CoLogNET Newsletter

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Editorial

Welcome to the ninth issue of the CoLogNET newsletter, the official newsletter of the Network of Excellence of Computational Logic.

This issue includes information about various events in the area of computational logic, such as summer schools, workshops and conferences. You will also find an interesting article on the SOCS project which aims at providing a solid scientific foundation for the design of Global Computing systems.

Finally, the newsletter provides calendar information about upcoming events related to the network.❖

Antonis Kakas and Marinos Georgiades
University of Cyprus

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Reasoning Web 2005 - Summer School

Uta Schwertel
LM University of Munich

Objectives

The *Semantic Web* is one of the major current endeavors of applied Computer Science. The *Semantic Web* aims at enriching the existing Web with meta-data and processing methods so as to provide web-based systems with advanced (so-called intelligent) capabilities, in particular with *context-awareness* and *decision support*.

The advanced capabilities required in most Semantic Web application scenarios primarily call for *reasoning.* Reasoning capabilities are offered by Semantic Web languages that are currently being developed. Most of these languages, however, are developed mainly from functionality-centered perspectives (e.g. ontology reasoning or access validation) or application-centered perspectives (e.g. Web service retrieval and composition). A perspective centered on the *reasoning techniques* (e.g. forward or backward chaining, tableau-like methods, constraint reasoning, etc.) complementing the above-mentioned activities appears desirable for Semantic Web systems and applications. The Summer School will be devoted to this perspective.

Just as the current Web is inherently heterogeneous in data formats and data semantics, the *Semantic Web* will be inherently heterogeneous in its *reasoning forms*. Indeed, any single form of reasoning turns out irrealistic in the Semantic Web. For instance, ontology reasoning in general relies on monotonic negation, while databases, Web databases, and Web-based information systems call for non-monotonic reasoning; constraint reasoning is needed in dealing with time (for time intervals are to be dealt with), while (forward

Continued on page 5

CLIMA V - fifth international workshop on computational logic in Multi-Agent Systems

Joao Leite and Paolo Torroni

Universidade Nova de Lisboa

The Fifth International Workshop on Computational Logic in Multi-Agent Systems (CLIMA V) was held in Lisbon, Portugal, on September 29-30, 2004.

The notion of agency has recently increased its influence in the research and development of computational logic based systems, while at the same time significantly gaining from decades of research in computational logic.

Computational Logic provides a well-defined, general, and rigorous framework for studying syntax, semantics and procedures for various tasks by individual agents, as well as interaction amongst agents in multi-agent systems, for attending implementations, environments, tools, and standards, and for linking together specification and verification of properties of individual agents and multi-agent systems.

The purpose of this workshop is to discuss techniques, based on Computational Logic, for representing, programming and reasoning about Agents and Multi-Agent Systems in a formal way.

CLIMA is now in its fifth edition. Former editions have been conducted in conjunction with other major Computational Logic and AI events such as CL in July 2000, ICLP in December 2001, FLoC in August 2002, and LPNMR and AI-Math in January 2004. Selected papers from previous editions have been published in special issues of international journals and in volumes issued by international publishers.

This year organizers, Joao Leite and Paolo Torroni, together with the CLIMA steering committee, decided to co-locate CLIMA V with the Ninth European Conference on Logics in Artificial Intelligence (JELIA 04), wishing to promote the CLIMA research topics in the broader community of Logics in AI: a community whose growing interest in multi-agent issues has been demonstrated by the large number of agent-related papers submitted to recent editions of JELIA.

The call for papers was answered by 35 submissions - a large increase, when compared with the 25 received for the previous edition. The submitted papers showed that the logical foundations of multi-agent systems are felt, nowadays, as a very important research topic by a large community, to build upon when addressing classical AI and agent-related issues such as agent planning and interaction.

In line with the high standards of previous CLIMA editions, the review process was very selective. The final acceptance rate was below 50 percent. A Program Committee of 24 top-level researchers from 11 countries and 12 additional reviewers selected 16 papers for presentation, authored by 46 researchers worldwide. The resulting program was organized in four technical sessions: Logic Foundations of MAS I II, Communication and Coordination, and Planning and Applications.

The workshop program featured an invited lecture by Alessio Lomuscio (University College London) on Specification and Verification of Multiagent Systems, as well as a panel discussion organized by Marina de Vos (University of Bath) on Logic-based Multi-Agents Systems and Industry. Around 50 delegates attended the two days event.

At the time of writing, revised selected and invited papers from CLIMA IV are about to be published by Springer as a volume of the Lecture Notes in Artificial Intelligence series. After CLIMA V, selected papers will be further extended to incorporate workshop discussion, and reviewed for inclusion in the CLIMA V Post-Proceedings, to be published as a Lecture Notes volume by Springer. ❖

Third international Workshop on Programming Multi-Agent Systems (To be held with The Fourth International Joint Conference on Autonomous Agents & Multi-Agent Systems (AAMAS 2005), July, 25th or 26th, Utrecht, the Netherlands)

Multi-agent Systems

Juergen DIX
University of Manchester

Even though the contributions of the multi-agent systems (MAS) community can make a significant impact in the development of open distributed systems, the techniques resulting from such contributions will only be widely adopted when suitable programming languages and tools are available. Furthermore, such languages and tools must incorporate those techniques in a principled but practical way, so as to support the ever more complex task of professional programmers, in particular when the systems have to operate in dynamic environments.

