

KES 2008

**12th International Conference on Knowledge-
Based and Intelligent Information & Engineering
Systems**

**The Westin Zagreb, Zagreb, Croatia,
3 – 5 September 2008**

Conference Programme
Updated on 28th August 2008

Conference Programme on a Page

	Wednesday 3rd September	Thursday 4th September	Friday 5th September
8.00	Registration	Registration	Registration
	9.30 – 10.00 Welcome Messages	8.20 – 10.00 Parallel Sessions	8.20 – 10.00 Parallel Sessions
10.00 – 11.00	Plenary Session	Plenary Session	Plenary Session
11.00 – 11.30	Poster Presentations Coffee and Tea Break	Poster Presentations Coffee and Tea Break	Poster Presentations Coffee and Tea Break
11.30 – 13.10	Parallel Sessions	Parallel Sessions	Parallel Sessions
13.10 – 14.10	Lunch Break	Lunch Break	Lunch Break
14.10 – 15.10	Plenary Session	Plenary Session	Plenary Session
15.10 – 16.30	Parallel Sessions	Parallel Sessions	Parallel Sessions
16.30 – 17.00	Poster Presentations Coffee and Tea Break	Poster Presentations Coffee and Tea Break	Poster Presentations Coffee and Tea Break
17.00 – 18.20	Parallel Sessions	Parallel Sessions 18.30 KES Advisory Group Meeting	Parallel Sessions
	20.00 Welcome Reception	20.30 Conference Dinner	18.20 KES 2009

Day 1

Wednesday, 3rd September 2008

8.00 – 9.30	Registration
9.30 – 10.00	Welcome Messages (Room: Crystal I)
10.00 – 11.00	Plenary Session - Keynote Lecture (Room: Crystal I) New Topics from Recent Interactive Evolutionary Computation Researches <i>Hideyuki Takagi, Kyushu University, Japan</i>
11.00 – 11.30	Poster Presentations (Room: Crystal Foyer) Coffee and Tea Break
11.30 – 13.10	Parallel Sessions Agent Systems I (Room: Crystal I) Intelligent Environment Support for Collaborative Learning (Room: Crystal II) Artificial Neural Networks and Connectionists Systems (Room: Maksimir) Machine Learning and Classical AI (Room: Zrinjevac) Skill Acquisition and Ubiquitous Human Computer Interaction (Room: Tuskanac) Artificial Intelligence Driven Engineering Design Optimization (Room: Zelengaj)
13.10 – 14.10	Lunch Break Opera and Panorama Restaurant, 17 th Floor
14.10 – 15.10	Plenary Session - Keynote Lecture (Room: Crystal I) Driven by Compression Progress <i>Jürgen Schmidhuber, IDSIA - Istituto Dalle Molle di Studi sull'Intelligenza Artificiale, Lugano, Switzerland & Cognitive Robotics Lab, Technische Universität München, Germany</i>
15.10 – 16.30	Parallel Sessions Agent Systems II (Room: Crystal I) Innovation-oriented Knowledge Management Platform (Room: Crystal II) Computational Intelligence in Human Cancer Research I (Room: Maksimir) Chance Discovery I (Room: Zrinjevac) Intelligent Utilization of Soft Computing Techniques I (Room: Tuskanac) Computational Intelligent Techniques for Bioprocess Modelling, Monitoring and Control (Room: Zelengaj)
16.30 – 17.00	Poster Presentations (Room: Crystal Foyer) Coffee and Tea Break
17.00 – 18.20	Parallel Sessions Knowledge Based and Expert Systems I (Room: Crystal I) Intelligent Security Techniques (Room: Crystal II) Computational Intelligence in Human Cancer Research II (Room: Maksimir) Chance Discovery II (Room: Zrinjevac) Intelligent Utilization of Soft Computing Techniques II (Room: Tuskanac) Innovations in Intelligent Multimedia Systems and Virtual Reality (Room: Zelengaj)
20.00 – 21.30	Welcome Reception Atrium of the Museum for Arts and Crafts

Day 2

Thursday, 4th September 2008

8.00 – 8.20	Registration
8.20 – 10.00	Parallel Sessions Agent Systems III (Room: Crystal I) Spatio-temporal Database Concept Support for Organizing Virtual Earth (Room: Crystal II) Knowledge-based Multi-criteria Decision Support (Room: Maksimir) Web Intelligence, Text and Multimedia Mining and Retrieval (Room: Zrinjevac) Knowledge-Based Systems for e-Business (Room: Tuskanac) Novel Foundation and Applications of Intelligent Systems (Room: Zelengaj)
10.00 – 11.00	Plenary Session - Keynote Lecture (Room: Crystal I) Evolvable Hardware Architectures and their Role in Fault Tolerant Computational Systems <i>Andy Tyrrell, University of York, UK</i>
11.00 – 11.30	Poster Presentations (Room: Crystal Foyer) Coffee and Tea Break
11.30 – 13.10	Parallel Sessions Knowledge Based and Expert Systems II (Room: Crystal I) Knowledge-based Creativity Support Systems I (Room: Crystal II) Fuzzy and Neuro Fuzzy Systems/Evolutionary Computation (Room: Maksimir) Engineered Applications of Semantic Web – SWEA (Room: Zrinjevac) Communicative Intelligence (Room: Tuskanac) Knowledge-Based Interface Systems I (Room: Zelengaj)
13.10 – 14.10	Lunch Break Opera and Panorama Restaurant, 17 th Floor
14.10 – 15.10	Plenary Session - Keynote Lecture (Room: Crystal I) Assisting Human Decision Making with Intelligent Technologies <i>Gloria Phillips-Wren, Loyolla College in Maryland, Baltimore, USA</i>
15.10 – 16.30	Parallel Sessions Knowledge Management, Ontologies and Data Mining I (Room: Crystal I) Knowledge-based Creativity Support Systems II (Room: Crystal II) Advanced Groupware I (Room: Maksimir) Soft Computing Approach to Management Engineering I (Room: Zrinjevac) Evolvable Hardware and Adaptive Systems – Advanced Engineering Design Methodologies and Applications (Room: Tuskanac) Knowledge-Based Interface Systems II (Room: Zelengaj)
16.30 – 17.00	Poster Presentations (Room: Crystal Foyer) Coffee and Tea Break
17.00 – 18.20	Parallel Sessions Advanced Groupware II (Room: Maksimir) Soft Computing Approach to Management Engineering II (Room: Zrinjevac) Evolvable Hardware Applications in the Area of Electronic Circuits Design (Room: Tuskanac) Use of AI Techniques to Build Enterprise System (Room: Zelengaj) KES Advisory Group Meeting
20.30 – 22.30	Conference Dinner Crystal Ballroom

Day 3

Friday, 5th September 2008

8.00 – 8.20	Registration
8.20 – 10.00	Parallel Sessions Knowledge Management, Ontologies and Data Mining II (Room: Crystal I) Knowledge Interaction for Creative Learning (Room: Crystal II) Advanced Knowledge Based Systems I (Room: Maksimir) Neural Information Processing for Data Mining (Room: Zrinjevac) Unsupervised Clustering for Exploratory Data Analysis (Room: Tuskanac) Hyperspectral Imagery for Remote Sensing: Intelligent Analysis and Applications (Room: Zelengaj)
10.00 – 11.00	Plenary Session - Keynote Lecture (Room: Crystal I) Virtual Humans: From Researcher's Fascination to Mass-market Technology <i>Igor S. Pandzic, University of Zagreb, Croatia</i>
11.00 – 11.30	Poster Presentations (Room: Crystal Foyer) Coffee and Tea Break
11.30 – 13.10	Parallel Sessions Knowledge Management, Ontologies and Data Mining III (Room: Crystal I) Intelligent Robotics and Control I (Room: Crystal II) Advanced Knowledge Based Systems II (Room: Maksimir) Intelligent Vision and Image Processing (Room: Zrinjevac) Intelligent Systems in Medicine and Healthcare (Room: Tuskanac) Intelligent Data Processing in Process Systems and Plants (Room: Zelengaj)
13.10 – 14.10	Lunch Break Opera and Panorama Restaurant, 17 th Floor
14.10 – 15.10	Plenary Session - Keynote Lecture (Room: Crystal I) Legal Issues for Military Intelligent Decision-making Technologies <i>Anthony Finn, Defence Science and Technology Organisation, Department of Defence, Edinburgh, Australia</i>
15.10 – 16.30	Parallel Sessions Immunity-Based Systems (Room: Crystal I) Intelligent Robotics and Control II (Room: Crystal II) Reasoning-Based Intelligent Systems (Room: Maksimir) Computational Intelligence for Image Processing and Pattern Recognition (Room: Zrinjevac) Biomedical Informatics: Intelligent Information Management from Nanomedicine to Public Health (Room: Tuskanac) Intelligent Computing for Grid (Room: Zelengaj)
16.30 – 17.00	Poster Presentations (Room: Crystal Foyer) Coffee and Tea Break
17.00 – 18.20	Parallel Sessions Smart Sustainability (Room: Crystal I) Intelligent Robotics and Control III (Room: Crystal II) Agent and Multi-Agent Systems: Technologies and Applications (Room: Maksimir) Computational Intelligence Techniques for Web Personalization (Room: Zrinjevac) Relevant Reasoning for Discovery and Prediction (Room: Tuskanac)
18.20	Closing Session – KES 2009 (Room: Crystal I)

