# The 2005 IEEE / WIC / ACM Joint International Conference on

# Web Intelligence (WI-05) Intelligent Agent Technology (IAT-05)

September 19 – 22, 2005 Compiègne University of Technology, France

**Final Program** 

Last Updated: 9/13/2005

## **Welcome Message**

Welcome to the 2005 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI'05 and IAT'05). On behalf of the WI'05 and IAT'05 Conference Committees, we would like to thank you for coming to WI'05 and IAT'05, and we hope you will enjoy the conference technical and social programs. We do hope that you enjoy the hospitality in the beautiful city of Compiègne.

The IEEE/WIC/ACM 2005 joint conferences are sponsored and organized by IEEE Computer Society Technical Committee on Intelligent Informatics (TCII), Web Intelligence Consortium (WIC), and ACM-SIGART.

The upcoming meeting in this conference series follows the great success of IAT'99 held in Hong Kong, WI-IAT'01 held in Maebashi City, Japan, WI-IAT '03 held in Halifax, Canada, and WI-IAT '04 held in Beijing, China.

WI and IAT 2005 are meant to provide a leading international forum for researchers and practitioners. Continuing their strong presence among similar events WI'05 and IAT'05 managed to attract 633 submissions (328 for WI'05 and 305 for IAT'05) to the research and industry tracks from 55 countries and territories.

The submitted full-length papers went through a rigorous reviewing process: Each of the 633 submissions was reviewed by at least two program committee members, and the borderline cases were re-reviewed by additional program committee members and by chair(s). For Wl'05 approximately 18% of 328 submissions were accepted as regular papers and 32% as short papers. For IAT'05 approximately 18% of 305 submissions were accepted as regular papers and 25% as short papers. Additionally 25 papers were selected for the Demo track.

Any successful, high-quality conference would require enormous efforts and expertise of many committed people. Here, we would like to thank Organizing Chairs, Program Co-chairs, Industry Track Chairs, Workshop Chairs, Tutorial Chairs, Publicity Chairs, Local Arrangement Chairs, and all Vice Chairs and Members of Wl'05 and IAT'05 Program Committees as well as appointed reviewers for the countless hours they devoted to the conference organization and review activities. Special thanks go to IEEE-CS-TCCI Chair, ACM-SIGART Chair, WIC Advisory Board members, and WIC Technical Committee & WI/IAT Steering Committee members for their constant support.

The conference Web support team contributed greatly to our success by putting together and maintaining the homepages for WI'05 and IAT'05 as well as managing Web-based software used to run paper submission and review process.

We would like to express our special appreciation to our world-class keynote speakers: Wray Buntine, Patrick Doherty, Nick Jennings, Pat Langley, Henry Lieberman, and Peter Schuster.

We are very grateful to the following institutions: French National Center for Scientific Research (CNRS), Compiègne University of Technology, Laboratoire Heuristique et Diagnostic des Systèmes Complexes (UMR-CNRS 6599), Institute of Electrical and Electronics Engineers (IEEE), Hong Kong Baptist University (HKBU), Maebashi Institute of Technology, and Warsaw University for their cooperation in preparations to WI'05 and IAT'05.

Last but not the least, we would like to thank all the authors of submitted papers and the attendees for their contribution and participation. Without their strong support, we could not have a successful conference.

Jiming Liu, Pierre Morizet-Mahoudeaux WI'05 and IAT'05 Conference Chairs

Andrzej Skowron WI'05 and IAT'05 Program Chair

## Plan of the Conference Site



# Program at a Glance

		September 19, Mor	nday		
		WI-IAT 2005 Tutorials 9:00			
Time	Sessions				
8:30 - 9:00	Workshop and Tutorial On-Si	te Registration			
9:00 – 11:00	Centre de Transfert - L 102 An Introduction to Auctions Maria Fasli, Department of Compo	uter Science University of Essex, UK	Centre de Transfert - Apollo Rough Set Approach to Learning in MAS Nguyen Hung Son, Institute of Mathematics, Warsaw University, Poland		
11:00 - 13:00			Pierre Guillaumat – Nautile Programming Complex Adaptive Systems Salima Hassas, LIRIS, Universite Claude Bernard, Lyon, France		
13:00 – 14:00	Lunch		•		
14:00 - 16:00	Centre de Transfert - L 102 A Methodology for Designing an Intelligent Agent System Lin Padgham, Department of Computer Science, RMIT University				
16:00 - 18:00	Leon Sterling, Department of Computer Science, RMT Offiversity Leon Sterling, Department of Computer Science and Software Engineering, Melbourne University Melbourne, Australia		Pierre Guillaumat – Nautile Roles for Agent Technology Guido Boella, Dipartimento di Informatica, Universita degli Studi di Torino, Italy		
		WI-IAT 2005 Workshops 9:	00 - 18:00		
9:00 – 13:00	Centre de Transfert – Oxygène WWW Service Composition with Semantic Web Services	Pierre Guillaumat K109 Open Source Web Information Retrieval	9:00-11:00: Tutorial Rough Set Approach to Learning in MAS	Pierre Guillaumat K110 Incentive Based Computing	
			11:30-13:00: Centre de Transfert – Apollo Rough Sets and Soft Computing in Intelligent Agent and Web Technologies		
13:00 – 14:00	Lunch				
14:00 - 18:00	WWW Service Composition with Semantic Web Services (Cont.)	Open Source Web Information Retrieval (Cont.)	Rough Sets and Soft Computing in Intelligent Agent and Web Technologies (Cont.)	Pierre Guillaumat K110 Semantics and Orches- tration of eGovernment Processes	

16:00 – 18:00 Conference On-Site Registration

		September 20	, Tuesday		
Time	Sessions				
8:00 - 8:45	Conference On-Site Regist	ration			
8:45 - 9:00	Opening Address			Conference Hall R. Colcombet	
	Welcome from Conference Cha	irs & Program Introduction			
09:00-09:50		nple Systems and the Emergend	e of Complexity	Conference Hall R. Colcombet	
	<b>Prof. Peter Schuster</b> , Universi	•			
	Chair: Amal El Fallah Seghroud				
09:50-10:40	Keynote Talk: Agreement Tech			Conference Hall R. Colcombet	
	Prof. Nick Jennings, Universit	y of Southampton, UK			
	Chair: Barbara Dunin-Kęplicz				
10:40-11:00	Coffee Break				
Venue	Conference Hall	Pierre Guillaumat	Pierre Guillaumat	Pierre Guillaumat	
	R. Colcombet	L.103	L.200	L.202	
11:00-12:30	Session 1A (IAT)	Session 1B (IAT)	Session 1C (WI)	Session 1D (WI)	
	Agent Systems Modeling and Methodology 1	Applications 1 Chair: Pericles A. Mitkas	Intelligent Human-Web Interaction	World Wide Wisdom Web (W4) and Web Agents	
	Chair: Ioan Alfred Letia	Oriali. I Choles A. Witkas	Chair: Francesco Amigoni	Chair: Meng Chang Chen	
12:30-13:30	Lunch		enam rancesee, amgem	Trial mong onang onen	
13:30-15:30	Session 2A (IAT)	Session 2B (IAT)	Session 2C (WI)	Session 2D (WI)	
	Agent Systems Modeling	Applications 2 and Others	Intelligent E-Technology 1	Social Networks and Social	
	and Methodology 2	Chair: Martin Purvis	Chair: Dawn Jutla	Intelligence 1	
	Chair: Rineke Verbrugge			Chair: Jean-Yves Delort	
15:30-15:50	Coffee Break				
15:50-17:30	Session 3A (IAT)	Session 3B (IAT)	Session 3C (WI)	Session 3D (WI)	
	Agent Systems Modeling	Autonomous Knowledge and	Intelligent E-Technology 2	Social Networks and Social	
	and Methodology 3 Chair: Pawan Lingras	Information Agents 1 Chair: Cory Butz	Chair: Luis Rocha	Intelligence 2	
17:30-19:00					
	Industrial and Demo track sessions (WI-IAT) – Centre de Transfert - Chair: Jianchang Mao				
19:30	Welcome Reception – Hôtel de Ville (City Hall)				

		September 21, V	Vednesday			
Time		S	essions			
08:00 - 8:30	Conference On-Site Regis	stration				
08:30-09:20	Keynote Talk: Opportunities from Open Source Search Prof. Wray Buntine, Helsinki Institute for Information Technology, Finland Chair: Ning Zhong  Conference Hall R. Colcombet					
09:20-10:10	Keynote Talk: An Adaptive Ar	Keynote Talk: <b>An Adaptive Architecture for Physical Agents Prof. Pat Langley</b> , Stanford University, USA  Conference Hall R. Colcombet				
10:10-10:30	Coffee Break					
Venue	Conference Hall R. Colcombet	Pierre Guillaumat L.103	Pierre Guillaumat L.200	Pierre Guillaumat L.202		
10:30-12:30	Session 4A (IAT) Agent Systems Modeling and Methodology 4 Chair: Michael Luck	Session 4B (IAT) Autonomous Knowledge and Information Agents 2 Chair: Achim Hoffmann	Session 4C (WI)  Web Mining and Farming 1  Chair: Tie-Yan Liu	Session 4D (WI)  Web Information Filtering and Retrieval 1 Chair: Michel Beigbeder		
12:30-13:30	Lunch	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
13:30-15:30	Session 5A (IAT) Agent Systems Modeling and Methodology 5 Chair: Kensuke Fukuda	Session 5B (IAT) Autonomous Knowledge and Information Agents 3 Chair: Ah-Hwee Tan	Session 5C (WI)  Web Mining and Farming 2  Chair: Takahira Yamaguchi	Session 5D (WI) Web Information Filtering and Retrieval 2 Chair: Atsushi Fujii		
15:30-15:50	Coffee Break					
15:50-18:00	Session 6A (IAT) Agent Systems Modeling and Methodology 6 Chair: Jean-Paul Barthès	Session 6B (IAT)  Autonomous Auctions and  Negotiation  Chair: Anna Gomolińska	Session 6C (WI)  Web Mining and Farming 3  Chair: Ali Ghorbani	Session 6D (WI)  Web Information Filtering and Retrieval 3 Chair: Fabien Gadon		
20:00-23:00	Conference Gala Dinner -	Castle of Pierrefonds	•			