The ProMAS workshop series aims to address the practical programming issues related to developing and deploying multi-agent systems. In particular, ProMAS aims to address how multi-agent systems designs or specifications can be effectively implemented. In its two previous editions, ProMAS constituted an invaluable occasion bringing together leading researchers from both academia and industry to discuss issues on the design of programming languages and tools for multi-agent systems. In particular, the workshop promotes the discussion and exchange of ideas concerning the techniques, concepts, requirements, and principles that are important for multi-agent programming technology.

Call for Papers

We encourage the submission of proposals for programming languages and tools that provide specific programming constructs to facilitate the implementation of the essential concepts used in multi-agent system analysis and specifications (e.g., mental attitudes, distribution, and social interaction). We also welcome submissions describing significant multi-agent applications, as well as agent programming tools that allow the integration of agents with legacy systems. Further, we are particularly interested in approaches or applications that show clearly the added-value of multi-agent programming, and explain why and how this technology should be adopted by designers and programmers both in academia and industry.

Specific topics for this workshop include, but are not limited to:

- Programming Languages for multi-agent systems
- Extensions of traditional languages for multi-agent programming
- Theoretical and practical aspects of multi-agent programming
- Computational complexity of MAS
- Semantics for multi-agent programming languages
- High-level executable multi-agent specification languages
- Algorithms, techniques, or protocols for multi-agent issues (e.g., coordination, cooperation, negotiation)
- Agent communication issues in multi-agent programming
- Implementation of social and organizational aspects of MAS
- Formal methods for specification and verification of MAS
- Verification tools for implementations of MAS
- Agent development tools and platforms
- Generic tools and infrastructures for multi-agent programming
- Interoperability and standards for MAS
- Programming mobile agents
- Safety and security for mobile MAS deployment
- Fault tolerance and load balancing for mobile MAS
- Application areas for multi-agent programming languages
- Applications using legacy systems

- Programming MAS for Grid-based applications
- Programming MAS for the Semantic Web
- Deployed (industrial-strength) MAS
- Benchmarks and testbeds for comparing MAS languages and tools

Important Dates

- Paper submission deadline: closed
- Notifications of acceptance/rejection: 18th of April, 2005
- Camera-ready copies due: 15th of May, 2005
- Workshop Date: 25th or 26th of July, 2005 (TBA)

Accepted papers will be published as a technical report and distributed among participants during the workshop. As it was the case for ProMAS'03 and ProMas'04, we are planning to publish extended versions of the accepted papers as a volume of the Lecture Notes in Computer Science series by Springer-Verlag. ❖

WILF 2005, Call for papers

Sixth International Workshop on Fuzzy Logic
Crema (Milan), Italy -- September 15-17, 2005

WILF 2005 is the 6th edition of what started out and was formerly known as the Italian Workshop on Fuzzy Logic. WILF 2005 is an international workshop on the theoretical, experimental, and applied fuzzy and, more generally, soft-computing techniques and systems which brings together researchers and developers from both Academia and Industry to report on the latest scientific and theoretical advances, to discuss and debate major issues and to demonstrate state-of-the-art systems.

Topics of interest include, but are not limited to:

1. General techniques and algorithms:
   - Fuzzy Sets; - Rough Sets;
   - Possibility Theory; - Fuzzy Logic;
   - Fuzzy Systems; Neuro-Fuzzy Systems;
   - Representation of Vague and Imprecise Knowledge;
   - Fuzzy Evolutionary Algorithms;
   - Fuzzy Pattern Recognition; Fuzzy Data Fusion.
2. Applications:
   - Bioinformatics; - Broadcasting;
   - Control; - Communications;
   - Information Retrieval;
   - Intelligent Resource Management;
   - Knowledge Management; - Medical;
   - Opto-mechatronics; - Remote Sensing;
   - Robotics; - Semantic Web
   - Speech Analysis; - Television;
   - Telepresence; - Virtual Reality.
3. Implementations:
   - Analog and Digital Circuits and Systems;
   - Architectures and VLSI Hardware;
   - Programmable Processors;
   - Commercial Software.

A special session on "Soft Computing in Image Processing" will be organized in cooperation with the SCIP group (http://fuzzy.rug.ac.be/SCIP).