Conference Schedule

Wednesday, 3rd September 2008

Welcome Messages

Wednesday, 9.30 – 10.00, Room: Crystal I

University of Zagreb

Melita Kovacevic, Vice-rector for Science and Technology
Vedran Mornar, Dean of the Faculty of Electrical Engineering and Computing

KES 2008 Chairs

Lakhmi C. Jain, University of South Australia, Adelaide, Australia
Robert J. Howlett, University of Brighton, UK
Ignac Lovrek, University of Zagreb, Croatia

Plenary Session – Keynote Lecture

Wednesday, 10.00 – 11.00, Room: Crystal I

Chair: Anne Håkansson (Uppsala University, Sweden)

New Topics from Recent Interactive Evolutionary Computation Researches
Hideyuki Takagi, Kyushu University, Japan

Poster Presentations

Wednesday, 11.00 – 11.30, Room: Crystal Foyer

Agent-based User Personalization Using Context-Aware Semantic Reasoning
Fran Frkovic, Vedran Podobnik, Krunoslav Trzec and Gordan Jezic

Design of an Auto-associative Neural Network by using Design of Experiments Approach
Božidar Bratina, Nenad Muškinja and Boris Tovornik

Classification Method Utilizing Reliably Labeled Data
Kouta Nakata, Shigeaki Sakurai and Ryohei Orihara

A Method of Graphic Composition using Differential SVG Documents
Motohiro Matsuda, Kazunari Ito, Martin J. Dürst and Kôiti Hasida

Downsizing Multigenic Predictors of the Response to Preoperative Chemotherapy in Breast Cancer
René Natowitz, Roberto Incitti, Roman Rouzier, Arben Çela, Antonio Braga, Euler Horta, Thiago Rodriges and Marcelo Costa

Statistical Assessment of MSigDB Gene Sets in Colon Cancer
Angela Distaso, Luca Abatangelo, Rosalia Maglietta, Teresa Maria Creanza, Ada Piepoli, Massimo Carella, Annarita D'Addabbo, Sayan Mukherjee and Nicola Ancona

Coordinated Exploration in Conflicting Multi-Stage Games
Maarten Peeters, Katja Verbeeck and Ann Nowé

Incremental Learning Method of Simple-PCA
Tadahiro Oyama, Stephen Karungaru, Satoru Tsuge, Yasue Mitsukura and Minoru Fukumi

CBR to Explain Medical Model Exceptions
Olga Vorobieva and Rainer Schmidt

On Attaining Higher Level of Certainty in Evaluation Processes
Sylvia Encheva and Sharil Tumin

Focus Support Interface Based on Collaborative Learning Activity
Yuki Hayashi, Tomoko Kojiri and Toyohide Watanabe

Parallel Sessions

Wednesday, 11.30 – 13.10

Agent Systems I

Wednesday, 11.30 – 13.10, Room: Crystal I

Chair: Ngoc Thanh Nguyen (Wroclaw University of Technology, Poland)

A First Step Towards Argument Mining and its Use in Arguing Agents and ITS
Safia Abbas and Hajime Sawamura

Optimizing Service Distributions Using a Genetic Algorithm
Kresimir Jurasovic and Mario Kusek

Performance Evaluation of a Mobile Agent Network Using Network Calculus
Vjekoslav Sinkovic, Mario Kusek, Gordan Jezic and Ignac Lovrek

Using Generalized Learning Automata for State Space Aggregation in MAS
Yann-Michaël De Hauwere, Peter Vrancx and Ann Nowé

Recommendation of Multimedia Objects based on Similarity of Ontologies
Przemyslaw Kazienko, Katarzyna Musial and Krzysztof Juszczyszyn

Intelligent Environment Support for Collaborative Learning

Wednesday, 11.30 – 13.10, Room: Crystal II

Chairs: Toyohide Watanabe, Tomoko Kojiri (Nagoya University, Japan)

A Prototype for Human-like e-Learning System
Kenji Yoshida, Yuji Shinoda, Koji Miyazaki, Kayoko Nakagami and Hirota Nakayama

A Cross-LMS Communication Environment with Web Services
Takashi Yukawa and Yoshimi Fukumura

A Web-based Asynchronous Discussion System and Its Evaluation
Hisayoshi Kunimune, Kenzou Yokoyama, Takeshi Takizawa, Takuya Hiramatsu and Yasushi Fuwa

CSCL Data Structurization and Inter-LMS Sharing with Use of Web Services
Yasuhisa Tamura, Kazuya Sumi, Takeshi Yamamuro and Masashi Maejima

Adventures in the Boundary between Domain-Independent Ontologies and Domain Content for CSCL
Seiji Isotani and Riichiro Mizoguchi

Artificial Neural Networks and Connectionists Systems

Wednesday, 11.30 – 13.10, Room: Maksimir

Chair: Bruno Apolloni (University of Milan, Italy)

An Intelligent Traffic Light Control Based on Extension Neural Network
Kuei-Hsiang Chao, Ren-Hao Lee and Meng-Hui Wang

A New Implementation for High Speed Normalized Neural Networks in Frequency Space
Hazem M. El-Bakry and Mohamed Hamada

A New SOM Initialization Algorithm for Nonvectorial Data
Antonino Fiannaca, Riccardo Rizzo, Alfonso Urso and Salvatore Gaglio

Accelerated Gradient Learning Algorithm for Neural Network Weights Update
Zeljko Hocenski, Mladen Antunovic and Damir Filko

Neural Model-based Segmentation of Image Motion
Lucia Maddalena and Alfredo Petrosino

Machine Learning and Classical AI

Wednesday, 11.30 – 13.10, Room: Zrinjevac

Chair: Anthony Finn (Defence Science and Technology Organisation, Department of Defence, Edinburgh, Australia)

Structural Analysis of Promoter Sequences Using Grammar Inference and Support Vector Machine

Robertas Damaševičius

A Metric to Discriminate the Selection of Algorithms for the General ATSP Problem

Jorge A. Ruiz-Vanoye, Ocotlán Diaz-Parra and Vanessa Landero N.

A Manifoldded AdaBoost for Face Recognition

C. Lu, J. Jiang, G. Feng and C. Qing

On Lipschitz Embeddings of Graphs

Kaspar Riesen and Horst Bunke

An Experiment on Human Face Recognition Performance for Access Control

Marcus Butavicius, Chloë Mount, Veneta MacLeod, Robyn Vast, Ian Graves and Jadranka Sunde

Skill Acquisition and Ubiquitous Human Computer Interaction

Wednesday, 11.30 – 13.10, Room: Tuskanac

Chairs: Hirokazu Taki (Wakayama University, Japan), Satoshi Hori (Monotsukuri Institute of Technologists, Japan)

Structuring Spatial Knowledge and Fail-safe Expression for Directive Voice Navigation

Taizo Miyachi, Jens J. Balvig, Ipei Kuroda and Takeshi Suzuki

Ubiquitous Earthquake Observation System using Wireless Sensor Devices

Hirokazu Miura, Yosuke Shimazaki, Noriyuki Matsuda, Fumitaka Uchio, Koji Tsukada and Hirokazu Taki

An Effectiveness Study of Pictogram Elements for Steps in Manufacturing Procedures

Atsuko K. Yamazaki, Kenji Goto, Hirokazu Taki and Satoshi Hori

Analysis of Continuous Tracks of Online Aerial Handwritten Character Recognition

Kazutaka Ogura, Yoshihiro Nishida, Hirokazu Miura, Noriyuki Matsuda, Hirokazu Taki and Norihiro Abe

Interactive Learning Environment for Drawing Skill based on Perspective

Yoshitake Shojiguchi, Masato Soga, Noriyuki Matsuda and Hirokazu Taki

Artificial Intelligence Driven Engineering Design Optimization

Wednesday, 11.30 – 13.10, Room: Zelengaj

Chair: Ioannis K. Nikolos (Technical University of Crete, Greece)

Design of Row-based Flexible Manufacturing System with Evolutionary Computation

Mirko Ficko and Joze Balic

Ant Colony System-Based Algorithm for Optimal Multi-Stage Planning of Distribution Transformer Sizing

Eleftherios I. Amoiralis, Pavlos S. Georgilakis, Marina A. Tsili and Antonios G. Kladas

On the Evolutionary-Fuzzy Control of WIP in Manufacturing Systems

Nikos C. Tsourveloudis

Numerical Study and Optimal Blade Design of a Centrifugal Pump by Evolutionary Algorithms

Vasilis Grapsas, Fotis Stamatelos, John Anagnostopoulos and Dimitris Papantonis

Groundwater Numerical Modeling and Environmental Design using Artificial Neural Networks and Differential Evolution

Ioannis K. Nikolos, Maria Stergiadi, Maria P. Papadopoulou and George P. Karatzas

Plenary Session – Keynote Lecture

Wednesday, 14.10 – 15.10, Room: Crystal I

Chair: Bogdan Gabrys (University of Bournemouth, UK)

Driven by Compression Progress

Jürgen Schmidhuber, IDSIA - Istituto Dalle Molle di Studi sull'Intelligenza Artificiale, Lugano, Switzerland & Cognitive Robotics Lab, Technische Universität München, Germany

