

# 20<sup>th</sup> IFIP World Computer Congress

Milano, Italy 7-10 September 2008

TC12 Conference on

IFIP Artificial Intelligence 2008 – IFIP AI



## Programme

Sunday, September 7 <sup>th</sup> 2008	
14.30–16.00	<p style="text-align: center;"><b>Session 1: Agents 1</b></p> <p><b>A Light-Weight Multi-Agent System Manages 802.11 Mesh Networks</b> <i>A.Prodan and J.Debenham (University of Technology, Sydney, Australia)</i></p> <p><b>Decisions with multiple simultaneous goals and uncertain causal effects</b> <i>Paulo Trigo (Instituto Superior de Engenharia de Lisboa, Portugal) and Helder Coelho (Faculdade de Ciências da Universidade de Lisboa, Portugal)</i></p> <p><b>Agent Based Frequent Set Meta Mining: Introducing EMADS</b> <i>Kamal Ali Albashiri, Frans Coenen and Paul Leng (University of Liverpool, UK)</i></p> <p><b>Short Papers:</b></p> <p><b>Smart communications network management through a synthesis of distributed intelligence and information</b> <i>J.K. Debenham (University of Technology Sydney, Australia), S.J. Simoff (University of Western Sydney, Australia), J.R. Leaney and V. Mirchandani (University of Technology, Sydney, Australia)</i></p>
16:00-16:30	<b>Coffee Break</b>
16:30–18:00	<p style="text-align: center;"><b>Session 2: Agents 2</b></p> <p><b>On the evaluation of MAS development tools</b> <i>Emilia Garcia, Adriana Giret and Vicente Botti (Technical University of Valencia, Spain)</i></p> <p><b>Information-Based Planning and Strategies</b> <i>J.Debenham (University of Technology, Sydney, Australia)</i></p> <p><b>Teaching Autonomous Agents to Move in a Believable Manner within Virtual Institutions</b> <i>A.Bogdanovych and S.Simoff (University of Western Sydney, Australia), M.Esteve (IIIA-CSIC, Spain), J.Debenham (University of Technology, Sydney, Australia)</i></p> <p><b>Short Papers</b></p> <p><b>An Abductive Multi-Agent System for Medical Services Coordination</b> <i>A.Ciampolini and P.Mello (University of Bologna, IT), S.Storari (University of Ferrara, IT)</i></p>
Monday, September 8 <sup>th</sup> 2008	
11.00–12.00	<p><b>Invited Speaker</b></p> <p>Prof. Nikola Kasabov, <i>Founding Director and Chief Scientist - Knowledge Engineering and Discovery Research Institute (KEDRI), Auckland University of Technology, New Zealand</i></p>
12.00–14.30	<b>Lunch</b>



**AICA**

Associazione Italiana per l'Informatica  
ed il Calcolo Automatico



14.30–16.00	<p style="text-align: center;"><b>Session 3: Data Mining</b></p> <p><b>Mining Fuzzy Association Rules from Composite Items</b>  <i>M. Sulaiman Khan and Maybin Muyeba (School of Computing, Liverpool Hope University, UK), Frans Coenen (Department of Computer Science, University of Liverpool, UK)</i></p> <p><b>P-Prism: A Computationally Efficient Approach to Scaling up Classification Rule Induction</b>  <i>Frederic T. Stahl, Max A. Bramer and Mo Adda (University of Portsmouth, UK)</i></p> <p><b>Applying Data Mining to the Study of Joseki</b>  <i>M. Helvensteijn (LIACS, Leiden University, The Netherlands)</i></p> <p><b>A Fuzzy Semi-Supervised Support Vector Machine Approach to Hypertext Categorization</b>  <i>Houda Benbrahim and Max Bramer (School of Computing, University of Portsmouth, UK)</i></p>
16.00–16.30	<p><b>Coffee Break</b></p>
16.30–18.00	<p style="text-align: center;"><b>Session 4: Neural Networks</b></p> <p><b>Estimation of Neural Network Parameters for Wheat Yield Prediction</b>  <i>Georg Ruß and Rudolf Kruse (Otto-von-Guericke-University of Magdeburg, Germany), Martin Schneider and Peter Wagner (Martin-Luther-University of Halle-Wittenberg)</i></p> <p><b>Enhancing RBF-DDA Algorithm's Robustness: Neural Networks Applied to Prediction of Fault-Prone Software Modules</b>  <i>Miguel E. R. Bezerra (Federal University of Pernambuco, Brazil), Adriano L. I. Oliveira (University of Pernambuco, Brazil), Paulo J. L. Adeodato and Silvio R. L. Meira (Federal University of Pernambuco, Brazil)</i></p> <p><b>Short Papers</b></p> <p><b>A New Learning Algorithm for Neural Networks with Integer Weights and Quantised Non-linear Activation Functions</b>  <i>Yan Yi, Zhang Hangping and Zhou Bin (Institute of Intelligence &amp; Software, Hangzhou Dianzi University, Hangzhou, China)</i></p> <p><b>Neural Recognition of Minerals</b>  <i>Mauricio Solar (Universidad Técnica Federico Santa María), Patricio Perez and Francisco Watkins (Universidad de Santiago de Chile)</i></p>
<p><b>Tuesday, September 9<sup>th</sup> 2008</b></p>	
09.00–10.30	<p style="text-align: center;"><b>Session 5: Learning</b></p> <p><b>A Study with Class Imbalance and Random Sampling for a Decision Tree Learning System</b>  <i>R. C. Prati and G. E. A. P. A. Batista and M. C. Monard (University of São Paulo, Campus of São Carlos, Brazil)</i></p> <p><b>Answer Extraction for Definition Questions using Information Gain and Machine Learning</b>  <i>C. Martinez-Gil and A. Lopez-Lopez (Instituto Nacional de Astrfisica Optica y Electronica, Puebla, Mexico)</i></p> <p><b>Batch Reinforcement Learning for Controlling a Mobile Wheeled Pendulum Robot</b>  <i>Andrea Bonarini (Politecnico di Milano, Milan, Italy), Claudio Caccia (Universita' degli Studi di Milano-Bicocca, Milan, Italy), Alessandro Lazaric and Marcello Restelli (Politecnico di Milano, Milan, Italy)</i></p> <p><b>Short Papers</b></p> <p><b>Bayesian Networks Optimization Based on Induction Learning Techniques</b>  <i>Paola Britos (Software &amp; Knowledge Engineering Center. ITBA), Pablo Felgaer (Intelligent Systems Laboratory. School of Engineering. FI-UBA) and Ramón García-Martínez (Software &amp; Knowledge Engineering Center. ITBA)</i></p>