Important Dates:

Submission deadline: 29 April 2005
Notification of acceptance: 20 June 2005
Camera ready papers due: 15 July 2005
Workshop: 15 September 2005

Submission

Manuscripts, prepared according to the Springer LNCS format (instructions downloadable from http://www.springer.de/comp/lncs/instruct/typeinst.pdf) may not be longer than 6 pages, including a cover sheet stating (1) Paper title, (2) Keyword(s), (3) Authors' names and affiliations, (4) Contact Author's name and contact details including telephone/fax numbers and e-mail address. Papers in PDF or gzipped PostScript format have to be submitted, no later than April 29, 2005 following the link http://dsa.uniparthenope.it/wilf2005/Submission/tabid/283/Default.aspx . The papers will be peer-reviewed by at least two members of the program committee. Authors will be notified via email of the results of the review by June 20, 2005. The authors of accepted papers will have to improve their paper on the basis of the reviewers' comments and will be asked to send a camera ready version of their manuscripts, along with text sources and pictures, by July 15, 2005.

Web Address: http://dsa.uniparthenope.it/wilf2005/.

Continued from page 1

and/or backward) chaining is the reasoning of choice in coping with database-like views (for views, i.e. virtual data, can be derived from actual data by operations such as join and projections).

The objective of the Summer School Reasoning Web 2005 is to provide a coherent introduction into Semantic Web methods and issues with a particular focus on reasoning.

Provisional Programme

Monday 25 July, 2005

- A Perspective for Semantic Web Research and Development
  François Bry
- Fundamentals of Semantic Web Ontology Languages
  Grigoris Antoniou, Enrico Franconi
- Programming with Logic and Objects
  Michael Kifer

Tuesday 26 July, 2005

- Web and Semantic Web Query Languages: Standards, State of the Art, and Perspectives
  François Bry and James Bailey
- Reuse in Semantic Web Applications
  Uwe Aßmann

Wednesday 27 July, 2005

- Rule Modelling and Markup
  Gerd Wagner

Thursday 28 July, 2005

- Personalization for the Semantic Web
  Matteo Baldoni, Nicola Henze
- Information Extraction for the Semantic Web
  Robert Baumgartner
- Types in the Semantic Web
  Włodzimierz Drabent

Friday 29 July, 2005

- Evolution and Reactivity for the Web
  Wolfgang May, José Júlio Alferes
- Attempto Controlled English
  Norbert E. Fuchs

Slight changes in the program might occur if desirable for didactic or organizational reasons.

Venue

The Summer School Reasoning Web 2005 will take place at the University of Malta in Msida. Msida is a port that is part of the Valletta urban agglomeration and about 3km away from the capital city Valletta, the cultural, administrative and commercial centre of Malta.

Accommodation will be in Sliema, also part of the Valletta urban agglomeration and a major tourist centre. The distance between accommodation and university is walkable in about 30 minutes. A shuttle service will be provided.

Application and Registration

The Summer School Reasoning Web 2005 is primarily intended for young researchers from industry, PhD students, or postdoc researchers investigating the Semantic Web and related issues. The Summer School will also be open to some senior researchers wishing to learn about Semantic Web issues related to their own fields of research. The number of participants is limited. Participation depends on prior application and a reviewing process.

Application

In order to apply for participation in the Summer School, please submit the following information through the online Application Form**:**

- Name, affiliation, address, etc.
- A summary of your present research activities and interests including up to 3 links to recent publications
  (max 50 words)
- A description of your research program including a classification "just started" or "advanced" or "final stage".
  (max 1 page, compulsory for PhD students and for applicants applying for a grant, optional for other applicants)

- If you are a PhD student:
  would you be willing to give a 30 minutes presentation of your PhD work if the reviewers suggest that?
  (yes/no)

Applications are possible from January 2005 until 15 May 2005 and will be reviewed as they arrive. New applicants receive the results of the reviewing at the end of each month. The answer to accepted applicants includes the details on how to register.

Registration

The details on how to register are included in the answer to accepted applicants. Registration is possible until 15 June 2005.

The Summer School registration fee is 300 Euro and covers teaching, transport between the Imperial Hotel (see below) and campus, 5 lunches, coffee breaks, and a volume of the proceedings.

Accommodation

Please see the online accommodation page.

Grants

Some grants are available to reimburse part of the cost of PhD students and active scientists whose participation furthers the Semantic Web research and who would otherwise be unable to afford participating.

A grant covers registration and accommodation (5 days half board shared room) plus reimbursement of documented travel expenses up to 200 Euro.

Applicants to the Summer School who also apply for a grant need to

- apply before 15 April 2005;
- provide with their application the one-page description of their research program, which also explains which advancements of this research the applicant expects from participating in the Summer School;
- airmail a paper letter signed by their institution confirming that the institution cannot contribute to the cost of the applicant's participation in the Summer School. The letter should be sent to:

  Reasoning Web 2005
  c/o Stefanie Heidmann
  Institute for Informatics, University of Munich
  Oettingenstr. 67
  D-80538 Munich
  Germany

Social Events

Excursion

A half day harbour cruise is planned for the afternoon of Wednesday 27th July, with guided visits to the famous three cities. The tour highlights the historic importance of Malta's natural Grand Harbour having witnessed the island's greatest battles -- the Great Siege of 1565 and the destruction sustained during World War II.

