +49 2408 94582

If you want to announce the submission of a paper, be kept informed or register, please return this form to: NiSIS Service Centre, c/o ELITE Foundation, Pascalstr. 69, 52076 Aachen, Germany.

Please keep me informed about NiSIS2005

I will submit a paper entitled: _____

I propose to organise the following session: _____

I register for the Symposium:

Early Registration before 31 July 2005

Late Registration after 31 July 2005

Participants

- Industry Rate: € 350
 University Rate: € 200

- Industry Rate: € 450
 University Rate: € 250

Members of NiSIS* and Speakers*

- Industry Rate: € 250
 University Rate: € 150

- Industry Rate: € 350
 University Rate: € 200

Undergraduate Students

- € 75

- € 100

* This is valid for all **members** of the project, who submitted the necessary information by May 31, 2005.

**Speakers who have an accepted contribution can participate in the symposium at the condition of NiSIS-Members.

Method of payment (we will send you an official invoice on receipt of your registration)

I pay the amount of € _____

by cheque bank transfer Mastercard/Eurocard VISA American Express

Cardholder's name: _____ Credit Card Number: _____

Card Expiration date: _____ Cardholder's Signature: _____

Bank transfers must be made 'free of charge for the beneficiary' (net of bank charges and commission). All bank charges or commissions reducing the amount will have to be paid in cash when registering. If you pay by credit card, 3% charges will be added to the total amount. To avoid any confusion, participants are requested to indicate clearly names and addresses on transfer orders and cheques.

Title	First Name	Name
Organisation/Company	Department	
Street	ZIP Code/Town	Country
Phone	Fax	email
Date/Place	Signature/Stamp	