10.30–11.00	<b>Coffee break</b>	
11.00–12.00	<b>Invited Speaker</b> Prof. Lorenza Saitta, Professor of Computer Science, University of Piemonte Orientale (Italy)	
12.00–14.30	<b>Lunch</b>	
14.30–16.00	<p style="text-align: center;"><b>Session 6: Knowledge Management</b></p> <p><b>Optimizing Relationships Information in Repertory Grids</b> <i>Enrique Calot (Intelligent Systems Laboratory, FI-UBA), Paola Britos (Software &amp; Knowledge Engineering Center. ITBA), and Ramón García-Martínez (Software &amp; Knowledge Engineering Center. ITBA)</i></p> <p><b>Modeling Stories in the Knowledge Management Context to Improve Learning Within Organizations</b> <i>Stefania Bandini (CSAI-University of Milan-Bicocca), Federica Petraglia (DISCO-University of Milan-Bicocca) and Fabio Sartori (DISCO-University of Milan-Bicocca)</i></p> <p><b>Knowledge Modeling Framework for System Engineering Projects</b> <i>Olfa Chourabi (CNAM University, Paris/ ENSI University, Tunisia), Yann Pollet (CNAM University, Paris) and Mohamed Ben Ahmed (ENSI University, Tunisia)</i></p> <p><b>Short Papers</b></p> <p><b>Application of Business Intelligence for Business Process Management</b> <i>Nenad Stefanovic (Information Systems Division, Zastava Automobiles, Kragujevac, Serbia), Dusan Stefanovic (Faculty of Science, University of Kragujevac, Serbia) and Milan Misic (Higher Technical School, Zvecan, Serbia)</i></p>	
16.00–16.30	<b>Coffe break</b>	
16.30–18.00	<p><b>Session 7A: Foundations</b></p> <p><b>Machines with good sense: How can computers become capable of sensible reasoning?</b> <i>J. C. Anacleto, Ap. F. P. de Carvalho, E. N. Pereira, A. M. Ferreira and A. J. F. Carlos (Federal University of São Carlos, Brazil)</i></p> <p><b>Making Use of Abstract Concepts -- Systemic-Functional Linguistics and Ambient Intelligence</b> <i>J. Cassens (Norwegian University of Science and Technology, Trondheim, Norway) and R. Wegener (Macquarie University, Sydney, Australia)</i></p> <p><b>Making Others Believe What They Want</b> <i>Guido Boella (University of Turin), Célia da Costa Pereira and Andrea G. B. Tettamanzi (University of Milan), Leendert van der Torre (University of Luxembourg)</i></p> <p><b>Foundations for Virtual Experiments to Evaluate Thermal Conductivity of Semi- and Super-conducting Materials</b> <i>Rakesh Mohan Bhatt and R.P.Gairola (HNB Garhwal University, Srinagar-GWL, India)</i></p>	<p><b>Session 7B: Representation, Reasoning and Search</b></p> <p><b>Context Search Enhanced by Readability Index</b> <i>P. Navrat, T. Taraba, A. Bou Ezzeddine and D.Chuda (Slovak University of Technology in Bratislava)</i></p> <p><b>Towards an Enhanced Vector Model to Encode Textual Relations: Experiments Retrieving Information</b> <i>Maya Carrillo and A. Lopez-Lopez (Instituto Nacional de Astrofisica, Optica y Electronica, Puebla, Mexico)</i></p> <p><b>Efficient Two-Phase Data Reasoning for Description Logics</b> <i>Zsolt Zombori (Budapest University of Technology and Economics)</i></p> <p><b>Some Issues in Personalization of Intelligent Systems: An Activity Theory Approach for Meta Ontology Development</b> <i>Daniel E. O`Leary (University of Southern California, USA)</i></p>