September 22, Thursday						
Time		Sessions				
08:00 - 8:30	Conference On-Site Regi	stration				
08:30-09:20		ert Advice by Analogy for On-Line	e Help	Conference Hall R. Colcombet		
	Chair: Steven Willmott					
09:20-10:10		epresentation and Unmanned Aeri		Conference Hall R. Colcombet		
		rtment of Computer and Information	Science,			
	Linköping University, Sweder Chair: Jeffrey Bradshaw	1				
10:10-10:30	Coffee Break					
Venue	Conference Hall Pierre Guillaumat Pierre Guillaumat Pierre Guillaumat Pierre Guillaumat Pierre Guillaumat L.202					
10:30-12:30	Session 7A (IAT) Autonomy-Oriented Computing 1 Chair: Natasa Milic-Frayling	Session 7B (IAT)  Distributed Problem Solving 1  Chair: Norimichi Ukita	Session 7C (WI)  Web Mining and Farming 4  Chair: James Wang	Session 7D (WI)  Web Services Chair: Robert Tolksdorf		
12:30-13:30	Lunch					
13:30-15:30	Session 8A (IAT) Autonomy-Oriented Computing 2 Chair: Guido Boella	Session 8B (IAT)  Distributed Problem Solving 2  Chair: Philippe Balbiani	Session 8C (WI) Semantic Web Chair: Ruth Cobos Perez	Session 8D (WI) Web Services (Cont. – 40 min.) Chair: Hung Son Nguyen Session 9D (WI) Knowledge Grids and Grid Intelligence (80 min.) Chair: Javed I. Khan		
15:30-15:50	Coffee Break					
15:50-18:00	Session 9A (IAT) Autonomy-Oriented Computing 3 Chair: Michel Desmarais	Session 9B (IAT)  Distributed Problem Solving 3  Chair: Vincent Corruble	Session 9C (WI) Ontology Engineering Chair: Naoki Fukuta	Session 10D (WI)  Web Support Systems Chair: Marcin Szczuka		

# **Program**September 20, Tuesday

8:00 - 8:45	Conference On-Site Registration		
Venue	Conference Hall R. Colcombet		
8:45 - 9:00	Opening Address		
	Welcome from Conference Chairs & Program Introduction		
09:00-09:50	Keynote Talk: Evolution in Simple Systems and the Emergence of Complexity		
	Prof. Peter Schuster, University of Vienna, Austria		
	Chair: Amal El Fallah Seghrouchni		
09:50-10:40	Keynote Talk: Agreement Technologies		
	Prof. Nick Jennings, University of Southampton, UK		
	Chair: Barbara Dunin-Kęplicz		
10:40-11:00	Coffee Break		

## Session guide

Venue	Conference Hall R. Colcombet	Pierre Guillaumat L.103	Pierre Guillaumat L.200	Pierre Guillaumat L.202
11:00-12:30	Session 1A (IAT) Agent Systems Modeling and Methodology 1 Learning, Self- Adaptation, and Reinforcement Learning Ir219 Ir290, Ir328, Ir442, Ir327	Session 1B (IAT) Applications 1 Ir271, Ir335, Ir354, Ir483, Ir251	Session 1C (WI) Intelligent Human-Web Interaction Wr345, Wr348, Wr257, Wr312, Wr451, Wr472, Wr512	Session 1D (WI) World Wide Wisdom Web (W4) and Web Agents Wr349, Wr366, Wr374, Wr385, Wr401, Wr496, Wr506, Wr233, wr360
12:30-13:30	Lunch			
13:30-15:30	Session 2A (IAT) Agent Systems Modeling and Methodology 2 Agent Interaction Protocols and Multiagent Coordination Techniques Ir287, Ir452, Ir480, Ir284, Ir333, Ir413, Ir464, Ir402, Ir487	Session 2B (IAT) Applications 2 Ir312, Ir293, Ir351, Ir313, Ir337, Ir364, Ir406, Ir424	Session 2C (WI) Intelligent E- Technology 1 • Wr423, Wr470, Wr258, Wr294, Wr300, Wr306, Wr414, Wr450, Wr487, Wr217	Session 2D (WI) Social Networks and Social Intelligence 1 Wr205, Wr210, Wr327, Wr208, Wr275, Wr303, Wr446, Wr456
15:30-15:50	Coffee Break		T	T =
15:50-17:30	Session 3A (IAT) Agent Systems Modeling and Methodology 3 Agent Interaction Protocols and Multiagent Coordination Techniques (Cont.) Ir247, Ir215, Ir340, Ir223, Ir332, Ir479, Ir412	Session 3B (IAT) Autonomous Knowledge and Information Agents  1 Information Filtering, Knowledge Sharing and Aggregation, Autonomous and Ontology-Based Information Services Ir308, Ir226, Ir336, Ir358, Ir369, Ir373, Ir454, Ir455	Session 3C (WI) Intelligent E- Technology 2 Wr330, Wr347, Wr365, Wr504, Wr221, Wr475,	Session 3D (WI) Social Networks and Social Intelligence 2 Wr339, W444, Wr457, Wr464
17:30-19:00	Industrial and Demo track sessions (WI-IAT) – Centre de Transfert			
19:30	Welcome Reception – Hôtel de Ville (City Hall)			

## September 20, Tuesday 11:00-12:30 IAT

Session 1A (IAT) - Chair: Ioan Alfred Letia

#### Agent Systems Modeling and Methodology 1

Learning, Self-Adaptation, and Reinforcement Learning

#### Regular:

• Fuzzy Q-Learning with the Modified Fuzzy ART Neural Network
Hiroaki Ueda, Naoki Hanada, Hideaki Kimoto, Takeshi Naraki, Kenichi Takahashi, and
Tetsuhiro Miyahara

• An Improved Multiagent Reinforcement Learning Algorithm
Xiangping Meng, Babuska Robert, Lucian Busoniu, Y. Chen, and W. Tan

• Self-Organizing Cognitive Agents and Reinforcement Learning in Multi-Agent Environment

Ah-Hwee Tan and Xiao Dan

Reinforcement Learning in Swarms that Learn
 James Peters, Christopher Henry, and Sheela Ramanna

#### Short:

 Model-based Reinforcement Learning for a Multi-player Card Game with Partial Observability

Hajime Fujita and Shin Ishii

Session 1B (IAT) - Chair: Pericles A. Mitkas

#### **Applications 1**

#### Regular:

- SpeechPA: An Ontology-Based Speech Interface for Personal Assistants
  Emerson Paraiso and Jean-Paul Barthes
- Real-time Cooperative Multi-target Tracking by Dense Communication among Active Vision Agents

Norimichi Ukita

• Using a Multi-Agent Organization Description Language to describe contract dynamics in virtual enterprises

Jomi Hubner, Olivier Boissier, and Jaime Sichman

• Using the Erlang Language for Multi-Agent Systems Implementation
Antonella Di Stefano and Corrado Santoro

#### Short:

• IA Student Agent in a CAI System

Kenichi Takahashi, Hiroaki Ueda, and Tetsuhiro Miyahara

## September 20, Tuesday 11:00-12:30 WI

Session 1C (WI) - Chair: Francesco Amigoni

**Intelligent Human-Web Interaction** 

#### Regular:

Personalized Search Based on User Search Histories
 Mirco Speretta and Susan Gauch

• Predictive Algorithms for Browser Support of Habitual User Activities on the Web Janez Brank, Natasa Milic-Frayling, Anthony Frayling, and Gavin Smyth

#### Short:

• Time Based Segmentation of Log Data for User Navigation Prediction in Personalization

Martin Halvey, Mark Keane, and Barry Smyth

- Stable Third-Order Tensor Representation for Color Image Classification Dacheng Tao, Steve Maybank, and Weiming Hu
- STAMP: Adaptable Templates for Synchronized Multimedia Presentations Ioan Marius Bilasco, Jérôme Gensel, and Marlène Villanova-Oliver
- Real-time Learning Behavior Mining for e-Learning Yen-Hung Kuo, Juei-Nan Chen, Yu-Lin Jeng, and Yueh-Min Huang
- Multilevel Web Personalization
  Yan Zhao, Yiyu Yao, and Ning Zhong