Parallel Sessions

Wednesday, 15.10 –16.30

Agent Systems II

Wednesday, 15.10 –16.30, Room: Crystal I

Chair: Ngoc Thanh Nguyen (Wroclaw University of Technology, Poland)

Toward Emotional E-Commerce: The Customer Agent

Nicolae Jascanu, Veronica Jascanu and Severin Bumbaru

A Method for Integration of WordNet-based Ontologies Using Distance Measures

Trong Hai Duong, Ngoc Thanh Nguyen and Geun Sik Jo

The Multiagent System for Channel Selection and Topology Control on 802.11 based Mesh Networks

Ante Prodan, Vinod Mirchandani and John Debenham

EasyLife: A Location-aware Service Oriented Mobile Information System

J. M. Shen, M. J. O'Grady and G. M. P. O'Hare

Innovation-oriented Knowledge Management Platform

Wednesday, 15.10 –16.30 Room: Crystal II

Chairs: Toyohide Watanabe (Nagoya University, Japan), Taketoshi Ushiana (Kyushu University, Japan)

Face Image Annotation based on Latent Semantic Space and Rules

Hideaki Ito, Yuji Kawai and Hiroyasu Koshimizu

A Spam Filtering Method Learning from Web Browsing Behavior

Taiki Takashita, Tsuyoshi Itokawa, Teruaki Kitasuka and Masayoshi Aritsugi

Externalization Support of Key Phrase Channel in Presentation Preparation

Koichi Hanaue and Toyohide Watanabe

X-Web: A Data Model for Managing Personal Contents Based on User Experiences

Taketoshi Ushiana and Toyohide Watanabe

Computational Intelligence in Human Cancer Research I

Wednesday, 15.10 –16.30, Room: Maksimir

Chairs: Alfredo Vellido (Technical University of Catalonia, Spain), Paulo J. G. Lisboa (Liverpool John Moores University, UK)

Classification of Sporadic and BRCA1 Ovarian Cancer based on a Genome-wide Study of Copy Number Variations

Anneleen Daemen, Olivier Gevaert, Karin Leunen, Vanessa Vanspauwen, Geneviève Michils, Eric Legius, Ignace Vergote and Bart De Moor

Rule-based Assistance to Brain Tumour Diagnosis using LR-FIR

Àngela Nebot, Félix Castro, Alfredo Vellido, Margarida Julià-Sapé and Carles Arús

Are Model-based Clustering and Neural Clustering Consistent? A Case Study from Bioinformatics

Davide Bacciu, Elia Biganzoli, Paulo J. G. Lisboa and Antonina Starita

Exploratory Characterization of Outliers in a Multi-centre ¹H-MRS Brain Tumour Dataset

Alfredo Vellido, Margarida Julià-Sapé, Enrique Romero and Carles Arús

Chance Discovery I

Wednesday, 15.10 –16.30, Room: Zrinjevac

Chairs: Akinori Abe (ATR Knowledge Science Laboratories, Japan), Yukio Ohsawa (University of Tokyo, Japan)

A Bank Run Model in Financial Crises

Katsutoshi Yada, Takashi Washio, Yasuharu Ukai and Hisao Nagaoka

Logic of Discovery and Knowledge. Decision Algorithm

Sergey Babenyshev and Vladimir Rybakov

Chance, Affordances, Niche Construction

Lorenzo Magnani

Free Association versus Recognition: Sensitivity for Chance Discovery in Cross-Cultural Color Design

Gyoung Soon Choi, Ruediger Oehlmann and David Cottingham

Intelligent Utilization of Soft Computing Techniques I

Wednesday, 15.10 –16.30, Room: Tuskanac

Chair: Norio Baba (Osaka Kyoiku University, Japan)

A Learning Automata Approach to Multi-Agent Policy Gradient Learning

Maarten Peeters, Ville Könönen, Katja Verbeeck and Ann Nowé

Utilization of Soft Computing Techniques for Making Environmental Games More Exciting - Toward an Effective Utilization of the COMMONS GAME

Norio Baba, Kenta Nagasawa and Hisashi Handa

Petri Net-based Simulation and Analysis of the Software Development Process

Gordan Topic, Dragan Jevtic and Marijan Kunstic

Learning Grouping and Anti-Predator Behaviors for Multi-Agent Systems

Koichiro Morihiro, Haruhiko Nishimura, Tejiro Isokawa and Nobuyuki Matsui

Computational Intelligent Techniques for Bioprocess Modelling, Monitoring and Control

Wednesday, 15.10 –16.30, Room: Zelengaj

Chair: Lakhmi C. Jain (University of South Australia, Australia)

Application of Agent-based System for Bioprocess Description and Process Improvement

Ying Gao, Katie Kipling, Jarka Glassey, Mark Willis, Gary Montague, Yuhong Zhou and Nigel Titchener-Hooker

A Dynamic Bayesian Network to Represent a Ripening process of a Soft Mould Cheese

Cédric Baudit, Pierre-Henri Wuillemin, Mariette Sicard and Nathalie Perrot

Nonlinear and Neural Networks Based Adaptive Control for a Wastewater Treatment Bioprocess

Emil Petre, Dan Selişteanu, Dorin Şendrescu and Cosmin Ionete

Epileptic Seizure Classification Using Neural Networks with 14 Features

Rui P. Costa, Pedro Oliveira, Guilherme Rodrigues, Bruno Leitão and António Dourado

Poster Presentations

Wednesday, 16.30 – 17.00 , Crystal Foyer

Information as for morning break.

Parallel Sessions

Wednesday, 17.00 -18.20

Knowledge Based and Expert Systems I

Wednesday, 17.00 -18.20, Room: Crystal I

Chair: Anne Håkansson (Uppsala University, Sweden)

Reasoning for Incomplete Authorization

Yun Bai

A Place Judgment System Based on an Association Mechanism for Natural Language Interaction
Seiji Tsuchiya, Eriko Yoshimura, Ren Fuji, Hirokazu Watabe and Tsukasa Kawaoka

Knowledge Maturity Based on Processing and Creation of Information

Sabah S. Al-Fedaghi

A User Interface for the User-Centred Knowledge Model, t-UCK

Anne Håkansson

Grammar-Based Argument Construction

Jörn Sprado and Björn Gottfried

Intelligent Security Techniques

Wednesday, 17.00 -18.20, Room: Crystal II

Chairs: Ernesto Damiani, Antonia Azzini, Stefania Marrara (University of Milan, Italy)

Access Control Labeling Scheme for Efficient Secure XML Query Processing

Dong Chan An and Seog Park

A Secure Mediator for Integrating Multiple Access Control Policies

Isabel F. Cruz, Rigel Gjomemo and Mirko Orsini

Domain Account Model

Giulio Galiero, Paolo Roccetti and Andrea Turlì

Impostor Users discovery using a Multimodal Biometric Continuous Authentication Fuzzy System

Antonia Azzini and Stefania Marrara

Computational Intelligence in Human Cancer Research II

Wednesday, 17.00 -18.20, Room: Maksimir

Chairs: Alfredo Vellido (Technical University of Catalonia, Spain), Paulo J. G. Lisboa (Liverpool John Moores University, UK)

Feature Selection in "in vivo" ¹H-MRS Single Voxel Spectra

Félix F. González-Navarro and Lluís A. Belanche-Muñoz

Stratification of Severity of Illness Indices: A Case Study for Breast Cancer Prognosis

Terence A. Etchells, Ana S. Fernandes, Ian H. Jarman, José M. Fonseca and Paulo J. G. Lisboa

Chance Discovery II

Wednesday, 17.00 -18.20, Room: Zrinjevac

Chairs: Akinori Abe (ATR Knowledge Science Laboratories, Japan), Yukio Ohsawa (University of Tokyo, Japan)

A Cross-cultural Study on Attitudes toward Risk, Safety and Security

Yumiko Nara

Insight or Try & Errors: Ambiguous Items as Clue to Discovering New Concepts in Constrained Environments

Jun Nakamura and Yukio Ohsawa

Exceptions as Chance for Computational Chance Discovery

Akinori Abe, Norihiro Hagita, Michiko Furutani, Yoshiyuki Furutani and Rumiko Matsuoka

Analyzing Behavior of Objective Rule Evaluation Indices based on a Correlation Coefficient
Hidenao Abe and Shusaku Tsumoto

Intelligent Utilization of Soft Computing Techniques II

Wednesday, 17.00 -18.20, Room: Tuskanac

Chair: Norio Baba (Osaka Kyoiku University, Japan)

Network Simulations for Relationality Design - An Approach Toward Complex Systems -
Katsunori Shimohara

Dynamical Effect on Tick-wise Price Predictions
Mieko Tanaka-Yamawaki and Keita Awaji

Time-series Models of the EEG Wearing Overcorrected Glasses
Yohei Tomita, Shin-ichi Ito, Yasue Mitsukura, Minoru Fukumi and Taketoshi Suzuki

Feature Extraction System for Age Estimation
Hironobu Fukai, Hironori Takimoto, Yasue Mitsukura and Minoru Fukumi

Innovations in Intelligent Multimedia Systems and Virtual Reality

Wednesday, 17.00 -18.20, Room: Zelengaj

Chairs: Cecilia Sik Lanyi (University of Pannonia, Hungary), Lakhmi C. Jain (University of South Australia, Australia)