**Wednesday, September 10<sup>th</sup> 2008**

<b>09:00-10:30</b>	<p><b>Session 8: Applications 1</b></p> <p><b>Intelligent Systems Applied to Optimize Building's Environments Performance</b>  <i>Enrique Sierra and Alejandro Hossian (Comahue University), Dario Rodríguez (Buenos Aires Institute of Technology), Martín García-Martínez (University of Buenos Aires), Paola Britos and Ramón García-Martínez (Buenos Aires Institute of Technology)</i></p> <p><b>A Comparative Analysis of One-class Structural Risk Minimization by Support Vector Machines and Nearest Neighbor Rule</b>  <i>George G. Cabral and Adriano L. I. Oliveira (University of Pernambuco, Brazil)</i></p> <p><b>Estimation of the Particle Size Distribution of a Latex using a General Regression Neural Network</b>  <i>G. Stegmayer, J. Vega, L. Gugliotta (INTEC-CONICET, Argentina) and O. Chiotti</i></p> <p><b>Intelligent Advisory System for Designing Plastics Products</b>  <i>U. Sancin and B. Dolšak (University of Maribor, Slovenia)</i></p>	
<b>11.00–12.00</b>	<p><b>Session 9A: Applications 2</b></p> <p><b>Modeling the Spread of Preventable Diseases: Social Culture and Epidemiology</b>  <i>A. Y. Tawfik (University of Windsor, Windsor, Ontario, Canada) and R.R. Farag (German University in Cairo, New Cairo, Egypt)</i></p> <p><b>An Intelligent Decision Support System for the prompt Diagnosis of Malaria and Typhoid fever in the malaria belt of Africa.</b>  <i>B. Adehor and P. Burrell (London South Bank University, UK)</i></p> <p><b>Detecting Unusual Changes of Users Consumption</b>  <i>Paola Britos (Software &amp; Knowledge Engineering Center ITBA), Hernan Grosser (Intelligent Systems Laboratory. FI-UBA), Dario Rodríguez (Software &amp; Knowledge Engineering Center ITBA) and Ramon Garcia-Martínez (Software &amp; Knowledge Engineering Center ITBA)</i></p>	<p><b>Session 9B: Techniques</b></p> <p><b>Optimal Subset Selection for Classification through SAT Encodings</b>  <i>F. Angiulli (Università della Calabria, Italy) and S. Basta (ICAR-CNR, Italy)</i></p> <p><b>Multi-objective Model Predictive Optimization using Computational Intelligence</b>  <i>Hirotaaka Nakayama (Konan University, Japan) and Yeboon Yun (Kagawa University)</i></p> <p><b>An Intelligent Method For Edge Detection Based On Nonlinear Diffusion</b>  <i>C. A. Z. Barcelos and V. B. Pires (Federal University of, Uberlândia - UFU, Brazil)</i></p> <p><b>Short Papers</b>  <b>Learning Life Cycle in Autonomous Intelligent Systems.</b>  <i>Jorge Ierache (Intelligent Systems Laboratory. FI-UBA), Ramón García-Martínez (Software and Knowledge Engineering Center. Postgraduate School. ITBA) and Armando De Giusti (Instituto de Investigación en Informática LIDI, FI-UNLP)</i></p>
<b>12.00–14.30</b>	<b>Lunch</b>	
<b>14.30–16.00</b>	<p style="text-align: center;"><b>Session 10: Semantic Web</b></p> <p><b>A Survey of Exploiting WordNet in Ontology Matching</b>  <i>Feiyu Lin and Kurt Sandkuhl (Jönköping University, Sweden)</i></p> <p><b>Using Competitive Learning Between Symbolic Rules as a Knowledge Learning Method</b>  <i>F. Hadzic and T.S. Dillon (Curtin University of Technology, Perth)</i></p>	

**Knowledge Conceptualization and Software Agent based Approach for OWL Modeling Issues**

*Shuxin Zhao, Pornpit Wongthongtham, Elizabeth Chang and Tharam Dillon  
(Curtin University of Technology, Australia)*

**Short Paper**

**A Map-based Integration of Ontologies into an Object-Oriented Programming Language**

*K. Kuramitsu (Yokohama National University, Japan)*