Session 1D (WI) - Chair: Meng Chang Chen

## World Wide Wisdom Web (W4) and Web Agents Short:

- A Method of Distributed Problem Solving on the Web Yila Su, Ning Zhong, Jiming Liu, Lei Zheng, and Chunnian Liu
- Automated Metadata and Instance Extraction from News Web Sites
  Srinivas Vadrevu, Saravanakumar Nagarajan, Fatih Gelgi, and Hasan Davulcu
- Resource Optimization in Heterogeneous Grid Environments
  Xiaolong Jin and Jiming Liu
- A Virtual-Service-Domain Based Bidding Algorithm for Resource Discovery in Computational Grid

Hongbo Zou, Zongfen Han, Hai Jin, Jing Tie, and Xuanhua Shi

- INFO: An Improving Strategy for Searching the Small World Networks Yi Tang and Liankuan Zhang
- Towards a Semantics-based Framework for KD- and IR-style Resource Querying on XML-based P2P Information Systems

Alfredo Cuzzocrea

- Multi-Source Knowledge Bases and Ontologies with Individual and Social Viewpoints Matthias Nickles, Tina Froehner, Ruth Cobos Pérez, and Gerhard Weiss
- From Robots to Web-Agents: Building Cognitive Software Agents for Webinformation Retrieval by Taking Inspiration from Experience in Robotics Arnaud Revel
- MDSManager: A system based on Multidatasource Approach for Data Integration Gilles Nachouki, Mohamed Quafafou, and Marie-Pierre Chastang

## September 20, Tuesday 13:30-15:30 IAT

Session 2A (IAT) - Chair: Rineke Verbrugge
Agent Systems Modeling and Methodology 2

Agent Interaction Protocols and Multiagent Coordination Techniques

#### Regular:

- Analyzing Myopic Approaches for Multi-Agent Communication Raphen Becker, Victor Lesser, and Shlomo Zilberstein
- Coordinating Non Cooperative Planning Agents: Complexity Results
  Cees Witteveen and Adriaan ter Mors
- On Rough Judgment Making by Socio-cognitive Agents
   Anna Gomolińska

#### Short:

- Modelling Multiagent Bayesian Networks with Inclusion Dependencies
   Cory Butz and Fang Fang
- Executable Specifications for Agent Oriented Conceptual Modelling Ying Guan and Aditya Ghose
- On the Interplay of Roles and Power Maria Fasli
- Delegation Mechanisms for Agent Architectural Design Stéphane Faulkner, S. Dehousse, M. Kolp, H. Mouratidis, and P. Giorgini
- On Detecting Deception in Agent Societies
  Amrish Vyas and Lina Zhou
- Role-based Rights in Artificial Social Systems
   Guido Boella and Leendert van der Torre

Session 2B (IAT) - Chair: Martin Purvis

### Applications 2

#### Regular:

- A Multi-Agent System for the management of E-Government Services
  Pasquale De Meo, Giovanni Quattrone, Giorgio Terracina, and Domenico Ursino
- A System of Emotional Agents for Decision-Support Stéphane Daviet, Hélène Desmier, Henri Briand, Fabrice Guillet, and Vincent Philippe
- Modeling and Simulating the Dynamics of Service Agent Networks Shiwu Zhang and Jiming Liu

#### **Short:**

• Corroborating Role Theory and Intelligent Agents: a New Paradigm to Support Collaborative Learning?

Bogdan Florin Marin, Axel Hunger, and Stefan Werner

- A Lightweight Description Model to Support Experience Management Xiong Xie, Weishi Zhang, and Lei Xu
- An Application of Ontology Technologies to Robotic Agents Francesco Amigoni and Mario Arrigoni Neri
- Agent-Based Personal Article Citation Assistant
   C. Ma, J.Q. Feng, Z. Yang, and Q.H. Wu
- A tool for agent communication in Mozart/Oz
   Juan A. Suárez-Romero, Amparo Alonso-Betanzos, Bertha Guijarro-Berdiñas, and Cristina Durán-Sanlés

## September 20, Tuesday 13:30-15:30

WI

Session 2C (WI) Technology 1 - Chair: Dawn Jutla

### Intelligent E-Technology 1

#### Regular:

• Perception of Individual Activities in a Group Activity through Qualitative Information about the Group Dynamics

Christelle Laperrousaz, Pascal Leroux, and Philippe Teutsch

• User Navigational Behavior in E-learning Virtual Environments Joan Marc Carbó, Enric Mor, and Julià Minguillón

#### **Short:**

• An E-Services Architecture for Legislative Assemblies Elena Sanchez-Nielsen and Francisco Chavez-Gutierrez

• Schema Matching Using Neural Network You Li, Dong-bo Liu, and Wei-ming Zhang

 Recommending Trade Exhibitions by Integrating Semantic Information with Collaborative Filtering

Xuetao Guo and Jie Lu

- Argument Games for Interactive Access Control Guido Boella, Joris Hulstijn, and Leendert van der Torre
- Binary Prediction Based on Weighted Sequential Mining Method Shuchuan Lo
- Ontology- based Information Integration in Virtual Learning Environment
  Aijuan Dong and Honglin Li
- Applying the HYRIWYG incentive mechanism in a Recommender System Ana Cristina Garcia and Leandro Ciuffo
- Implementation and Evaluation of a Distributed RDF Storage and Retrieval System Gergely Adamku and Heiner Stuckenschmidt

Session 2D (WI) - Chair: Jean-Yves Delort Social Networks and Social Intelligence 1

#### Regular:

• A Knowledge Fusion Model for Web Information Nengfu Xie, C. Cao, and H. Guo

• Community-Driven Ontology Management: DERI Case Study Anna Zhdanova, Reto Krummenacher, Jan Henke, and Dieter Fensel

• Detecting sequences and cycles of web pages Narayan Bhamidipati and Sankar Pal

- Limitations of Community Web Portals: A Classmates' Case Study Anna Zhdanova and Dieter Fensel
- Usability of Real-time Unconstrained WWW Co-browsing for Educational Settings Maria Aneiros and V. Estivill-Castro
- Big Blackboard : On a Large Web Page by using a Fast Page Loading Method Takeshi Konagaya, Tadachika Ozono, Takayuki Ito, and Toramatsu Shintani
- Fuzzy-Neural Theory Applied to Web-Based Proactive Service Degan Zhang, Y.-c. Li, X.-d. Wu, and G.-p. Zeng
- A Fuzzy Web Surfer Model

  Narayan Bhamidipati and Sankar Pal
- Studying dependencies among Web traffic and link analysis data using perceptron Marcin Sydow

## September 20, Tuesday 15:50-17:30

IAT

Session 3A (IAT) - Chair: Pawan Lingras

#### Agent Systems Modeling and Methodology 3

Agent Interaction Protocols and Multiagent Coordination Techniques (Cont.)

#### Regular:

 Conversation Pattern-based Anticipation of Teammates' Information Needs via Overhearing

Xiaocong Fan and John Yen

• A Generic Multi-agent System Platform for Business Workflows Using Web Services Composition

Li Guo, Dave Robertson, and Yun-Heh Chen-Burger

• A Synthesis Between Mental Attitudes and Social Commitments in Agent Communication Languages

Guido Boella, Joris Hulstijn, and Leendert van der Torre

#### Short:

- From Single Static to Multiple Dynamic Combinatorial Auctions
  Don Perugini, Dale Lambert, Leon Sterling, and Adrian Pearce
- Trading in Open Marketplace Using Trust and Risk Yuk-Hei Lam, Zili Zhang, and Kok-Leong Ong
- Increasing the Migration Efficiency of Java-based Mobile Agents
  Peter Braun, Ingo Mueller, Ryszard Kowalczyk, and Steffen Kern
- Rules for Translating Interaction Protocols into a B Formal Representation Jean-Luc Koning

Session 3B (IAT) - Chair: Cory Butz

#### **Autonomous Knowledge and Information Agents 1**

Information Filtering, Knowledge Sharing and Aggregation, Autonomous and Ontology-Based Information Services

#### Regular:

• A Compact Multiagent System based on Autonomy Oriented Computing Xiao-Feng Xie and Jiming Liu

- Using Similarity Measures for an Efficient Business Information-Exchange Andreia Malucelli and Eugénio Oliveira
- 'Auto-Presentation': A Multi-Agent System for Building Automatic Multi-Modal Presentation of a Topic from World Wide Web Information Shaikh Mostafa, Mitsuru Ishizuka, and Md. Tawhidul Islam
- MAX-Sense: A Mobile Agent Approach to Active and Adaptive Distributed Monitoring Imad Riachi, Mounir Mouawad, and Hassan Artail
- Modeling Annotators to Improve Semantic Annotation and Retrieval of Images Chen-Yu Lee and Von-Wun Soo
- Agent-based modeling of third-party logistics performance indicators Elfriede Krauth, Hans Moonen, Viara Popova, and Martijn Schut
- Distributed learning of Multi-Agent Causal Models Stijn Meganck, Sam Maes, Bernard Manderick, and P. Leray
- A Multiagent Architecture for Semantic Web Resources
  Wei Dai and Brooke Abrahams

## September 20, Tuesday 15:50-17:30 WI

Session 3C (WI) - Chair: Luis Rocha

Intelligent E-Technology 2

#### Regular:

- Network-based Intrusion Detection Using Adaboost Algorithm Wei Hu and Weiming Hu
- QTIP: Multi-Agent NLP and Privacy Architecture for Information Retrieval in Usable Web Privacy Software