OGRE-Multimedia: An API for the Design of Multimedia and Virtual Reality Applications
Paulo N. M. Sampaio, Roberto Ivo C. de Freitas and Gonçalo Nuno P. Cardoso

Eighty-color-channel Lighting
Zoltán Márton and Cecília Sik Lányi

Virtual Reality Supporting Environmental Planning Processes: A Case Study of the City Library in Gothenburg
Kaj Sunesson, Carl Martin Alwood, Ilona Heldal, Dan Paulin, Mattias Roupé, Mikael Johansson and Börje Westerdahl

Conference Schedule

Thursday, 4th September 2008

Parallel Sessions

Thursday, 8.20 – 10.00

Agent Systems III

Thursday, 8.20 – 10.00, Room: Crystal I

Chair: Ngoc Thanh Nguyen (Wroclaw University of Technology, Poland)

A New Concept of Trust Modeling and Management in Complex Networks

Grzegorz Kolaczek

Extending Intelligent Tutoring Systems to Mobile Devices

Vlado Glavinić, Marko Rosić and Marija Zelić

Integration of Knowledge in Disjunctive Structure on Semantic Level

Trong Hieu Tran and Ngoc Thanh Nguyen

Three Parameters Refinement for Distributed 3D-Image Rendering

Dariusz Król and Adam Bogdal

Spatio-temporal Database Concept Support for Organizing Virtual Earth

Thursday, 8.20 – 10.00, Room: Crystal II

Chairs: Toyohide Watanabe (Nagoya University, Japan), Jun Feng (Hohai University, Japan),

Naoto Mukai (Tokyo University of Science, Japan)

Continuous Clustering of Moving Objects in Spatial Networks

Wenting Liu, Zhijian Wang and Jun Feng

Index Method for Tracking Network-constrained Moving Objects

Jun Feng, Jiamin Lu, Yuelong Zhu and Toyohide Watanabe

Adaptive Routing of Cruising Taxis by Mutual Exchange of Pathways

Kosuke Yamamoto, Kentaro Uesugi and Watanabe Toyohide

Route Optimization using Q-Learning for On-demand Bus Systems

Naoto Mukai, Toyohide Watanabe and Jun Feng

Sharing Event Information in Distributed Environment Based on Three-Layered Structure

Masakazu Ikezaki, Toyohide Watanabe, Tomoko Kojiri and Taketoshi Ushiyama

Knowledge-based Multi-criteria Decision Support

Thursday, 8.20 – 10.00, Room: Maksimir

Chair: Hsuan-Shih Lee (National Taiwan Ocean University, Taiwan)

Municipal Solid Waste Site Location using a Fuzzy Logic Approach

Beatriz S. L. P. de Lima, Maria C. M. Alves, Alexandre G. Evsukoff and Ian N. Vieira

Fuzzy-based Call Admission Control Scheme for Mobile Networks

Jin-Long Wang and Shu-Yin Chiang

Routing Analysis Using Fuzzy Logic Systems in Wireless Sensor Networks

Shu-Yin Chiang and Jing-Long Wang

Prioritization of incomplete fuzzy preference relation

Hsuan-Shih Lee, Pei-Di Shen and Wen-Li Chyr

Fuzzy Multi-Criteria Decision Making Based on Fuzzy Preference Relation

Hsuan-Shih Lee and Chen-Huei Yeh

Web Intelligence, Text and Multimedia Mining and Retrieval

Thursday, 8.20 – 10.00, Room: Zrinjevac

Chair: Mario Kusek (University of Zagreb, Croatia)

Automatic Generation of Computer Animation Conveying Impressions of News Articles

Tadahiko Kumamoto, Akiyo Nadamoto and Katsumi Tanaka

Exploring Robustness Enhancements for Logic-Based Passage Filtering

Ingo Glöckner and Björn Pelzer

Comparing Document Classification Schemes Using K-means Clustering

Artur Šilić, Marie-Francine Moens, Lovro Žmak and Bojana Dalbelo Bašić

Scalable Content-based Ranking in P2P Information Retrieval

Maroje Puh, Toan Luu, Ivana Podnar Zarko and Martin Rajman

A New Algorithm for Community Identification in Linked Data

Nacim Fateh Chikhi, Bernard Rothenburger and Nathalie Aussenac-Gilles

Knowledge-Based Systems for e-Business

Thursday, 8.20 – 10.00, Room: Tuskanac

Chair: Kazuhiko Tsuda (University of Tsukuba, Japan)

A Method for Ensuring Consistency of Software Design Information in Retrospective Computer Validation

Masakazu Takahashi, Satoru Takahashi and Yoshikatsu Fujita

Egocentrism Presumption Method with N-gram for e-Business

Nobuo Suzuki and Kazuhiko Tsuda

Generating Dual-Directed Recommendation Information from Point-of-Sales Data of a Supermarket

Masakazu Takahashi, Toshiyuki Nakao, Kazuhiko Tsuda and Takao Terano

Extraction of the Project Risk Knowledge on the Basis of a Project Plan

Yasunobu Kino, Kazuhiko Tsuda and Tadashi Tsukahara

Real-valued LCS using UNDX for Technology Extraction

Setsuya Kurahashi

Novel Foundation and Applications of Intelligent Systems

Thursday, 8.20 – 10.00, Room: Zelengaj

Chairs: Valentina E. Balas (Aurel Vlaicu University of Arad, Romania), Chee-Peng Lim, (University of Science Malaysia, Malaysia), Lakhmi C. Jain (University of South Australia, Australia)

Various Speaker Recognition Techniques Using a Special Nonlinear Metric

Tudor Barbu and Mihaela Costin

A Collaborative Information System Architecture for Process-based Crisis Management

Omar Tahir, Eric Andonoff, Chihab Hanachi, Christophe Sibertin-Blanc, Frédéric Benaben, Vincent Chapurlat and Thomas Lambolais

About the Buildings' Danger Control Systems Vulnerabilities

Daniela E. Popescu and Marcela F. Prada

Traffic Management by Constant Time to Collision

Valentina E. Balas and Marius M. Balas

Plenary Session – Keynote Lecture

Thursday, 10.00 – 11.00, Room: Crystal I

Chair: Yoshiteru Ishida (Toyohashi University of Technology, Japan)

Evolvable Hardware Architectures and their Role in Fault Tolerant Computational Systems

Andy Tyrell, University of York, UK

Poster Presentations

Thursday, 11.00 – 11.30, Room: Crystal Foyer

Map-oriented Regional Information Management for Data Broadcasting Content

Masahiro Ura, Takami Yasuda, Masashi Yamada, Mamoru Endo, Shinya Miyazaki and Koji Nakamura

Data Mining for Navigation Generating System with Unorganized Web Resources

Diana Purwitasari, Yasuhisa Okazaki and Kenzi Watanabe

Describing and Generating Web-based Affective Human-agent Interaction

Xia Mao, Zheng Li and Haiyan Bao

The Development of the Financial Learning Tool through Business Game

Yasuo Yamashita, Hiroshi Takahashi and Takao Terano

Information Fusion for Uncertainty Determination in Video and Infrared Cameras System

Cornel Barna

A Role-based Framework for Multi-agent Teaming

Jinsong Leng, Jiuyong Li and Lakhmi C. Jain

A Semantic Similarity Measure for the SIMS Framework

Roberto Pirrone, Giuseppe Russo, Pierluca Sangiorgi, Nunzio Ingraffia and Claudia Vicari

Representation of Uncertain Knowledge in Probabilistic OLAP Model

Maciej Kiewra

Uncovering the Deep Web: Transferring Relational Database Content and Metadata to OWL Ontologies

Damir Jurić, Marko Banek and Zoran Skočir

The Proposal of the Association Response Based on Commonsense in Conversation System

Eriko Yoshimura, Seiji Tsuchiya, Hirokazu Watabe and Tsukasa Kawaoka

A Hybrid Approach for Data Preprocessing in the QSAR Problem

Adina Cocu, Luminita Dumitriu, Marian Craciun and Cristina Segal

Novel Image Rejection Filter Based on Neural Networks

Botond Sandor Kirei, Marina Topa, Irina Dornean and Albert Fazakas

Log-Domain Binary SVM Image Classifier

Robert Groza, Lelia Festila, Sorin Hintea and Mihaela Cirlucea

Parallel Sessions

Thursday, 11.30 – 13.10

Knowledge Based and Expert Systems II

Thursday, 11.30 – 13.10, Room: Crystal I

Chair: Anne Håkansson (Uppsala University, Sweden)

Towards the Knowledge Capitalisation and Organisation in the Model of Conformity-Checking Process in Construction

Anastasiya Yurchyshyna, Catherine Faron-Zucker, Nhan Le Thanh and Alain Zarli

A Web-Based Customer Support Knowledge Base System

S. Wood and R. J. Howlett

Incremental Determinization of Finite Automata in Model-based Diagnosis of Active Systems

Gianfranco Lamperti, Marina Zanella, Giovanni Chiodi and Lorenzo Chiodi

A Knowledge Based Approach for Capturing Rich Semantic Representations from Text
Peter Z. Yeh, Daniel R. Farina and Alex Kass