Banquet

This will take place at '1743' Ir-Razzett L-Antik, situated in the heart of the medieval village of Qormi, a 300 year old farmhouse retaining most of the original architecture and now serving traditional Maltese cuisine.

Participation in these events is not included in the registration fee.

Important Dates

15 May, 2005	deadline for application
31 May, 2005	deadline for booking guaranteed accommodation
15 June, 2005	deadline for registration
25-29 July, 2005	Summer School

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4th Mexican International Conference on Artificial Intelligence

November 14-18, 2005, Monterrey, Mexico

Alexandre Guelboukh
National Polytechnic Institute, Mexico

MICAI is a high-level international conference covering all areas of Artificial Intelligence, traditionally held in Mexico. All previous editions of MICAI were published in Springer LNAI (N 1793, 2313, 2972). Acceptance rate of MICAI-2004 was 38% of submissions from 19 countries.

The conference is organized by the Mexican Society for Artificial Intelligence (SMIA) in cooperation with the Mexican Society for Computer Science (SMCC) and the American Association for Artificial Intelligence (AAAI).

The scientific program includes invited lectures, paper presentations, tutorials, panels, and workshops.

PAPER SUBMISSION

All accepted papers will be published by Springer-Verlag in their Lecture Notes in Artificial Intelligence (LNAI).

Authors are invited to submit original previously unpublished research papers written in English, of up to 10 pages, strictly following the LNCS/LNAI format guidelines. Submissions not following the format guidelines are rejected without review.

Submissions are received electronically through the website. The title and a short abstract must be submitted a week before the paper submission deadline (through the same web submission form).

All submissions will be subject to blind peer review by three program committee members.

IMPORTANT DATES

- May 22: Paper registration deadline (title and abstract required).
- May 29: Paper submission deadline (only papers registered by May 22).
- July 17: Acceptance notification.
- August 7: Camera-ready deadline.

TOPICS

Topics of interest are all areas of Artificial Intelligence, including but not limited to:

- Expert Systems / KBS
- Multiagent systems and Distributed AI
- Knowledge Management
- Intelligent Interfaces: Multimedia, Virtual Reality
- Natural Language Processing / Understanding
- Computer Vision
- Neural Networks
- Genetic Algorithms
- Fuzzy logic
- Belief Revision
- Machine Learning
- Intelligent Tutoring Systems
- Data Mining
- Knowledge Acquisition
- Knowledge Representation
- Knowledge Verification, Sharing and Reuse
- Ontologies
- Qualitative Reasoning
- Model-Based Reasoning
- Constraint Programming
- Common Sense Reasoning
- Case-Based Reasoning
- Nonmonotonic Reasoning
- Spatial and Temporal Reasoning
- Robotics
- Planning and Scheduling
- Navigation
- Assembly
- Hybrid Intelligent Systems
- Logic Programming
- Automated Theorem Proving
- Intelligent Organizations
- Uncertainty / Probabilistic Reasoning
- Philosophical and Methodological Issues of AI

Web site: www.MICAI.org/2005 ❖

SCIP@IFSA2005

Special Session on "Soft Computing in Image Processing" at the IFSA 2005 Conference, Beijing (China), July 28-31, 2005

Andrea G. B. Tettamanzi
University of Milan

About IFSA 2005

The 11th World Congress of International Fuzzy Systems Association (IFSA 2005) will be held in Beijing China, July 28-31, 2005. As a major biennial event of IFSA, the Congress aims at bringing together scholars and practitioners from academia and industries to present the latest development in theories and applications of fuzzy logic and soft computing. The scientific program will include keynote/plenary talks and technical parallel sessions that address important issues of interest in the fields. The Congress will serve as a platform not only for knowledge sharing, but also for stimulating new ideas in broadening and deepening theoretical and applied explorations of fuzzy logic and soft computing. Notably, IFSA2005 will take place in the year of IFSA's 20th anniversary, which may well be an event of memory and celebration in the course of its evolution.

Call for Papers

Images play a very important role in our daily live. They are used to register and transfer information, and have a wide variety of scientific, medical, commercial and recreational applications. Consequently, image processing, i.e. the science that deals with all aspects of image capture and manipulation, is a very broad and active area of research. Soft computing is one of the techniques used in image processing. Due to their capability to model uncertainty, imprecision and/or complex systems, these techniques have shown that they can have an added value for the field, both from a theoretical and practical point of view. The special conference sessions of the SCIP Working Group are aimed at promoting the results of the research on soft computing in image processing.
You are kindly invited to participate in the special session on Soft Computing in Image Processing to be organised at the IFSA 2005 Conference. IFSA 2005, the 11th World Congress of International Fuzzy Systems Association, will be held in Beijing (China), on July 28-31, 2005. The special session is organised in the framework of the SCIP Working Group. The aim of the session is to provide an international forum for presentation of recent results and advances regarding soft computing techniques in image processing. It is a unique opportunity for researchers in this area to meet and to exchange ideas.