Vlado Keselj and Dawn Jutla

• Privacy-Preserving Top-N Recommendation on Horizontally Partitioned Data Huseyin Polat and Wenliang Du

#### **Short:**

- A Reversible Data Hiding Approach to Authentication of 3D Mesh Models Haotian Wu and Yiu-ming Cheung
- Access control with uncertain surveillance Philippe Balbiani
- A Formal Language for Access Control Policies in Distributed Environment Peng Liu, Jianbin Hu, and Zhong Chen

Session 3D (WI) - Chair: Toyoaki Nishida
Social Networks and Social Intelligence 2
Regular:

- Social Computing and Weighting to Identify Member Roles in Online Communities
  Robert Nolker and Lina Zhou
- Mining Web Data for Competency Management
  Jianhan Zhu, Alexandre Goncalves, Victoria Uren, Enrico Motta, and Roberto Pacheco
  Short:
- Transitive Reduction for Social network Analysis and Visualization Vincent Dubois and Cécile Bothorel
- A Service-Oriented Personalization Mechanism in Pervasive Environments Yuping Yang, M. Williams, L. MacKinnon, and R. Pooley

## September 20, Tuesday 17:30 – 19:00 WI/IAT Industrial and Demo Tracks

# Industrial and Demo track presentations Chair: Jianchang Mao

#### Centre de Transfert Exhibition Hall and Oxygène Room

• Data Mining from Genomic Dataset Yong Shi, Wei Yin, Qing Yang, and Shaoyuan Yao

 A Platform for Semantic Annotations and Ontology Population Using Conditional Random Fields

Bruno Grilheres, Christophe Beauce, Stephane Canu, and Stephan Brunessaux

• Web Log Session Analyzer: Integrating Parsing and Logic Programming Into a Data Mart Architecture

Michel C. Desmarais

• ITPilot: A Toolkit for Industrial-strength Web Data Extraction
Alberto Pan, Juan Raposo, Manuel Álvarez, Paula Montoto, Jose Losada, and Justo Hidalgo

• A MAS Approach to Fusion of Heterogeneous Information Gregor Pavlin, Patrick de Oude, and Jan Nunnink

- A-globe: Multi-Agent Platform with Advanced Simulation and Visualization Support David Sislak, Martin Rehak, and Michal Pechoucek
- "misearch"

  Mirco Speretta and Susan Gauch
- Intelligent Taxonomy Management Tools for Enterprise Content
  Danny Tom, Mani Abrol, Bhavin Doshi, Jim Kanihan, Amit Kumar, Jinhui Liu, and Jianchang
  Mao
- Proposal and Verification of Flexible Interface Mapping Technique for Automatic System Cooperation based on Semantics Makoto Nakatsuji, Yu Miyoshi, and Tatsuyuki Kimura
- An Interactive Hybrid System for Identifying and Filtering Unsolicited e-mail Del Castillo Ma Dolores and Serrano J. Ignacio

## September 20, Tuesday 17:30 – 19:00 WI/IAT Industrial and Demo Tracks

### WI-IAT papers' demo session Chair: Jianchang Mao

#### Centre de Transfert Exhibition Hall

- Community-Driven Ontology Management: DERI Case Study
  Anna Zhdanova, Reto Krummenacher, Jan Henke, and Dieter Fensel
- From Robots to Web-Agents: Building Cognitive Software Agents for Webinformation Retrieval by Taking inspiration from Experience in Robotics Arnaud Revel
- UBB Mining: Finding Unexpected Browsing Behaviour in Clickstream Data to Improve a Web Site's Design

I-Hsien Ting, Chris Kimble, and Daniel Kudenko

- Conversation Errors in Web Service Coordination: Run-time Detection and Repair Warren Blanchet, Renee Elio, and Eleni Stroulia
- Information Extraction from HTML Product Catalogues: from Source Code and Images to RDF

Martin Labský, Vojtech Svátek, Ondrej Šváb, Pavel Praks, Michal Krátký, and Václav Snášel

- Personalized Search Based on User Search Histories
   Mirco Speretta and Susan Gauch
- Predictive Algorithms for Browser Support of Habitual User Activities on the Web Janez Brank, Natasa Milic-Frayling, Anthony Frayling, and Gavin Smyth
- Personalized Web Recommendations: Supporting Epistemic Information about End-Users

Mircea Preda and Dan Popescu

• Efficient Extraction of Closed Motivic Patterns in Multi-Dimensional Symbolic Representations of Music

Olivier Lartillot

- Clickstream Data Acquisition with Web Farming
   Jia Hu and Ning Zhong
- Using Similarity Measures for an Efficient Business Information-Exchange Andreia Malucelli and Eugénio Oliveira
- Estimating and Measuring Performance of Computational Agents
  Roman Neruda and Pavel Krusina

# September 21, Wednesday

8:00 - 8:30	Conference On-Site Registration			
Venue	Conference Hall R. Colcombet			
8:30- 9:20	Keynote Talk: Opportunities from Open Source Search			
	Prof. Wray Buntine, Helsinki Institute for Information Technology, Finland			
	Chair: Ning Zhong			
09:20-10:10	Keynote Talk: An Adaptive Architecture for Physical Agents			
	Prof. Pat Langley, Stanford University, USA			
	Chair: Setsuo Ohsuga			
10:10-10:30	Coffee Break			

# Session guide

Venue	Conference Hall R. Colcombet	Pierre Guillaumat L.103	Pierre Guillaumat L.200	Pierre Guillaumat L.202
10:30-12:30	Session 4A (IAT) Agent Systems Modeling and Methodology 4 Information Exchange and Coordination Techniques Ir342 Ir345 Ir261 Ir319 Ir262 Ir309 Ir220 Ir233	Session 4B (IAT) Autonomous Knowledge and Information Agents 2 Human-Agent Interaction Ir273 Ir322 Ir347 Ir478 Ir213 Ir383 Ir419 Ir423 Ir458	Session 4C (WI) Web Mining and Farming 1 Text Mining – part I Wr273 Wr337 Wr415 Wr431 wr203 Wr279 Wr304	Session 4D (WI) Web Information Filtering and Retrieval 1 Information Retrieval Criteria and Evaluation Wr409 Wr433 Wr454 Wr266 Wr220 Wr267 Wr310 Wr417
12:30-13:30	Lunch			
13:30-15:30	Session 5A (IAT) Agent Systems Modeling and Methodology 5 Fault-Tolerance and Task-Oriented Agents Ir462, Ir379, Ir395, Ir306, Ir214, Ir352, ir368	Session 5B (IAT) Autonomous Knowledge and Information Agents 3 Data Mining and Knowledge Discovery Ir295, Ir426, Ir506, Ir324, Ir371, Ir392, Ir301, Ir476	Session 5C (WI) Web Mining and Farming 2 Text Mining – part II Wr448, Wr476, Wr510, Wr376, Wr405, Wr281, Wr424, Wr440, Wr478	Session 5D (WI) Web Information Filtering and Retrieval 2 Search Engines and Categorization Wr406, Wr429, Wr468, Wr350, Wr396, Wr410, Wr256, Wr486, Wr394
15:30-15:50	Coffee Break	Cassian CD (IAT)	Coopies CC (MI)	Coopies CD (MI)
15:50-18:00	Session 6A (IAT) Agent Systems Modeling and Methodology 6 Learning, Self- Adaptation and Autonomic Architectures Ir376, Ir507, ir393, Ir486, Ir396	Session 6B (IAT) Autonomous Auctions and Negotiation Ir500, Ir270, Ir314, Ir325, Ir353, Ir484	Session 6C (WI) Web Mining and Farming 3 General Web Mining Wr290, Wr238, Wr358, Wr500, Wr509, Wr411, Wr418, Wr437	Session 6D (WI) Web Information Filtering and Retrieval 3 Wr202, Wr384, Wr461, Wr497, Wr494, Wr324, Wr269, Wr246
20:00-23:00	Conference Gala I	Dinner – Castle of	Pierrefonds	

## September 21, Wednesday 10:30-12:30 IAT

Session 4A (IAT) – Chair: Michael Luck

#### Agent Systems Modeling and Methodology 4

Information Exchange and Coordination Techniques

#### Regular:

- Automating the Dispute Resolution in a Task Dependency Network Ioan Alfred Letia and Adrian Groza
- "What if?" Dealing with Uncertainty in Repage's Nental Landscape Mario Paolucci, Jordi Sabater, and Rosaria Conte
- NEURAL-Trust: Stimulating Cooperation Engagements in Multi-Agents Systems Vicente Mujica, Dorgham Sisalem, and Radu Popescu-Zeletin
- Exploiting Multi-Agent Interactions for Identifying the Best-Payoff Information Source Young-Woo Seo and Katia Sycara

#### **Short:**

- Performance Evaluation of Dynamically Assembled Multi Agent Systems Glenn Jayaputera, Seng Loke, and Arkady Zaslavsky
- Improvisational Multi-Agent Organization: Using Director Agent to Coordinate Improvisational Agents

Marcia Moraes and Antônio Carlos Rocha Costa

- Improving the Agent-Oriented Modeling Realization by Roles Xiao Xue, Quanliang Deng, and Yinren Zhou
- Third-party Subscription in Multiparty Dialogues for Agent Teams Kaivan Kamali, Xiaocong Fan, and John Yen

Session 4B (IAT) - Chair: Achim Hoffmann

#### **Autonomous Knowledge and Information Agents 2**

**Human-Agent Interaction** 

#### Regular:

- Can Proactive Behavior Turn Chatterbots into Conversational Agents?