Ontology-Based Design Pattern Recognition
Damir Kirasić and Danko Basch

Knowledge-based Creativity Support Systems I

Thursday, 11.30 – 13.10, Room: Crystal II

Chairs: Susumu Kunifuji (Japan Advanced Institute of Science and Technology, Japan), Kazuo Misue (University of Tsukuba, Japan), Motoki Miura (Japan Advanced Institute of Science and Technology, Japan), Takanori Ugai (Fujitsu Laboratories Limited, Japan)

Understanding Creativity-technique based Problem Solving Processes
Florian Forster and Michele Brocco

A Visualisation Tool for Cooperative Relations and its Verification with a Case Study
Takanori Ugai and Kouji Aoyama

Participatory Workshop as a Creativity Support System
Kosuke Numa, Kiyoko Toriumi, Katsuaki Tanaka, Mina Akaishi and Koichi Hori

Readable Representations for Large-Scale Bipartite Graphs
Shuji Sato, Kazuo Misue and Jiro Tanaka

Evaluation of a Prototype of the Mimamori-care System for Persons with Dementia
Taro Sugihara, Kenichi Nakagawa, Tsutomu Fujinami and Ryozo Takatsuka

Fuzzy and Neuro-Fuzzy Systems//Evolutionary Computation

Thursday, 11.30 – 13.10, Room: Maksimir

Chair: Ignac Lovrek (university of Zagreb, Croatia)

Classification on Soft Labels is Robust against Label Noise
Christian Thiel

Prediction of the collapse index by a Mamdani fuzzy inference system
Kivanc Zorlu and Candan Gokceoglu

A Cross-Entropy Based Population Learning Algorithm for Discrete-Continuous Scheduling with Continuous Resource Discretisation
Piotr Jędrzejowicz and Aleksander Skakovski

Improving the Responsiveness of a GA in Dynamic Environments using an Adaptive Mutation Operator - A Case Study
Alvaro Gomes, C. Henggeler Antunes and A. Gomes Martins

Engineered Applications of Semantic Web – SWEA

Thursday, 11.30 – 13.10, Room: Zrinjevac

Chairs: Tommaso Di Noia, Marco Degemmis, Giovanni Semeraro, Eugenio Di Sciascio (University of Bari, Italy)

Classification and Retrieval through Semantic Kernels
Claudia d'Amato, Nicola Fanizzi and Floriana Esposito

Semantic Bookmarking and Search in the Earth Observation Domain
Francesca Fallucchi, Maria Teresa Pazienza, Noemi Scarpato, Armando Stellato, Luigi Fusco and Veronica Guidetti

VSB: The Visual Semantic Browser
Ismael Navas-Delgado, Amine Kerzazi, Othman Chniber and José F. Aldana-Montes

Lexical and Semantic Resources for NLP: from Words to Meanings
Anna Lisa Gentile, Pierpaolo Basile, Leo Iaguinta and Giovanni Semeraro

Fuzzy Bilateral Matchmaking in e-Marketplaces

Azzurra Ragone, Umberto Straccia, Fernando Bobillo, Tommaso Di Noia and Eugenio Di Sciascio

Communicative Intelligence

Thursday, 11.30 – 13.10, Room: Tuskanac

Chairs: Ngoc Thanh Nguyen (Wroclaw University of Technology, Poland), Toyooki Nishida (Kyoto University, Japan)

Towards Natural Head Movement of Autonomous Speaker Agent

Marko Brkic, Karlo Smid, Tomislav Pejsa and Igor S. Pandzic

Automatic Translation in Two Phases: Recognition and Interpretation

Oswaldo Cairó and Silvia Guardati

Local Topology of Social Network Based on Motif Analysis

Przemysław Kazienko, Katarzyna Musiał and Krzysztof Juszczyszyn

A Semantic Language for Querying Anonymous Web Sources

François Pinet and Michel Schneider

CDNs with Global Adaptive Request Distribution

Leszek Borzemski and Krzysztof Zatwarnicki

Knowledge-Based Interface Systems I

Thursday, 11.30 – 13.10, Room: Zelengaj

Chairs: Naohiro Ishii (Aichi Institute of Technology, Japan), Yuji Iwahori (Chubu University, Japan)

A Model for Measuring Cognitive Complexity of Software

Sanjay Misra and Ibrahim Akman

Efficient Tracking with AdaBoost and Particle Filter under Complicated Background

Yuji Iwahori, Naoki Enda, Shinji Fukui, Haruki Kawanaka, Robert J. Woodham and Yoshinori Adachi

Analog VLSI Layout Design and the Circuit Board Manufacture of Advanced Image Processing for Artificial Vision Model

Masashi Kawaguchi, Takashi Jimbo and Naohiro Ishii

Classification of Local Surface Using Neural Network and Object Rotation of Two Degrees of Freedom

Takashi Kojima, Yuji Iwahori, Tsuyoshi Nakamura, Shinji Fukui, Robert J. Woodham and Hidenori Itoh

Control of Hypothesis Space using Meta-knowledge in Inductive Learning

Nobuhiro Inuzuka, Hiroyuki Ishida and Tomofumi Nakano

Plenary Session – Keynote Lecture

Thursday, 14.10 – 15.10, Room: Crystal I

Chair: Junzo Watada (Waseda University, Japan)

Assisting Human Decision Making with Intelligent Technologies

Gloria Phillips-Wren, Loyolla College in Maryland, Baltimore, USA

Parallel Sessions

Thursday, 15.10 – 16.30

Knowledge Management, Ontologies and Data Mining I

Thursday, 15.10 – 16.30, Room: Crystal I

Chair: Bojana Dalbelo Basic (University of Zagreb, Croatia)

Accessing the Distributed Learner Profile in the Semantic Web

Mourad Ouziri

A New Travel Time Prediction Method for Intelligent Transportation Systems

Hyunjo Lee, Nihad Karim Chowdhury and Jaewoo Chang

Measuring Sequence Similarity through Many-to-Many Frequent Correlations
Gianluigi Greco and Giorgio Terracina

IRPS - An Efficient Test Data Generation Strategy for Pairwise Testing
Mohammed I. Younis, Kamal Z. Zamli and Nor Ashidi Mat Isa

Enhancing Recommendations through a Data Mining Algorithm
Alexis Lazanas and Nikos Karacapilidis

Knowledge-based Creativity Support Systems II

Thursday, 15.10 – 16.30, Room: Crystal II

Chairs: Susumu Kunifuji (Japan Advanced Institute of Science and Technology, Japan), Kazuo Misue (University of Tsukuba, Japan), Motoki Miura (Japan Advanced Institute of Science and Technology, Japan), Takanori Ugai (Fujitsu Laboratories Limited, Japan)

Aware Group Home Enhanced by RFID Technology
Motoki Miura, Sadanori Ito, Ryozo Takatsuka and Susumu Kunifuji

A Tabletop Interface using Controllable Transparency Glass for Collaborative Card-based Creative Activity
Motoki Miura and Susumu Kunifuji

Random Display of Hints and its Effect on Generating Ideas in Brain-writing Groupware
Ujjwal Neupane, Kazushi Nishimoto, Motoki Miura and Susumu Kunifuji

Visual Analysis Tool for Bipartite Networks
Kazuo Misue

Advanced Groupware I

Thursday, 15.10 – 16.30, Room: Maksimir

Chair: Jun Munemori (Wakayama University, Japan), Hiroshi Mineno (Shizuoka University, Japan)

Web Application Construction by Group Work and Practice
Kouji Yoshida, Isao Miyaji, Hiroshi Ichimura and Kunihiro Yamada

Effect Analysis in Implementing IRM (Information Resources Management) to Enterprise
Kazuya Matsudaira, Teruhisa Ichikawa and Tadanori Mizuno

Automatic GUI Generation for Meta-data based PUCC Sensor Gateway
Masatoshi Ogura, Hiroshi Mineno, Norihiro Ishikawa, Tomoyuki Osano and Tadanori Mizuno

The Pictograph Chat Communicator II
Jun Munemori, Taro Fukuda, Moonyati Binti Mohd Yatid and Junko Itou

Soft Computing Approach to Management Engineering I

Thursday, 15.10 – 16.30, Room: Zrinjevac

Chairs: Junzo Watada (Waseda University, Japan), Huey-Ming Lee (Chinese Cultural University, Taiwan), Taki Kanda (Bunri University of Hospitality, Japan)

Structure Analysis of Fuzzy Node Fuzzy Graph and its Application to Sociometry Analysis
Hiroaki Uesu

Consumer Behaviors in Taiwan Online Shopping - A Case Study of a Company
Lily Lin, Huey-Ming Lee and Li-Hsueh Lin

A New Fuzzy Risk Assessment Approach
Huey-Ming Lee and Lily Lin

Making Scale with Units by Using Order Statistics from the Normal Distribution in AHP
Taki Kanda

Evolvable Hardware and Adaptive Systems – Advanced Engineering Design Methodologies and Applications

Thursday, 15.10 – 16.30, Room: Tuskanac

Chairs: Mircea Gh. Negoita (KES International), Sorin Hintea (Technical University of Cluj-Napoca, Romania)

Machine Vision Application to the Detection of Micro-Organism in Drinking Water

Hernando Fernandez-Canque, Sorin Hintea, Gabor Csipkes, Alan Pellow and Huw Smith

Adaptive and Evolvable Hardware and Systems: the State of the Art and the Prospectus for Future Development

Mircea Gh. Negoita, Lukas Sekanina and Adrian Stoica

Component Adaptation Architecture - A Formal Approach

Andrea Vescan

Adaptive Microarray Image Acquisition System and Microarray Image Processing Using FPGA Technology

Bogdan Belean, Monica Borda and Albert Fazakas

Knowledge-Based Interface Systems II

Thursday, 15.10 – 16.30, Room: Zelengaj

Chairs: Yoshinori Adachi (Chubu University, Japan), Nobuhiro Inuzuka (Nagoya Institute of Technology, Japan)

On Capacity of Memory in Chaotic Neural Networks with Incremental Learning

Toshinori Deguchi, Keisuke Matsuno and Naohiro Ishii

Improved Accuracy by Relearning and Combining Distance Functions

Naohiro Ishii, Takahiro Yamada and Yongguang Bao

Influence of Character Type of Japanese Hiragana on Writer Recognition

Yoshinori Adachi, Masahiro Ozaki and Yuji Iwahori

Learning Algorithm for Study Support in Web Study - Design of Prototype Model

Masahito Ozaki, Yoshinori Adachi and Naohiro Ishii

Poster Presentations

Thursday, 16.30 – 17.00, Room: Crystal Foyer

Information as for morning break.