Topics for the session include, but are not limited to:

- Image noise reduction
- Edge detection and segmentation
- Pattern recognition
- Image coding and encryption
- Computer vision
- Image similarity
- Mathematical morphology
- Video content-based indexing and retrieval
- Multimedia data analysis and visualization: texture, color, content, etc.
- Applications: visual surveillance, face recognition, medical imaging, remote sensing, satellite image processing, ...

Authors are invited to submit papers describing theoretical or practical results. Researchers that are interested in submitting a paper for this SCIP Session are kindly asked to send a short confirmation email, including the abstract of the paper, to scip@ugent.be; this will facilitate the upcoming review process.

Abstracts should be submitted by December 20, 2004; full papers by April 20, 2005. All papers will be reviewed, and you will receive notification of acceptance before February 20, 2005. Accepted papers will be published in the IFSA 2005 Conference Proceedings. Regarding the preparation of the

manuscripts, all authors are kindly asked to follow the instructions, as outlined below:

- The paper should be written in English in A4 size, two-column, single space, Times New Roman 10 points, top and bottom margin 1.0" (25mm) and left & right margin 0.7" (20mm).
- Papers should be submitted in pdf format, with a maximum file size of 2 MB.
- The maximum number of pages is six; up to four additional pages will be permitted for additional charges.

You can check out the IFSA 2005 website to download a pdf sample paper and a word format sample paper (click on the item "paper submission").

We summarize the most important dates:

- Abstract submission deadline: December 20, 2004
- Full paper submission deadline: February 20, 2005
- Notification of acceptance: March 20, 2005
- Delivery of camera ready papers: April 20, 2005

All information regarding the conference can be found at the conference website:
http://ifsa2005.em.tsinghua.edu.cn/

Contact information

If you have any questions related to the Special Session "Soft Computing in Image Processing" or to the SCIP Working Group in general, feel free to contact us:

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FIFTH PANHELLENIC LOGIC SYMPOSIUM

JULY 25-28, 2005, ATHENS, GREECE
Dedicated to Y. N. Moschovakis upon his retirement from the University of Athens, http://www.di.uoa.gr/~pls5

The Fifth Panhellenic Logic Symposium will take place at the University of Athens, Greece, from July 25 to 28, 2005. The scientific program of the symposium will consist of hour-long invited talks, tutorials, a panel discussion, and presentations of accepted papers.

Original papers that fall within the scope of the symposium are solicited. Authors are invited to submit electronically short papers, not exceeding six pages, in PDF format, in English or Greek, by April 15, 2005. The papers should be prepared according to the Lecture Notes in Computer Science (LNCS) guidelines (available from http://www.springer.de/comp/lncs/authors.html), preferably using LaTeX2e. All submitted papers will be reviewed by the scientific committee of the symposium. Authors of submitted papers will be notified of the decision by May 15, 2005. Each accepted paper will be allocated a thirty-minute period for presentation and questions. Camera-ready papers will be due by May 25, 2005 for inclusion in the proceedings of the symposium.

IMPORTANT DATES

Submission deadline: April 15, 2005

Notification of acceptance: May 15, 2005

Copies of papers due: May 25, 2005

Symposium: July 25-28, 2005

Workshop on Formal Models of Resource-Bounded Agents (FMRBA'05)

To be held at Utrecht University, The Netherlands on July 25/26, 2005. Co-located with the ***Fourth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS'2005)*** **http://www.aamas2005.nl/**

Natasha Alechina
University of Nottingham, UK

Much of the existing work in formal logical modeling of agents assumes idealized rational agents with unrestricted memory and unbounded time available for reasoning. This is unrealistic, since the agents are ascribed capabilities which they do not possess (e.g., the ability to instantaneously derive any theorem of classical propositional logic). Recently, there has been growing interest in formal models of resource-bounded agents which explicitly take the time or space (or both) required by an agent's computation into account. For many problems these approaches offer the possibility of more realistic models of real agent behavior, and have the potential to narrow the gap between formal modeling and agent development.

Work on formal models of resource-bounded agents has often appeared as isolated papers at agents and logics conferences and workshops (IJCAI, AAMAS, EUMAS) or in journals, such as the Journal of Autonomous Agents and Multi-Agent Systems, and this emerging community has lacked a forum for discussion. The aim of this workshop is to bring together researchers working on models of resource-bounded agents to assess the state of the art and identify open problems.

Aims and Scope

Much of the work in formal logical modeling of agents assumes idealized rational agents with unrestricted memory and unbounded time available for reasoning. This is unrealistic, since the agents are ascribed capabilities which they do not possess (e.g. ability to derive any theorem of classical propositional logic). Recently, there has been growing interest in formal models of resource-bounded agents. While this work has been presented at agents and logics conferences and workshops (IJCAI, AAMAS, EUMAS) and published in journals, such as the Journal of Autonomous Agents and Multi-Agent Systems, this emerging community has lacked a forum for discussion. The aim of this workshop is to bring together researchers working on models of resource-bounded agents to assess the state of the art and identify open problems.