  Marcello L'Abbate, Ulrich Thiel, and Thomas Kamps
- Challenge-Sensitive Action Selection: an Application to Game Balancing Gustavo Andrade, Geber Ramalho, Hugo Santana, and Vincent Corruble
- Creating Wholly Autonomous Agents in On-line Worlds
  Steven Willmott
- Understanding Domain Knowledge: Concept Approximation using Rough Mereology
  Tuan Trung Nguyen

- Personalization in Multi-Agent Systems
  Fabrício Enembreck and Jean-Paul Barthès
- Qualitative Orientation Reasoning in Spatial Multi-Agent Environment Jianhui Liu
- Towards an Authority Sharing Based on the Description Logic Action Model Abdenour Bouzouane
- A Cognitive Model of Interaction for Software Agents
  Alexandre Pauchet, Nathalie Chaignaud, and Amal El Fallah-Seghrouchni
- A Dialogue Agent with Adaptive and Proactive Capabilities
  Frederic Baudoin, Philippe Bretier, and Vincent Corruble

# September 21, Wednesday 10:30-12:30

WI

Session 4C (WI) - Chair: Tie-Yan Liu

Web Mining and Farming 1

Text Mining - part I

#### Regular:

• Improving Web Clustering by Cluster Selection Daniel Crabtree, Xiaoying Gao, and Peter Andreae

 Automatic Training Corpora Acquisition through Web Mining Chien-Chung Huang, Kuan-Ming Lin, and Lee-Feng Chien

• HDGSOMr: A High Dimensional Growing Self-Organizing Map using Randomness for Efficient Web and Text Mining

Rasika Amarasiri, Damminda Alahakoon, Kate Smith, and Malin Premaratne

• Integrating Element Kernel and Term Semantics for Similarity-Based XML Document Clustering

Jianwu Yang, William K. Cheung, and Xiaoou Chen

#### Short:

• Effective Summarization Method of Text Documents
Rasim Alguliev and Ramiz Aliguliyev

• A Semantic Classification Approach for Online Product Reviews Chao Wang, Jie Lu, and Guangquan Zhang

• Establishing Guidelines on how to Improve the Web Site Content based on the Identification of Representative Pages

Sebastian Rios, Juan Velasquez, Eduardo Vera, Hiroshi Yasuda, and Aoki Terumasa

Session 4D (WI) - Chair: Michel Beigbeder Web Information Filtering and Retrieval 1

Information Retrieval Criteria and Evaluation

#### Regular:

- WICER: A Weighted Inter-Cluster Edge Ranking for Clustered Graphs
  Divya Padmanabhan, Prasanna Desikan, Jaideep Srivastava, and Kashif Riaz
- Toward the Automatic Compilation of Multimedia Encyclopedias: Associating Images with Term Descriptions on the Web

Atsushi Fujii and T. Ishikawa

• Adding the Temporal Dimension to Search-A Case Study in Publication Search Philip Yu, Xin Li, and Bing Liu

#### **Short:**

- Weighted Link Analysis for Logo and Trademark Image Retrieval on the Web Epimenides Voutsakis, Euripides G.M. Petrakis, and Evangelos Milios
- Imagery-based Digital Collection Retrieval on Web Using Compact Perception Features

Ying Dai and D. Cai

- Wr267 A User-Centered Approach for Evaluating Query Expansion Methods Jean-Yves Delort
- Wr310 Kernel Nonparametric Biased Discriminant Analysis in Relevance Feedback for Content Based Image Retrieval Dacheng Tao
- Wr417 Evaluation of Response Quality for Heterogeneous Question Answering Wilson Wong, S. Sahib, and Goh Ong Sing

## September 21, Wednesday 13:30-15:30 IAT

Session 5A (IAT) - Chair: Kensuke Fukuda

#### Agent Systems Modeling and Methodology 5

Fault-Tolerance and Task-Oriented Agents

#### Regular:

 Meta-Agency and Individual-Power Francisco Coelho and Helder Coelho

#### Short:

• Flexible Exception Handling in a Multi-Agent Enactment Model for Knowledge-Intensive Processes

Holger Brocks, Henning Meyer, Thomas Kamps, and Christian Begger

• Exception Diagnosis in Open Multi-Agent Systems Nazaraf Shah, K-M Caho, Nick Godwin, and Anne James

• An Agent Component-Oriented Software Process Youtian Qu, Tian-Zhou Cheng, and Hong Xu

• The External Fault-tolerant Layer Supporting Multi-agent Systems from Different Vendors

Milovan Tosic and Arkady Zaslavsky

• Improved Template for Agent Pattern Description
Ayodele Oluyomi, Shanika Karunasekera, and Leon Sterling

• Automatic Generation of Self-controlled Autonomous Agents
Caroline Chopinaud, Amal El-Fallah Seghrouchni, and Patrick Taillibert

Session 5B (IAT) - Chair: Ah-Hwee Tan

#### **Autonomous Knowledge and Information Agents 3**

Data Mining and Knowledge Discovery

#### Regular:

 Computation of Meta-Learning Classifiers in Distributed Data Mining using a Novel Cognitive Memory Model

Kumari Wickramasinghe, Damminda Alahakoon, and Kate Smith

- On the Stability of Adjustment Processes with Persistent Randomness
  Alain Gaetan Anyouzoa, Filip Perich, Matt Abrams, Aloys Mbala, and Theo D'Hondt
- Classification of Examples by Multiple Agents with Private Features
   Pragnesh Jay Modi and Peter Woo Tae Kim

#### Short:

 Category-based Similarity Algorithm for Semantic Similarity in Multi-agent Information Sharing Systems

Sepideh Miralaei and Ali Ghorbani

• Informational Middleware based on Mutual Awareness Flavien Balbo, Mahdi Zargayouna, and Julien Saunier

- A New Approach to Agency in a Collaborative decision-Making Process Athmane Hamel, Suzanne Pinson, and M. Picard
- A Collaborative and Multi-Agent Approach to E-mail Filtering Marco Mari, Lorenzo Lazzari, and Agostino Poggi
- Sharing Engineering Information and Knowledge
  Mauro Koyama, Olga Nabuco, Francisco Pereira, and Khalil Drira

## September 21, Wednesday 13:30-15:30

WI

Session 5C (WI) - Chair: Takahira Yamaguchi

**Web Mining and Farming 2** 

Text Mining – part II

#### Regular:

• Efficient Extraction of Closed Motivic Patterns in Multi-Dimensional Symbolic Representations of Music

Olivier Lartillot

• A Method of Web Search Result Clustering based on Rough Sets Ngo Chi Lang and Nguyen Hung Son

#### Short:

 A Combined Approach of Formal Concept Analysis and Text Mining for Concept Based Document Clustering

Nyeint Myat and K. Hla

- Mining Highly Authoritative Web Resources for One-Stop Learning SeungJin Lim and Youngrae Ko
- Keyphrases Extraction from Web Document by the Least Squares SVM Jiabing Wang and Hong Peng
- Standardized Evaluation Method for Web Clustering Results
  Daniel Crabtree, Xiaoying Gao, and Peter Andreae
- Mining Interesting Topics for Web Information Gathering and Web Personalization Yuefeng Li, Ben Murphy, and Ning Zhong
- Categorical Term Descriptor: A Proposed Term Weighting Scheme for Feature Selection

Chih How Bong, Ting Kiong Wong, and N. Kulathuramaiyer

• Annotating Text Segments in Documents for Search
Pu-Jen Cheng, Hsin-Chen Chiao, Yi-Cheng Pan, and Lee-Feng Chien

Session 5D (WI) - Chair: Atsushi Fujii

### Web Information Filtering and Retrieval 2

Search Engines and Categorization

#### Regular:

- Webpage Importance Analysis using Conditional Markov Random Walk Tie-Yan Liu and Wei-Ying Ma
- An EM based training algorithm for Cross-Language Text Categorization Marco Maggini, Leonardo Rigutini, and Bing Liu
- Multi-Faceted Information Retrieval System for Large Scale Email Archives Jukka Perkiö, Ville Tuulos, Henry Tirri, and Wray Buntine

- Intelligent Web Information Mapping with HyperMap Celia Ralha, Jose Ralha, Charles Costa, and Augusto Rocha
- Metadata Propagation in the Web Using Co-citations
   Michel Beigbeder, Camille Prime-Claverie, and Thierry Lafouge
- Progressive Analysis Scheme for Web Document Classification Li-Chun Sung, Chin-Hwa Kuo, Meng Chang Chen, and Yeali Sun
- HITS is principal components analysis
  Marco Saerens and Francois Fouss
- Page-reRank: using Trusted Links to Re-rank Authority
   Paolo Massa and Conor Hayes
- Integrating Compound Terms in Bayesian Text Classification Jing Bai, Jian-Yun Nie, and G. Cao

## September 21, Wednesday 15:50-18:00 IAT

Session 6A (IAT) - Chair: Jean-Paul Barthès

Agent Systems Modeling and Methodology 6

Learning, Solf-Adaptation and Autonomic Archite

Learning, Self-Adaptation and Autonomic Architectures

#### Regular:

- The Minority Game Strategy in Team Competition: How and When? Tingting Wang and Jiming Liu
- Decomposing Large Scale POMDP Via Belief State Analysis
  Xin Li, William K. Cheung, and Jiming Liu
- A Comparison of Adaptive and Static Agents in Equity Market Trading Cyril Schoreels and Jonathan M. Garibaldi