Parallel Sessions

Thursday, 17.00 – 18.20

Advanced Groupware II

Thursday, 17.00 – 18.20, Room: Maksimir

Chair: Jun Munemori (Wakayama University, Japan), Hiroshi Mineno (Shizuoka University, Japan)

Network Forensics in Mobile Ad-hoc Networks

Akira Otaka, Tsuyosi Takagi and Osamu Takahashi

Efficient Reliable Data Transmission using Network Coding in MANET Multipath Routing Environment

Tomonori Kagi and Osamu Takahashi

Validation at a Small Building with Mutual Complement Network by Wireless and Wired

Kunihiro Yamada, Kakeru Kimura, Takashi Furumura, Masanori Kojima, Kouji Yoshida and Tadanori Mizuno

Analysis of Relationships between Smiley and Atmosphere during Chat with Emotional Characters

Junko Itou and Jun Munemori

Soft Computing Approach to Management Engineering II

Thursday, 17.00 – 18.20, Room: Zrinjevac

Chairs: Junzo Watada (Waseda University, Japan), Huey-Ming Lee (Chinese Cultural University, Taiwan), Taki Kanda (Bunri University of Hospitality, Japan)

Placement Problem in an Industrial Environment

Shamshul Bahar Yaakob and Junzo Watada

Motion Tracking Using Particle Filter

Zalili Binti Musa and Junzo Watada

Regression Model Based on Fuzzy Random Variables

Shinya Imai, Shumin Wang and Junzo Watada

Biological Clustering Method for Logistic Place Decision Making

Rohani Binti Abu Bakar and Junzo Watada

Evolvable Hardware Applications in the Area of Electronic Circuits Design

Thursday, 17.00 – 18.20, Room: Tuskanac

Chairs: Mircea Gh. Negoita (KES International), Sorin Hintea (Technical University of Cluj-Napoca, Romania)

A Digitally Reconfigurable Low Pass Filter for Multi-Mode Direct Conversion Receivers

Gabor Csipkes, Sorin Hintea, Doris Csipkes, Cristian Rus, Lelia Festila and Hernando Fernandez-Canque

Towards Reconfigurable Circuits Based on Ternary Controlled Analog Multiplexers/Demultiplexers

Emilia Sipos, Lelia Festila and Gabriel Oltean

Analog Multiplying/Weighting VLSI Cells for SVM Classifiers

Lelia Festila, Lorant Andras Szolga, Mihaela Cirlugea and Robert Groza

An Adaptive GP Strategy for Evolving Digital Circuits

Mihai Oltean and Laura Dioşan

Computational Intelligence in Analog Circuits Design

Gabriel Oltean, Sorin Hintea and Emilia Sipos

Use of AI Techniques to Build Enterprise System

Thursday, 17.00 – 18.20, Room: Zelengaj

Chair: Ronald L. Hartung (Franklin University, USA)

Integrating Web Services and Intelligent Agents in Supply Chain for Securing Sensitive Messages

Esmiralda Moradian

A User Interface for the User-Centred Knowledge Model - t-UCK

Anne Håkansson

Information Coordination using Meta-Agents in Information Logistics Processes

Mats Apelkrans and Anne Håkansson

Ontology for Enterprise Modeling

Ronald L. Hartung, Jay Ramanathan and Joe Bolinger

Conference Schedule

Friday, 5th September 2008

Parallel Sessions

Friday, 8.20 – 10.00

Knowledge Management, Ontologies and Data Mining II

Friday, 8.20 – 10.00, Room: Crystal I

Chair: Bojana Dalbelo Basic (University of Zagreb, Croatia)

A Procedure Ontology for Advanced Diagnosis of Process Systems

Katalin M. Hangos, Erzsébet Németh and Rozália Lakner

Congenital Heart Disease: An Ontology-based Approach for the Examination of the Cardiovascular System

M. Esposito

ODDI: Ontology-Driven Data Integration

Paolo Ceravolo, Zhan Cui, Ernesto Damiani, Alex Gusmini and Marcello Leida

Knowledge Interaction for Creative Learning

Friday, 8.20 – 10.00, Room: Crystal II

Chair: Toyohide Watanabe, Tomoko Kojiri (Nagoya University, Japan)

Learning Environment for Improving Critical Thinking Skills Based on New Synthesis Theory

Hiroki Satake, Haruna Marumoto, Kazuhisa Seta, Motohide Umamo and Mitsuru Ikeda

Assisting Learners to Acquire Knowledge Structure by Way of Map Generation Based on Indexing Learning Contents in Terms of Natural Language

Kohji Itoh

English Grammar Learning System Based on Knowledge Network of Fill-in-the-blank Exercises

Takuya Goto, Tomoko Kojiri, Toyohide Watanabe, Takeshi Yamada and Tomoharu Iwata

The Planetary Simulator for Generalized Understanding of Astronomical Phenomena from Various Viewpoints

Masato Soga, Yasunori Nakanishi and Kohe Tokoi

A Discussion Model for System Design Novices

Shoich Nakamura, Miho Watanabe, Atsuo Hazeyama, Setsuo Yokoyama and Youzou Miyadera

Advanced Knowledge Based Systems I

Friday, 8.20 – 10.00, Room: Maksimir

Chair: Alfredo Cuzzocrea (University of Calabria, Italy)

An Introduction to Authorization Conflict Problem in RDF Access Control

Jaehoon Kim, Kangsoo Jung and Seog Park

Improving Text Summarization using Noun Retrieval Techniques

Christos Bouras and Vassilis Tsogkas

A Knowledge-Based Approach for Answering Fuzzy Queries over Relational Databases

Z. M. Ma and Xiangfu Meng

An Algorithm for Discovering Ontology Mappings in P2P Systems

Giuseppe Pirrò, Massimo Ruffolo and Domenico Talia

Neural Information Processing for Data Mining

Friday, 8.20 – 10.00, Room: Zrinjevac

Chair: Ryohei Nakano (Nagoya Institute of Technology, Japan), Kazumi Saito (University of Shizuoka, Japan)

Improving Search Efficiency of Incremental Variable Selection by using Second-order Optimal Criterion
Kazumi Saito, Nobuaki Mutoh, Tetsuo Ikeda, Toshinao Goda and Kazuki Mochizuki

A Biphase-Bayesian-based Method of Emotion Detection from Talking Voice
Jangsik Cho, Shohei Kato and Hidenori Itoh

EM Algorithm with PIP Initialization and Temperature-based Selection
Yuta Ishikawa and Ryohei Nakano

Prediction of Information Diffusion Probabilities for Independent Cascade Model
Kazumi Saito, Ryohei Nakano and Masahiro Kimura

Reducing SVR Support Vectors by Using Backward Deletion
Masayuki Karasuyama and Ryohei Nakano

Unsupervised Clustering for Exploratory Data Analysis

Friday, 8.20 – 10.00, Room: Tuskanac

Chairs: Roberto Tagliaferri (University of Salerno, Italy), Michele Ceccarelli (University of Sannio, Italy)

Using Global Optimization to Explore Multiple Solutions of Clustering Problems
Ida Bifulco, Loredana Murino, Francesco Napolitano, Giancarlo Raiconi and Roberto Tagliaferri

Robust Clustering by Aggregation and Intersection Methods
Ida Bifulco, Carmine Fedullo, Francesco Napolitano, Giancarlo Raiconi and Roberto Tagliaferri

Comparison of Genomic Sequences Clustering using Normalized Compression Distance and Evolutionary Distance
Massimo La Rosa, Riccardo Rizzo, Alfonso Urso and Salvatore Gaglio

A One Class Classifier for Signal Identification: A Biological Case Study
Vito Di Gesù, Giosuè Lo Bosco and Luca Pinello

A Fuzzy Extension of some Classical Concordance Measures and an Efficient Algorithm for their Computation
Michele Ceccarelli and Antonio Maratea