Topics of interest include general frameworks for modeling resource-bounded agents, models of resource-bounded agent architectures and models of resource-bounded agent capabilities.

Possible topics include, but are not limited to,

Modelling frameworks

- Epistemic logics for resource-bounded reasoners

Models of resource-bounded agent architectures

- resource-bounded BDI agents
- resource-bounded MAS architectures

Models of agent capabilities

- Resource-bounded planning
- Resource-bounded belief revision
- Resource-boundedness in games, such as limited recall

The workshop will be of interest both to agent researchers and to logicians involved in specifying, implementing and verifying agents. More generally, the activity of making formal models more relevant to work on practical agents is of relevance to all agent developers.

Important dates

Submission deadline:	Closed
Notification of acceptance:	April 18
Final pre-workshop version:	May 30
Workshop event:	July 25 or 26

Publication

We believe the work presented will be of interest to the general agents' community and to ensure wider dissemination we plan to publish selected papers from the workshop, possibly as a special issue of the journal Knowledge, Rationality and Action ❖

CP-AI-OR

2005 MAY 30 - JUNE 1, PRAGUE, CZECH

The aim of the conference is to bring together interested researchers from AI and OR, and to give them the opportunity to show how the integration of techniques from AI and OR can lead to interesting results on large scale and complex problems. We explicitly welcome new ideas and methods for integrating OR and AI techniques that have arisen from real-world applications.

CP-AI-OR is intended primarily as a forum to focus on the integration and hybridization of the approaches of CP, AI, and OR technologies. A secondary aim is to provide an opportunity for researchers in one area to learn about techniques in others. Therefore, papers that actively combine, integrate or contrast approaches from more than one of the areas are solicited. High quality pure papers from a single area are eligible provided that they are of interest to other communities involved.

Prague Castle and Charles Bridge -

IMPORTANT DATES

Submission:	Closed
CP-AI-OR'05:	May 30-June 1, 2005

COMPUTATIONAL LOGIC IN MULTI-AGENT SYSTEMS EUROPEAN NEWS - SIXTH INTERNATIONAL WORKSHOP

SUBMISSIONS OPEN UNTIL APRIL 15, 2005 (DEADLINE EXTENDED)

Multi-Agent Systems are communities of problem-solving entities that can perceive and act upon their environments to achieve their individual goals as well as joint goals. The work on such systems integrates many technologies and concepts in artificial intelligence and other areas of computing as well as other disciplines.

Although commonly implemented by means of imperative languages, mainly for reasons of efficiency, agent-related concepts have recently increased their influence in the research and development of Computational Logic based systems.

Computational Logic provides a well-defined, general, and rigorous framework for studying syntax, semantics and procedures for individual agents and multi-agent systems, for attending implementations, environments, tools, and standards, and for linking together specification and verification of properties of individual agents and multi-agent systems.

In particular, the purposes of this CLIMA are:

1. to present state-of-the-art research, based on CL, aimed at representing, programming and reasoning about agents and MAS in a formal way,
2. to further promote CL in MAS and disseminate recent advances in the area to researchers and students, and
3. to discuss and confront techniques and approaches to CL/MAS-based problem modelling and solving in an informal and inspiring environment.

To this end, the organization of CLIMA VI will provide **scholarships** to students who wish to attend, and will offer a number of yon several aspects of CL-based MAS modelling and programming. CLIMA VI will also host the First CLIMA Competition, organized by Jürgen Dix and Mehdi Dastani.

CFP: DALT 2005 3rd Intl WS on Declarative Agent Languages and Technologies

http://www.multiagent.com/dailist/msg00117.html

Huhns, Michael
University of South Carolina

Call for Papersy

"Declarative Agent Languages and Technologies", in its third edition this year, is an well-established venue for researchers interested in sharing their experiences in declarative and formal aspects of agents and multi-agent systems, on the one hand, and in engineering

and technology on the other. Today it is still a challenge to develop technologies that can satisfy the requirements of complex agent systems. Importantly, building multi-agent systems still calls for models and technologies that ensure predictability, enable feature discovery, allow the verification of properties, and guarantee flexibility. Declarative approaches are potentially a valuable means for satisfying the needs of multi-agent systems developers and for specifying multi-agent systems.

The main goal of DALT is to provide a discussion to both (1) support the transfer of declarative paradigms and techniques into the broader community of agent researchers and practitioners, and (2) to bring the issues of designing real-world and complex agent system to the attention of researchers working on declarative programming and technologies.