#### **Short:**

• Generating Adequate Representations for Learning from Interaction in Complex Multiagent Simulations

Charles Madeira, Vincent Corruble, and Geber Ramalho

• Learning Dynamic Preferences in Multi-Agent Meeting Scheduling Elisabeth Crawford and Manuela Veloso

Session 6B (IAT) - Chair: Anna Gomolińska Autonomous Auctions and Negotiation Regular:

- Agent-Based Negotiation Between Partners in Loose Inter-Organizational Workflow Andonoff Eric and Bouzguenda Lotfi
- Combinatorial Markets for Efficient Energy Management Yoseba K. Penya and Nicholas R. Jennings
- A framework for multiple criteria English reverse auctions Marie-Jo Bellosta, Sylvie Kornman, and Daniel Vanderpooten
- A Study on Dynamic Bargaining Strategy under Time Constraints and with Incomplete Information

Fu-Ming Lee, Li-Hua Li, and Pao-Hsiao Chen

 Estimation of the Buyer's Contract Space incorporating learning from experience techniques to the Seller's Rationale in E-Commerce Context Malamati Louta, Ioanna Roussaki, and Lambros Pechlivanos

#### **Short:**

• Adaptive Pricing Functions for Open Outcry Auctions
Dionisis Kehagias and Pericles A. Mitkas

### September 21, Wednesday 15:50-18:00 WI

Session 6C (WI) - Chair: Ali Ghorbani

Web Mining and Farming 3

General Web Mining

#### Regular:

• UBB Mining: Finding Unexpected Browsing Behaviour in Clickstream Data to Improve a Web Site's Design

I-Hsien Ting, Chris Kimble, and Daniel Kudenko

- An Editor Labeling Model for Training Set Expansion in Web Categorization Tie-Yan Liu, Hao WAN, and Wei-Ying Ma
- A Semi-supervised Document Clustering Algorithm based on EM Marco Maggini and Leonardo Rigutini
- Referential Context Mining: Discovering Viewpoints from Web Koji Zettsu and Katsumi Tanaka
- DSM-TKP: Mining Top-K Path Traversal Patterns over Web Click-Streams Hua-Fu Li, Suh-Yin Lee, and Man-Kwan Shan

#### Short:

- Discovering and Visualizing Temporal-based Web Access Behavior Baoyao Zhou, Siu Cheung Hui, and Alvis C. M. Fong
- Visual Similarity Comparison for Web Page Retrieval Yasufumi Takama and Noriaki Mitsuhashi
- Web Structure Mining for Usability Analysis ChunHung Li and C-c. Kit

# Session 6D (WI) - Chair: Fabien Gadon Web Information Filtering and Retrieval 3 Regular:

- Cache Replacement for Transcoding Proxy Caching Keqiu Li, Keishi Tajiam, and Hong Shen
- Design and Implementation of A P2P Cooperative Proxy Cache System James Wang and Vipul Bhulawala
- A Novel Way of Computing Similarities between Nodes of a Graph, with Application to Collaborative Recommendation

Francois Fouss, Alain Pirotte, and Marco Saerens

• MyLibrary@LANL: Proximity and Semi-metric Networks for a Collaborative and Recommender Web Service

Luis Rocha, Tiago Simas, Andreas Rechtsteiner, Mariella Di Giacomo, and Rick Luce **Short:** 

- Improving the Effectiveness of Model Based Recommender Systems for Highly Sparse and Noisy Web Usage Data
  - Bhushan Shankar Suryavanshi, Nematollaah Shiri, and Sudhir P. Mudur
- Kernel Principle Component Analysis in Pixels Clustering Jing Li, Dacheng Tao, and Weiming Hu
- WISE: A Visual Tool for Automatic Extraction of Objects from World Wide Web Yi-Wei Jan, Jyh-Jong Tsay, and Bo-Liang Wu
- Mining Web Logs to Improve Hit Ratios of Prefetching and Caching Yin-Fu Huang and Jhao-Min Hsu

## September 22, Thursday

8:00 - 8:30	Conference On-Site Registration			
Venue	Conference Hall R. Colcombet			
8:30- 9:20	Keynote Talk: Providing Expert Advice by Analogy for On-Line Help			
	Prof. Henry Lieberman, MIT Media Laboratory, USA			
	Chair: Steven Willmott			
09:20-10:10	Keynote Talk: Knowledge Representation and Unmanned Aerial Vehicles			
	Prof. Patrick Doherty, Department of Computer and Information Science,			
	Linköping University, Sweden			
	Chair: Jeffrey Bradshaw			
10:10-10:30	Coffee Break			

## Session guide

Venue	Conference Hall R. Colcombet	Pierre Guillaumat L.103	Pierre Guillaumat L.200	Pierre Guillaumat L.202
10:30-12:30	Session 7A (IAT) Autonomy-Oriented Computing 1 Self-Organized Intelligence and Nature Inspired Paradigms Ir321, Ir346, Ir356, Ir248, Ir469, Ir504, Ir279, Ir384	Session 7B (IAT) Distributed Problem Solving 1 Coordination and Cooperation Ir276, Ir277, Ir256, Ir382, Ir404, Ir416, Ir281	Session 7C (WI) Web Mining and Farming 4 Web Content Mining and Warehousing Wr483, Wr517, Wr515, Wr329, Wr370, Wr499, Wr277	Session 7D (WI) Web Services Wr302, Wr314, Wr388, Wr489, Wr228, Wr343, Wr482, Wr439
12:30-13:30	Lunch	Consists OD (IAT)	Consists OC (MI)	Cooriem OD (MI)
13:30-15:30	Session 8A (IAT) Autonomy-Oriented Computing 2 Agent Based Simulation, Autonomy	Session 8B (IAT) Distributed Problem Solving 2 Grid Computing,	Session 8C (WI) Semantic Web Wr237, Wr264,Wr390, Wr502, Wr359, Wr430, Wr503, Wr352	Session 8D (WI)  Web Services (Cont. – 40 min.)  Wr441, Wr452, Wr434, Wr488
	Oriented Modeling and Computation Methods Ir473, Ir374, Ir498, Ir422, Ir272, Ir400, Ir445, Ir237	Distributed Intelligence, Search Efficiency and Complexity Ir491, Ir468, Ir401, Ir485, Ir320, Ir497, Ir331		Session 9D (WI) Knowledge Grids and Grid Intelligence (80 min.) Wr271, Wr356, Wr491, Wr413, Wr471
15:30-15:50	Coffee Break			
15:50-18:00	Session 9A (IAT) Autonomy-Oriented Computing 3 Agent-Based Complex Systems' Modeling and Development Ir435, Ir418, Ir378, Ir326, Ir427, Ir350, Ir209, Ir225, Ir265	Session 9B (IAT) Distributed Problem Solving 3 Agent Networks and Collective Group Behaviour Ir280, Ir246, Ir294, Ir264, Ir433	Session 9C (WI) Ontology Engineering Wr272, Wr363, Wr379, Wr436, Wr251, Wr336, Wr407, Wr443, Wr485	Session 10D (WI) Web Support Systems Wr346, Wr361, Wr465, Wr250, Wr299, Wr375 Wr386, Wr416, Wr428, Wr498, Wr513

## September 22, Thursday 10:30-12:30 IAT

Session 7A (IAT) - Chair: Natasa Milic-Frayling

#### **Autonomy-Oriented Computing 1**

Self-Organized Intelligence and Nature Inspired Paradigms

#### Regular:

• Mining for Interesting Action Rules

Zbigniew Ras, Angelina Tzacheva, Li-Shiang Tsay, and Osman Gurdal

 Dynamic Lightpath Protection in WDM optical Networks Using Ant-based Mobile Agents

Son Hong Ngo, Xiaohong Jiang, and Susumu Horiguchi

 An Internal Agent Architecture Incorporating Standard Reasoning Components and Standards-based Agent Communication

Mengqiu Wang, Martin Purvis, and Mariusz Nowostawski

#### **Short:**

- An Abstract Architecture for Computational Reflection in Multi-Agent Systems Martin Rehak, Jan Tozicka, Michal Pechoucek, Filip Zelezny, and Milan Rollo
- Actionable Knowledge Model for GUI Regression Testing Zhiqi Shen, Zunliang Yin, Yuan Miao, and Chunyan Miao
- Abstraction of Transition Properties in Multiagent Systems
   Eric Matson
- Optimizing Agents Operation in Partially Inaccessible and Disruptive Environment David Sislak, Martin Rehak, Michal Pechoucek, and Petr Benda
- Evolving Biosciences in Multi-agent Systems
  Vicente Mujica, Dorgham Sisalem, and Radu Popescu-Zeletin

Session 7B (IAT) - Chair: Norimichi Ukita

#### **Distributed Problem Solving 1**

Coordination and Cooperation

#### Regular:

- Cooperative Community Selection in Multi Agent Filtering Framework Sahin Albayrak and Dragan Milosevic
- Trust Model for Open Ubiquitous Agent Systems