An Algorithm to Assess the Reliability of Hierarchical Clusters in Gene Expression Data
Roberto Avogadri, Matteo Brioschi, Francesca Ruffino, Fulvia Ferrazzi, Alessandro Beghini and Giorgio Valentini

Hyperspectral Imagery for Remote Sensing: Intelligent Analysis and Applications

Friday, 8.20 – 10.00, Room: Zelengaj

Chairs: Miguel A. Veganzones, Manuel Grana (Universidad del Pais Vasco, Spain)

Dimensionality Reduction and Linear Discriminant Analysis for Hyperspectral Image Classification
Qian Du and Nicolas H. Younan

Endmember Extraction Methods: A Short Review
Miguel A. Veganzones and Manule Graña

Super Resolution of Multispectral Images using TV Image Models
Miguel Vega, Javier Mateos, Rafael Molina and Aggelos K. Katsaggelos

Classification of Hyperspectral Images Compressed through 3D-JPEG2000
Ian Blanes, Alaitz Zabala, Gerard Moré, Xavier Pons and Joan Serra-Sagristà

A New Band Selection Strategy for Target Detection in Hyperspectral Images
Marco Diani, Nicola Acito, Mario Greco and Giovanni Corsini

Plenary Session – Keynote Lecture

Friday, 10.00 – 11.00, Room: Crystal I

Chair: Ernesto Damiani (University of Milan, Italy)

Virtual Humans: From Researcher's Fascination to Mass-market Technology

Igor S. Pandzic, University of Zagreb, Croatia

Poster Presentations

Friday, 11.00 – 11.30, Room: Crystal Foyer

Providing Flexible Queries over Autonomous Web Databases

Xiangfu Meng, Z. M. Ma and Li Yan

SD-Core: Generic Semantic Middleware Components for the Semantic Web

Ismael Navas-Delgado and José F. Aldana-Montes

A Novel Approach for Practical Semantic Web Data Management

Giorgio Gianforme, Roberto De Virgilio, Stefano Paolozzi, Pierluigi Del Nostro and Danilo Avola

Distance-based Classification in OWL Ontologies

Claudia d'Amato, Nicola Fanizzi and Floriana Esposito

Kernel Methods for Graphs: A Comprehensive Approach

Francesco Camastra and Alfredo Petrosino

Context Enabled Semantic Granularity

Riccardo Albertoni, Elena Camossi, Monica De Martino, Franca Giannini and Marina Monti

Development and Evaluation of a Centaur Robot

Satoshi Tsuda, Kuniya Shinozaki and Ryohei Nakatsu

Self-Protecting Session Initiation Protocol Stack

Zoran Rusinovic and Nikola Bogunovic

Cognitive Systems for Medical Pattern Understanding and Diagnosis

Lidia Ogiela

A Study on Self Practice Navigation System for the "Kana" Strings

Kenta Kouyama, Naoto Hara, Toshiaki Kuroiwa, Seiu Yamashita, Akiko Ono, Isao J. Ohsugi, Junichi Yoshino and Hiroshi Ichimura

Networked Virtual Marionette Theater

Daisuke Ninomiya, Kohji Miyazaki and Ryohei Nakatsu

Decision Analysis of Fuzzy Partition Tree Applying AIC and Fuzzy Decision

Kimiaki Shinkai, Shuya Kanagawa, Takenobu Takizawa and Hajime Yamashita

Parallel Sessions

Friday, 11.30 – 13.10

Knowledge Management, Ontologies and Data Mining III

Friday, 11.30 – 13.10, Room: Crystal I

Chairs: Bojana Dalbelo Basic (University of Zagreb, Croatia), Claudio Turchetti, Paolo Crippa, Francesco Gianfelici (Universita Politecnica delle Marche, Italy)

Using Sense Recognition to Resolve the Problem of Polysemy in Building a Taxonomic Hierarchy

Lei Liu, Sen Zhang, Lu Hong Diao, Shu Ying Yan and Cun Gen Cao

A Framework for Context-Awareness in Artificial Systems

Fulvio Mastrogiovanni, Antonio Sgorbissa and Renato Zaccaria

Ontological Knowledge Maintenance Methodology

Rim Djedidi and Marie-Aude Aufaure

Modeling of the Students Scenario on a Learning Course

Yuji Shinoda, Kenji Yoshida and Hirotaka Nakayama

Sensor Network-Based Nonlinear System Identification
Giorgio Biagetti, Paolo Crippa, Francesco Gianfelici and Claudio Turchetti

Intelligent Robotics and Control I

Friday, 11.30 – 13.10, Room: Crystal II

Chair: Ryohei Nakatsu (National University of Singapore)

GrasSmart: An Intelligent Robotic System for Continuous Area Coverage
Miri Weiss-Cohen, Igal Sirotnin and Erez Rave

Stator Resistance Tuning based on a Neural Network in an Indirect Rotor Field Oriented Control System of an Induction Motor
Dinko Vukadinovic, Mateo Basic and Ljubomir Kulisic

A Simple Goal Seeking Navigation Method for a Mobile Robot using Human Sense, Fuzzy Logic and Reinforcement Learning
Hamid Boubertakh, Mohamed Tadjine and Pierre-Yves Glorennec

Fuzzy Control of a Real Time Inverted Pendulum System
Selcuk Kizir, Zafer Bingul and Cuneyt Oysu

Construction and Evaluation of a Robot Dance System
Kuniya Shinozaki, Akitsugu Iwatani and Ryohei Nakatsu

Advanced Knowledge Based Systems II

Friday, 11.30 – 13.10, Room: Maksimir

Chair: Alfredo Cuzzocrea (University of Calabria, Italy)

Fast Cryptographic Privacy Preserving Association Rules Mining on Distributed Homogenous Data Base
Mahmoud Hussein, Ashraf El-Sisi and Nabil Ismail

Privacy Risks in Trajectory Data Publishing: Reconstructing Private Trajectories from Continuous Properties
Emre Kaplan, Thomas B. Pedersen, Erkay Savaş and Yücel Saygin

Event-based Compression and Mining of Data Streams
Alfredo Cuzzocrea and Sharma Chakravarthy

Towards Relational Inconsistent Databases with Functional Dependencies
Sergio Greco and Cristian Molinaro

Intelligent Vision and Image Processing

Friday, 11.30 – 13.10, Room: Zrinjevac

Chair: Tuan Pham (James Cook University, Australia)

Detection and Analysis of Cell Nuclear Phases
Donggang Yu, Tuan D. Pham and Xiaobo Zhou

Simple Perceptually-inspired Methods for Blob Extraction
Paolo Falcoz

A Fuzzy Thresholding Circuit for Image Segmentation
Angel Barriga and Nashaat M Hussein

A Method for Reading a Resistor by Image Processing Techniques
Yoshihiro Mitani, Yuuki Sugimura and Yoshihiko Hamamoto

A Generic Methodology for Classification of Complex Data Structures in Automotive Industry
Dymitr Ruta

Intelligent Systems in Medicine and Healthcare

Friday, 11.30 – 13.10, Room: Tuskanac

Chairs: Chee-Peng Lim, (University of Science Malaysia, Malaysia), Lakhmi C. Jain (University of South Australia, Australia), Robert F. Harrison (University of Sheffield, UK)

Mammographic Image Contrast Enhancement Through the Use of Moving Contrast Sweep
Zailani Mohd Nordin, Nor Ashidi Mat Isa, Umi Kalthum Ngah and Kamal Zuhairi Zamli

Detection of Sprague Dawley Sperm Using Matching Method
Mohd Fauzi Alias, Nor Ashidi Mat Isa, Siti Amrah Sulaiman and Kamal Zuhairi Zamli

Application of the Fuzzy Min-Max Neural Networks to Medical Diagnosis
Anas Quteishat and Chee Peng Lim

SVD based Feature Selection and Sample Classification of Proteomic Data
Annarita D'Addabbo, Massimo Papale, Salvatore di Paolo, Simona Magaldi, Roberto Colella, Valentina d'Onofrio, Annamaria Di Palma, Elena Rannieri, Loreto Gesualdo and Nicola Ancona

Prediction of Crohn's Disease by Profiles of Single Nucleotide Polymorphisms
Roberto Colella, Annarita D'Addabbo, Anna Latiano, Orazio Palmieri, Vito Annese and Nicola Ancona

Intelligent Data Processing in Process Systems and Plants

Friday, 11.30 – 13.10, Room: Zelengaj

Chairs: Yoshiyuki Yamashita (Tokyo University of Agriculture and Technology, Japan), Tetsuo Fuchino (Tokyo Institute of Technology, Japan)

Development of Activity Models of Integrated Safety and Disaster Management for Industrial Complex Areas
Yukiyasu Shimada and Hossam A. Gabbar

LCA of the Various Vehicles in Environment and Safety Aspect
Kazuhiro Takeda, Shingo Sugioka, Yukiyasu Shimada, Takashi Hamaguchi, Teji Kitajima and Tetsuo Fuchio

Plant Model Generation for Countermeasures Planning
Takashi Hamaguchi, Kazuhiro Takeda, Yukiyasu Shimada and Yoshihiro Hashimoto

Trend Analysis for Decision Support in Control Actions of Suspension Polymerization
Hideyuki Matsumoto, Masaya Honda and Chiaki Kuroda