DALT topics of interest include, but are not limited to:

- Declarative agent communication and coordination languages

- Declarative approaches to the engineering of agent systems

- Experimental studies of declarative technologies

- Industrial and commercial experiences with declarative agent technologies

- Formal methods for the specification and verification of agent systems

- Distributed constraint satisfaction and constraint reasoning=20 in agents=20

- Multi-criteria optimization and distributed problem solving=20 with constraints

- Computational logics in multi-agent systems

- Model Checking MAS

- Declarative description of contracts and negotiation issues

- Lessons learned from the design and implementation of agent systems

- Declarative paradigms for the combination of heterogeneous agents

- Constraints and agent systems

- Declarative policies and security in MAS

- Knowledge-based and knowledge-intensive MAS

- Modeling of agent rationality

Proceedings

A printed volume with the proceedings will be available at the workshop. Authors of papers presented at the workshop will be asked to extend their contributions, possibly incorporating the results of the workshop discussion, to be included in the workshop post-proceedings to be published in a journal special issue or a book. The DALT 2003 and 2004 post-proceedings are published by Springer as a volume of the Lecture Notes on Artificial Intelligence series.

Submission instructions

Papers should be written in English, formatted according to the Springer LNCS style, and not exceed 16 pages. Paper submission is electronic via the conference home page.

Important dates

- Submission: Closed

- Notification of acceptance: April 18th, 2005

- Final version: May 15th, 2005

- Workshop: July 25th or 26th, 2005

SOCS - A computational logic model for the description, analysis and verification of global and open societies of heterogeneous computees

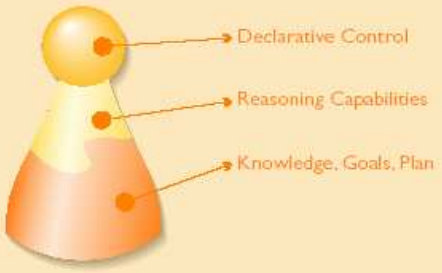
The SOCS (SOcieties of ComputeeS) project aims at providing a solid scientific foundation for the design of Global Computing systems. Global Computing is a new technological vision where computing environments are composed of autonomous computational entities whose activity is not centrally controlled but is decentralized instead, either because global control is impossible or at times impractical, or because the entities are created or controlled by different owners. The computational entities may also be mobile, and the environment is open and evolves over time. Moreover, the behavior of the entities may be heterogeneous and vary over time, and the entities may need to operate with incomplete information about the environment.

Achievements

SOCS developed the declarative **KGP** model for computees whose internal state consists of:

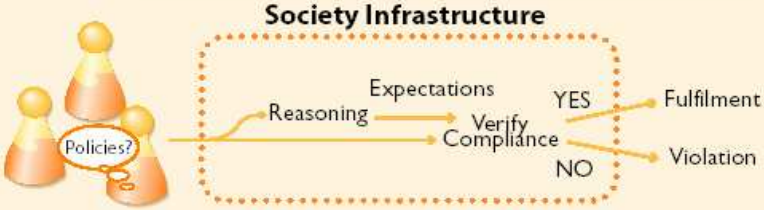
- a knowledge base (K) to reason with,
- goals (G) to be achieved, and
- plans (P) to achieve the goals.

Computees pursue their goals while being alert to the environment and adapt their goals and plans to any changes that they perceive, by exploiting their reasoning capabilities. Computees may be heterogeneous in their behaviour. Heterogeneity is achieved by a modular, flexible, and declarative specification of control.



Computees interact within societies. Interactions are declaratively specified via a society model, defined in terms of

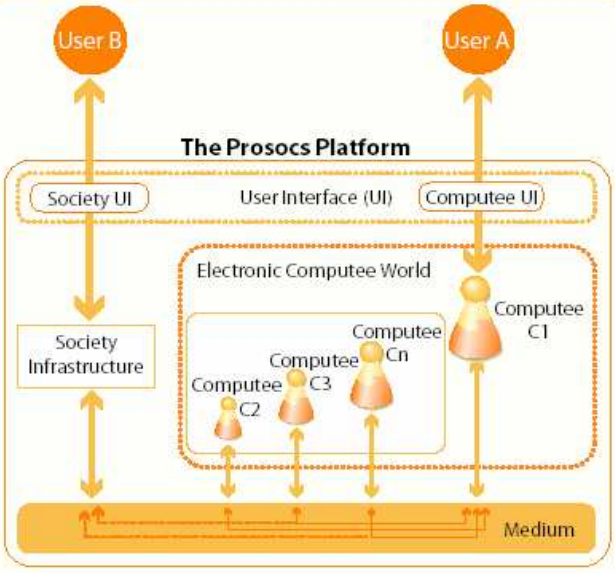
- a knowledge base,
- a set of social rules representing interaction protocols,
- an operational framework based upon hypothetical reasoning to achieve the society's goals, verify the compliance of computees' behaviour with respect to the interaction protocols, and verify properties of these protocols.



Using the underlying operational framework the society generates expectations about the ideal social behaviour of computees. The compliance of the observed behaviour of the computees is verified against such expectations at run time.