  Martin Rehak, Lukas Foltyn, Michal Pechoucek, and Petr Benda
- A BDI Agent Architecture for Dialogue Modelling and Coordination in a Smart Personal Assistant

Wayne Wobcke, Van Ho, Anh Nguyen, and Alfred Krzywicki

 An Approximate Pareto Optimal Cooperative Negotiation Model for Multiple Continuous Dependent Issues

Nicola Gatti and Francesco Amigoni

• Competition, Cooperation and Collective Behaviour: Resource Utilization in Non-stationary Environments

Michael Kirley

#### Short:

- An Efficient Distributed Protocol for Online Gossiping Problem Zhengman Shi and Pradip Srimani
- Ir281 Web-MASI : Multi-Agent Systems Interoperability Using a Web Services Based Approach

Tarak Melliti, Serge Haddad, Alexandru Suna, and Amal El Fallah Seghrouchni

## September 22, Thursday 10:30-12:30

WI

Session 7C (WI) - Chair: James Wang

Web Mining and Farming 4

Web Content Mining and Warehousing

#### Regular:

- Automatically Generating Labeled Examples for Web Wrapper Maintenance Juan Raposo, Alberto Pan, Manuel Álvarez, and Justo Hidalgo
- Clickstream Data Acquisition with Web Farming
   Jia Hu and Ning Zhong
- Knowledge Datawarehouse: Web Usage OLAP Application Mohamed Quafafou, Sami Naouali, and Gilles Nachouki
- Guidance Performance Indicator Web Metrics for Information Driven Web Sites Carsten Stolz, Maximilian Viermetz, Michal Skubacz, and Ralph Neuneier
- Tracking Information Epidemics in Blogspace Eytan Adar and Lada Adamic

#### Short:

• Mining Emerging Patterns and Classification in Data Streams
Hamad Alhammady and Kotagiri Ramamohanarao

Session 7D (WI) - Chair: Robert Tolksdorf

#### **Web Services**

#### Regular:

- Conversation Errors in Web Service Coordination: Run-time Detection and Repair Warren Blanchet, Renee Elio, and Eleni Stroulia
- IPR: Automated Interaction Process Reconciliation
  Zongxia Du, Jinpeng Huai, Yunhao Liu, Chunming Hu, and Lei Lei
- Encoding Abstract Descriptions into Executable Web Services: Towards a Formal Development

Antonella Chirichiello and Gwen Salaün

• Developing Agent Web Service Agreements Shamimabi Paurobally and Nicholas Jennings

- Integrating Web Services with Agent Based Workflow Management System (WfMS)
  Bastin Tony Roy Savarimuthu, Maryam Purvis, Martin Purvis, and Stephen Cranefield
- Publish and Search versus Registries for Semantic Web Service Discovery Steven Willmott, Heiko Ronsdorf, and Karl-Heinz Krempels
- Modelling & Simulating Chained Negotiation to Enable Sharing of Notifications
  Richard Lawley, Michael Luck, and Luc Moreau

## September 22, Thursday 13:30-15:30 IAT

Session 8A (IAT) - Chair: Guido Boella **Autonomy-Oriented Computing 2** 

Agent Based Simulation, Autonomy Oriented Modeling and Computation Methods Regular:

- On Different Trust Attitudes and Their Effects on the Electronic Marketplace Michael Michaelakopoulos and Maria Fasli
- A Personality-based Model of Agents for Representing Individuals in Working Organizations

Anne Canuto, Andre Campos, João Alchieri, Eliane de Moura, Araken Santos, and Rodrigo Soares

- Improving Operational Efficiency of Web Services with Mobile Agent Technology I Made (Dennis) Pratistha, Arkady Zaslavsky, Simon Cuce, and Martin Dick
- A Mobile Autonomous Agent-based Secure Payment Protocol Supporting Multiple Payments

Yan Wang and V. Varadharajan

#### **Short:**

- Agent-Based Simulation of Coalition Formation in Cooperative Games Stephane Bonnevay, Nadia Kabachi, and Michel Lamure
- Partial Adjustable Autonomy in Multi Agent Environment and Its Application to Military Logistics

Hoong Chuin Lau, Lucas Agussurja, and Ramesh Thangarajoo

- Modelling Pedestrian Behaviour Using the BDI Architecture Nicole Ronald and Leon Sterling
- The Bullwhip Effect: A Counterexample Toshiji Kawagoe and Shihomi Wada

Session 8B (IAT) - Chair: Philippe Balbiani

#### **Distributed Problem Solving 2**

Grid Computing, Distributed Intelligence, Search Efficiency and Complexity Regular:

- Complexity of a Theory of Collective Attitudes in Teamwork Marcin Dziubiński, Rineke Verbrugge, and Barbara Dunin-Kęplicz
- BSCA-F: Efficient Fuzzy Valued Stable Coalition Forming Among Agents
  Bastian Blankenburg and Matthias Klusch

- Managing Commitments in a Multi Agent System using Passive Bids Fabrizio Furano and Andrew Hanushevsky
- Agent-Based Service Coordination for the Grid Adam Barker
- PASIBC A Novel Net Agent Platform for Knowledge Based Information Systems loan Sova
- Estimating and Measuring Performance of Computational Agents
  Roman Neruda and Pavel Krusina
- Decomposition Techniques for a Loosely-Coupled Resource Allocation Problem Pierrick Plamondon, Brahim Chaib-draa, and A. Benaskeur

### September 22, Thursday 13:30-15:30

WI

Session 8C (WI) - Chair: Ruth Cobos Perez

#### **Semantic Web**

#### Regular:

- Towards a Tuplespace-Based Middleware for the Semantic Web Robert Tolksdorf, Elena Paslaru Bontas, and Lyndon Nixon
- Extracting a Domain Ontology from Linguistic Resource Based on Relatedness Measurements

Ting Wang, Diana Maynard, Wim Peters, Kalina Bontcheva, and Hamish Cunningham

- An Efficient Ontology Comparison Tool for Semantic Web Applications
  James Wang and Farha Ali
- Aligning Class Hierarchies with Grass-roots Class Alignment Baoshi Yan

#### **Short:**

- Situated Support for Choice of Representation for a Semantic Web Application Sari E. Hakkarainen, Anders Kofod-Petersen, and Carlos Buil Aranda
- Software Architecture of Advisory Systems Using Agent and Semantic Web Technologies

Juergen Dunkel and Ralf Bruns

- Managing Ontology Changes on the Semantic Web Delia Rogozan and Gilbert Paquette
- Adapting Agent Communication Languages for Semantic Web Service Inter-Communication

Steven Willmott, Félix Oscar Fernández Peña, Carlos Merida Campos, Ion Constantinescu, Jonathan Dale, and David Cabanillas

Session 8D (WI) - Chair: Hung Son Nguyen

Web Services (Continuation – 40 min.): 13:30 – 14:10 Short:

- Compatibility Analysis On Web Services
  Yuliang Shi, Liang Zhang, Fangfang Liu, Lili Lin, and Baile Shi
- Using Ontological Concepts for Web Service Composition Marco Sbodio and Claude Moulin
- Ontology-Driven Knowledge Management on the Grid He Huang, Zhongzhi Shi, and Yong Cheng
- The Role of Local Knowledge in Complex Web Service Reconfiguration Sander van Splunter, Pieter van Langen, and Frances Brazier

Session 9D (WI) - Chair: Javed I. Khan

# Knowledge Grids and Grid Intelligence (80 min.): 14:10 – 15:30 Regular:

- A Middleware System for Web-based Digital Music Libraries
  Aristomenis Lampropoulos, Paraskevi Lampropoulou, and George Tsihrintzis
- Semantic Based Collaborative P2P in Ubiquitous Computing
   Tommaso Di Noia, Michele Ruta, Giacomo Piscitelli, Eugenio Di Sciascio, and Francesco M. Donini
- GridMiner: A Fundamental Infrastructure for Building Intelligent Grid Systems
  Peter Brezany, Ivan Janciak, and A Min Tjoa

- Semantic Web Services Discovery and Ranking Hongen Lu
- Semantic Service Integration Support for Web Portal
  Naoki Fukuta, Tetsuya Osawa, Tadashi lijima, and Takahira Yamaguchi

## September 22, Thursday 15:50-18:00 IAT

Session 9A (IAT) - Chair: Michel Desmarais

#### **Autonomy-Oriented Computing 3**

Agent-Based Complex Systems' Modeling and Development

#### Regular:

- Goal-oriented Methodology for Agent System Development Zhiqi Shen, Dongtao Li, Chunyan Miao, Robert Gay, and Y. Miao
- On the use of Hierarchical Power-law Network Topology for Server Selection and Allocation in Multi-Agent Systems

Kensuke Fukuda, Shin-ya Sato, Osamu Akashi, Toshio Hirotsu, and Toshiharu Sugawara

- Using ODML to Model Multi-Agent Organizations
  Bryan Horling and Victor Lesser
- Dynamic Determination of the Itinerary of Mobile Agents with Timing Constrains Luciana Rech, Romulo de Oliveira, and Carlos Montez

#### Short:

- A Parallel BDI Agent Architecture
  Zhang Huiliang and Huang Shell Ying
- A Method for Designing Agents to Support Collaborative Applications Igor Hawryszkiewycz
- Modeling Organization Structure of Multi-Agent System Xinjun Mao and Jiajia Chen
- Agent Services-Oriented Architectural Design of Open Complex Agent Systems Longbing Cao, Chengqi Zhang, and Jiarui Ni
- An Agent-based Platform for Web-enabled Equipment Predictive Maintenance Li Yan, Chun Lu, and Andrew Nee