An Operational Model and a Computer Support Environment for Batch Plants Based on Adaptive Scheduling
Hisaaki Yamaba, Makoto Hirotsuki and Shigeyuki Tomita

Plenary Session – Keynote Lecture

Friday, 14.10 – 15.10, Room: Crystal I

Chair: Ronald L. Hartung (Franklin University, USA)

Legal Issues for Military Intelligent Decision-making Technologies
Anthony Finn, Defence Science and Technology Organisation, Department of Defence, Edinburgh, Australia

Parallel Sessions

Friday, 15.10 – 16.30

Immunity-Based Systems

Friday, 15.10 – 16.30, Room: Crystal I

Chair: Yoshiteru Ishida (Toyoashi University of Technology, Japan)

Fatal Mutations in HIV Population as an Influential Factor for an Onset of AIDS
Kouji Harada and Yoshiteru Ishida

Asymmetric Interactions between Cooperators and Defectors for Controlling Self-Repairing
Yoshiteru Ishida and Masahiro Tokumitsu

A Note on Space-Time Interplay through Generosity in a Membrane Formation with Spatial Prisoner's Dilemma
Yoshiteru Ishida and Yuji Katsumata

Dynamic Updating of Profiles for the Immunity-Based Anomaly Detection System
Takeshi Okamoto and Yoshiteru Ishida

Intelligent Robotics and Control II

Friday, 15.10 – 16.30, Room: Crystal II

Chair: Darko Huljenic (Ericsson Nikola Tesla, Croatia)

Collaboration Options for Small and Medium Size Enterprises
Sylvia Encheva and Sharil Tumin

Service Robot System Using Personal Attribute and Acquisition Preference Attribute with Networked Robots
Kota Nakamura, Yoshiharu Yoshida, Toru Yamaguchi and Eeri-Shimokawara-Sato

Early Forest Fire Detection with Sensor Networks: Sliding Window Skylines Approach
Krešimir Pripužić, Hrvoje Belani and Marin Vuković

Analysing Flight Data using Clustering Methods
Christopher Jesse, Honghai Liu, Edward Smart and David Brown

Reasoning-Based Intelligent Systems

Friday, 15.10 – 16.30, Room: Maksimir

Chair: Kazumi Nakamatsu (University of Hyogo, Japan)

Improving EEG Analysis by Using Paraconsistent Artificial Neural Networks
Jair Minoro Abe, Helder F.S. Lopes and Kazumi Nakamatsu

Transitive Reasoning of Before-after Relation Based on Bf-EVALPSN
Kazumi Nakamatsu, Jair Minoro Abe and Seiki Akama

A Conceptual Model for Guiding the Clustering Analysis
Wagner F. Castilho, Gentil J. Lucena Filho, Hércules A. do Prado, Edilson Feredna and Margarete Axt

An Image-Based Integration System for Real-Time Dispatching of Multi-Robots
Li-Che Chen, Tien-Ruey Hsiang, Yu Fu and Sheng-Luen Chung

Computational Intelligence for Image Processing and Pattern Recognition

Friday, 15.10 – 16.30, Room: Zrinjevac

Chair: Yen-Wei Chen (Ritsumeikan University, Japan)

Digital Video Watermarking based on RGB Color Channels and Principal Components Analysis
Hanane Mirza, Hien Thai and Zensho Nakao

A Watermarking Approach for MIDI File based on Velocity and Duration Modulation
Alexander Adli, Hanane Mirza and Zensho Nakao

Application of Interactive Genetic Algorithms to Boid Model based Artificial Fish Schools
Yen-Wei Chen, Kanami Kobayashi, Hitoshi Kawabayashi and Xinyin Huang

Classification of High Resolution Satellite Images using Supervised Locality Preserving Projections
Yen-Wei Chen and Xian-Hua Han

Biomedical Informatics: Intelligent Information Management from Nanomedicine to Public Health

Friday, 15.10 – 16.30, Room: Tuskanac

Chair: Victor Maojo (Universidad Politecnica de Madrid, Spain)

Using Hierarchical Task Network Planning Techniques to Create Custom Web Search Services over Multiple Biomedical Databases

Miguel García-Remesal

Building an Index of Nanomedical Resources: an Automatic Approach based on Text Mining

Stefano Chiesa, Miguel García-Remesal, Guillermo de la Calle, Diana de la Iglesia, Vaida Bankauskaite and Víctor Maojo

Annotation of Colorectal Cancer Data using the UMLS Metathesaurus

Marcos Martínez, José M. Vázquez, Javier Pereira and Alejandro Pazos

A Primer in Knowledge Management for Nanoinformatics in Medicine

Fernando Martín-Sánchez, Victoria López-Alonso, Isabel Hermosilla-Gimeno and Guillermo Lopez-Campos

Intelligent Computing for Grid

Friday, 15.10 – 16.30, Room: Zelengaj

Chair: Kun Gao (Zhejiang Wanli University, China)

Predicting Grid Performance based on Novel Reduct Algorithm

Kun Gao

A Uniform Parallel Optimization Method for Knowledge Discovery Grid

Kun Gao

E-service Delivery Pattern for Knowledge Discovery Grid

Meiqun Liu

Design and Implementation to Intelligent Examination System for E-business Application Operation

Xin Jin and YanLin Ma

Application Study in Decision Support with Fuzzy Cognitive Map

Yue He

Combination Study of Multi Fuzzy Cognitive Map

Chun-Mei Lin

A Hermeneutic Approach to the Notion of Information in IS

Su-Fen Wang

Poster Presentations

Friday, 16.30 – 17.00 , Crystal Foyer

Information as for morning break.

Parallel Sessions

Friday, 17.00 -18.20

Smart Sustainability

Friday, 17.00 -18.20, Room: Crystal I

Chair: Robert J. Howlett (University of Brighton, UK)

Intelligent GPS-based Vehicle Control for Improved Fuel Consumption and Reduced Emissions

S. H. Lee, S.D. Walters and R.J. Howlett

Agent-Based Decision Making through Intelligent Knowledge Discovery

Marina V. Sokolova and Antonio Fernández-Caballero

Conceptual Modeling in a Meta-model of Sustainability Indicators
Alfredo Tolón-Becerra and Fernando Bienvenido

Intelligent Robotics and Control III

Friday, 17.00 -18.20, Room: Crystal II

Chair: Dragan Jevtic (university of Zagreb, Croatia)

Visual-based View-invariant Human Motion Analysis: A Review
Xiaofei Ji, Honghai Liu, Yibo Li and David Brown

Generalized Extreme Value for Smooth Component Analysis in Prediction Improvement
Ryszard Szupiluk, Piotr Wojewnik and Tomasz Zabkowski

Context Cookies

Ramón Hervás, Gabriel Chavira, Salvador W. Nava, Vladimir Villarreal and José Bravo

Smart Environment Vectorization. An approach to Learning of User Lighting Preferences
Alejandro Fernández-Montes, Juan A. Ortega, Luis González, Juan A. Álvarez and Manuel D. Cruz

Agent and Multi-Agent Systems: Technologies and Applications

Friday, 17.00 -18.20, Room: Maksimir

Chair: Bala M. Balachandran, Dharmendra Sharma (University of Canberra, Australia)

Logic of Plausibility for Discovery in Multi-Agent Environment. Deciding Algorithms
Sergey Babenyshev and Vladimir Rybakov

An Agent-oriented Dynamic Adaptive Threshold Transmission for XML Data on Networks
Xu Huang and Dharmendra Sharma

An Agent-oriented Quantum Key Distribution for Wi-Fi Network Security
Xu Huang and Dharmendra Sharma

Developing Intelligent Agent Applications with JADE and JESS
Bala M. Balachandran

An Agent Based Multifactor Biometric Security System
Girija Chetty, Dharmendra Sharma and Bala M. Balachandran

Computational Intelligence Techniques for Web Personalization

Friday, 17.00 -18.20, Room: Zrinjevac

Chairs: Giovanna Castellano, Alessandra Torsello (University of Bari, Italy)

Categorization of Web Users by Fuzzy Clustering
Giovanna Castellano and Maria Alessandra Torsello

Fuzzy User Profiling in e-Learning Contexts
Corrado Mencar, Ciro Castiello and Anna Maria Fanelli

Personalized Web Search by Constructing Semantic Clusters of User Profiles
John Garofalakis, Theodoula Giannakoudi and Agoritsa Vopi

A Comparison of Different Rating Based Collaborative Filtering Algorithms
Fabián P. Lousame and Eduardo Sánchez

Relevant Reasoning for Discovery and Prediction

Friday, 17.00 -18.20, Room: Tuskanac

Chairs: Jingde Cheng, Yuichi Goto (Saitama University, Japan)

A Fast Duplication Checking Algorithm for Forward Reasoning Engines
Takahiro Koh, Yuichi Goto and Jingde Cheng

Formal definition of Relevant Logical Symbol Occurrence
Noriaki Yoshiura

Deontic Relevant Logic as the Logical Basis for Representing, Reasoning about, and Ensuring Legal Knowledge in Legal Information Systems

Jingde Cheng

A General Forward Reasoning Algorithm for Various Logic Systems with Different Formalizations

Yuichi Goto, Takahiro Koh and Jingde Cheng

Closing Session – KES 2009

Friday, 18.20, Room: Crystal I