Session 9B (IAT) - Chair: Vincent Corruble

#### **Distributed Problem Solving 3**

Agent Networks and Collective Group Behaviour

#### Regular:

- Admissible Agreements among Goal-Directed Agents Luigi Sauro, Guido Boella, and Leendert van der Torre
- Theoretical analysis on A Traffic-Based Routing Algorithm of Mobile Agents Wenyu Qu, Hong Shen, and Y. Jin
- Solving Generalized Open Constraint Optimization Problem using Two-Level Multi-Agent Framework

Hoong Chuin Lau, Lei Zhang, and Chang Liu

• A Flexible BDI Architecture Supporting Extensibility
Alexander Pokahr, Lars Braubach, and Winfried Lamersdorf

#### Short:

• CCCI Trustworthiness Measure for Agent Networks
Elizabeth Chang, Farookh Khadeer Hussain and Tharam Dillon

# September 22, Thursday 15:50-18:00

WI

Session 9C (WI) - Chair: Naoki Fukuta

#### **Ontology Engineering**

#### Regular:

- Generating Surrogates to Make the Semantic Web Intelligible to End-Users Fabien Gandon
- An Approach for Defining Relevance in the Ontology-based Information Retrieval Nenad Stojanovic
- Measuring the Relative Performance of Schema Matchers Shlomo Berkovsky, Yaniv Eytani, and Avigdor Gal
- Biological Ontology Enhancement with Fuzzy Relations: A Text-Mining Framework Muhammad Abulaish and Lipika Dey

#### Short:

- Learning from Ontologies for Common Meaningful Structures
  Liu Yang, Guojie Li, and Zhongzhi Shi
- Information Extraction from HTML Product Catalogues: from Source Code and Images to RDF

Martin Labský, Vojtěch Svátek, Ondřej Šváb, Pavel Praks, Michal Krátký, and Václav Snášel

 Architecture for Automated Annotation and Ontology Based Querying of Semantic Web Resources

Brooke Abrahams and Wei Dai

 Pseudo-Relevance Feedback in Web information Retrieval Using Segments' Subjective Importance Values

Seung Yeol Yoo and Achim Hoffmann

• Study of Problem Difficulty Evaluation for Semantic Network Ontology Based Intelligent Courseware Sharing

Javed Khan, Manas Hardas, and Yongbin Ma

Session 10D (WI) - Chair: Marcin Szczuka

#### **Web Support Systems**

#### Regular:

- Visualization Support for Interactive Query Refinement Orland Hoeber, Xue-Dong Yang, and Yiyu Yao
- Graph Neural Networks for Ranking Web Pages

Franco Scarselli, Sweah Liang Yong, Marco Gori, Markus Haugenbuchner, Ah Chung Tsoi, and Marco Maggini

• The WebCAT Framework - Automatic Generation of Meta-Data for Web Resources
Bruno Martins and Mário Silva

#### **Short:**

- An Evaluation Model for Web-Based Learning Support Systems
   Yong Yang and Guoyin Wang
- Information Domain Modeling for Adaptive Web Systems Wenpu Xing and Ali Ghorbani
- Assisting Analysts in the Construction of Model Based Tracking Recommender Systems

Richard Bruno and Pierre Tchounikine

• Personalized Web Recommendations: Supporting Epistemic Information about End-Users

Mircea Preda and Dan Popescu

• Spatial QBE – A High-Level Interface for Supporting Spatial Queries Shapiee Abd Rahman and Subhash Bhalla

- Clinical Decision Support based on Web-based Mobile Telecommunication Systems Shusaku Tsumoto, H. Abe, H. Nakakuni, Eisuke Hanada, and Shoji Hirano
- Boosting Item Keyword Search with Spreading Activation
  Dipti Aswath, James D'cunha, Syed Toufeeq Ahmed, and Hasan Davulcu
- Optimizing Dynamic Web Service Component Composition By Using Evolutionary Algorithms

W.-C. Chang, C.-S. Wu, and C. Chang

## Social Program

Welcome Reception Tuesday, September 20 19:30

Hôtel de Ville (City Hall)

Shuttle buses will be provided from hotels and Conference site (see below)

Conference Gala Dinner Wednesday, September 21 20:00-23:00

Castle of Pierrefonds

Shuttle buses will be provided from and to hotels and Conference site (see below)

### **Useful Information**

## WI-IAT Conference Shuttle Buses Time-Table

#### September 19, 2005:

#### To the conference site

8:20 Compiègne railway station

8:25 Bus stop « Quai du Harlay » (In front of "hôtel du Harlay")

(Best Western Hotel and Harlay, Etap hotel attendees, please walk to this bus stop)

8:20 Mercure Hotel

8:25 Campanile Hotel

8:30 Ibis Hotel

#### To the hotels

**18:30:** Departure from the Conference site (Centre de Transfert) to Hotels : Harlay, Nord, Best Western, Flandre, Harlay, Mercure, Ibis, Campanile and Etap' hotel

#### **September 20, 2005**

#### To the conference site

8:15 In front of « Hôtel de Flandre » & « Hôtel du Nord »

8:20 Compiègne railway station

8:25 Bus stop « Quai du Harlay » (In front of "hôtel du Harlay")

(Best Western Hotel and Harlay, Etap hotel attendees, please walk to this bus stop)

8:10 Mercure Hotel

8:20 Campanile Hotel

8:30 Ibis Hotel

#### To the City Hall

**19:15** Departure from the Conference site

**20:30** Shuttle buses return to the hotels: Ibis, Campanile and Mercure (the other hotels are in walking distance of the City Hall)

#### **September 21, 2005**

#### To the conference site

8:15 In front of "Hôtel de Flandre" & "Hôtel du Nord"

8:20 Compiègne railway station

8:25 Bus stop « quai du Harlay » (In front of "hôtel du Harlay")

(Best Western Hotel and Harlay, Etap hotel attendees, please walk to this bus stop)

8:10 Mercure Hotel

8:20 Campanile Hotel

8:30 Ibis Hotel

#### To the Hotels

**18:15** Departure from the conference site to the hotels : Harlay, du Nord, Best Western, Flandre, Harlay, Mercure, Ibis, Campanile and Etap hotel

#### To the gala dinner in Pierrefonds

**19:10** Bus Stop « Quai du Harlay» » (In front of "hôtel du Harlay") (Best Western Hotel and Harlay, Etap hotel attendees, please walk to this bus stop) **19:15** Flandres and Nord hotels

19:15 Campanile Hotel

**19:25** Mercure Hotel

19:15 Cconference Site

**19:25** Ibis Hotel

#### Return to the hotels of Compiègne

**23:00** Departure from the Castle of Pierrefonds

#### **September 22, 2005**

#### To the conference site

**8:00** Bus Stop « Quai du Harlay » (In front of "hôtel du Harlay") (Best Western Hotel and Harlay, Etap hotel attendees, please walk to this bus stop)

8:15 Flandres and Nord Hotel

8:20 Compiègne Railway Station

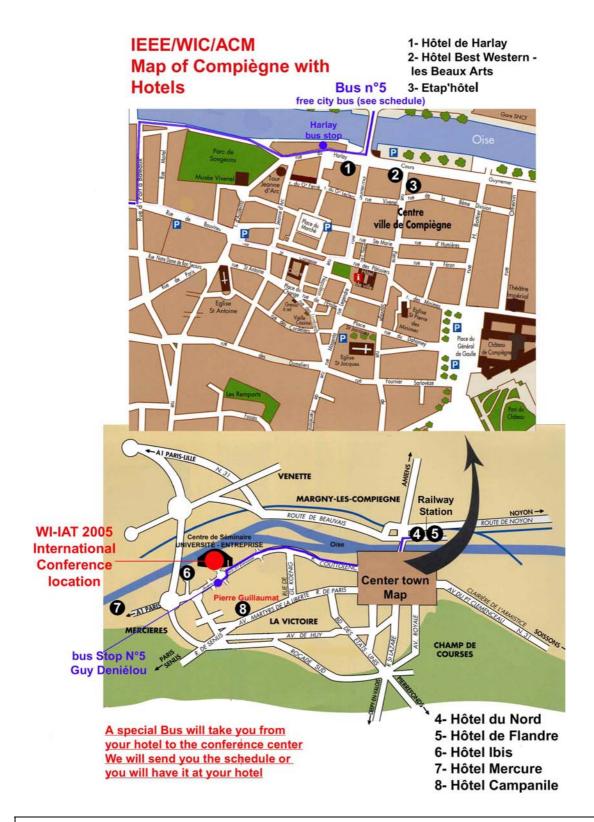
8:00 Mercure Hotel

**8:10** Campanile Hotel

8:20 Ibis Hotel

#### Return to hotels and railway station

**18:30** Departure from the conference site.



## Taxis / Compiègne

Borne de Taxi Gare de Compiègne: 03 44 83 24 24

Real Taxi: 06 07 54 0 2 27

TAXI Carel 8 Places : 03 44 36 67 26 Mr Faure Laurent : 06 07 31 83 01 Taxi Pamart : 06 07 49 12 05

## Plan of the Conference vicinity