We have identified a number of properties of computees and their societies, such as those related to the formal characterisation of profiles of behaviour by computees and conformance to interaction protocols by computees within societies. The social operational framework has also been exploited in order to automatically prove properties of interaction protocols.

To experiment with the logical models and their properties we have developed PROSOCS (PROgramming SOcieties of ComputeeS), a prototype platform supporting the implementation and deployment of societies of computees. The platform has been applied successfully in test-bed scenaria with a Global Computing flavour, both for individual computees and their interactions in terms of protocols. The scenaria range from auctions, e-commerce, and ambient intelligence settings.



The main objectives of the SOCS project are:

- To deliver novel descriptions of computational Global Computing entities, with heterogeneous knowledge, goals, and patterns of behavior and interaction.

- To describe systems of such entities, capable of interacting in a global, open, and dynamically changing Global Computing environment.

- To provide tools for the specification, analysis and verification of properties of entities and their systems.

Approach

In trying to achieve these objectives, SOCS interprets the Global Computing vision as follows. Entities are defined via Computational Logic, which is used to define their internal organization, reasoning and their interactions. We call the entities **computees**, standing for “agents in computational logic”, and the systems composed of such entities **societies of computees,** as they are characterized by “social rul es” governing the computees interaction and operation in the presence of each other.

SOCS has developed logic-based models for computees and their societies, integrating extensions of a number of existing Computational Logic techniques for temporal reasoning in a changing environment, hypothetical reasoning for dealing with incomplete information and agents’ communication, and argumentation for decision-making.

CLIMA VI - Sixth workshop on computational logic in multi-agent systems

Multi-agent Systems

Francesca Toni

Imperial College London

Introduction

Multi-agent systems are communities of problem-solving entities that can perceive and act upon their environments to achieve their individual goals as well as joint goals. the work on such systems integrates many technologies and concepts in artificial intelligence and other areas of computing. for this reason, over recent years, the agent paradigm gained popularity in many sub-fields of computer science. a full spectrum of multi-agent systems applications have been and are being developed; from search engines to educational aids to electronic commerce and trade, e-procurement, recommendation systems, simulation and routing, to cite only some.

Although commonly implemented by means of imperative languages, mainly for reasons of efficiency, the agent concept has recently increased its influence in the research and development of computational logic based systems.

Computational logic provides a well-defined, general, and rigorous framework for studying syntax, semantics and procedures, for attending implementations, environments, tools, and standards, and for linking together specification and verification of properties of computational systems.

The purpose of this workshop is to discuss techniques, based on computational logic, for representing, programming and reasoning about multi-agent systems in a formal way.

Call for papers

We solicit unpublished papers that address formal approaches to multi-agent systems. The approaches as well as being formal must make a significant contribution to the practice of multi-agent systems. Relevant techniques include, but are not limited to, the following:

- logical foundations of multi-agent systems
- knowledge and belief representation and updates in multi-agent systems
- agent and multi-agent hypothetical reasoning and learning
- extensions of logic programming for multi-agent systems
- non-monotonic reasoning in multi-agent systems
- theory and practice of argumentation for agent reasoning and interaction
- operational semantics and execution agent models
- model checking algorithms, tools, and applications for multi-agent logics
- semantics of interaction and agent communication languages
- distributed constraint satisfaction in multi-agent systems
- temporal reasoning for multi-agent systems
- modal logic approaches to multi-agent systems
- logic based programming languages for multi-agent systems
- distributed theorem proving for multi-agent systems
- logic based implementations of multi-agent systems
- decision theory for multi-agent systems
- specification and verification of formal properties of agent systems

Important dates

- Submission: Closed
- Notification: May 6, 2005
- Camera-Ready: May 27, 2005
- CLIMA VI: June 27-29, 2005

CLIMA VI will be held at City University of London.

For more information, please visit **http://clima.deis.unibo.it/** ❖

ISCIS'05 - The 20th International Symposium on Computer and Information Sciences

20th Anniversary Conference of the ISCIS Series
Celebrating the 60th Birthday of the Founder of ISCIS, Prof. Erol Gelenbe
October 26-28, 2005, Istanbul, Turkey
http://iscis05.cmpe.boun.edu.tr/

Pinar Yolum
Bogazici University, Turkey

We kindly invite you to submit papers for the twentieth of the ISCIS series of conferences that bring together computer scientists and engineers from around the world. This year's conference will be held in Istanbul. Topics of interest include, but are not limited to:

- Computational Intelligence
- Computer Architecture
- Computer Graphics
- Computer Networks
- Databases
- Information Retrieval
- Internet and Multimedia
- Operating Systems
- Parallel and Distributed Computing
- Performance Evaluation
- Programming Languages and Algorithms
- Security and Cryptography
- Software Engineering
- Theory of Computing

This year we especially welcome papers in the areas of e-commerce (including web services and service-oriented computing, auctions, reputation and recommender systems, personalization and privacy, mobile commerce), multi-agent systems (including agent coordination and cooperation, agent communication, agent networks, agents and complex systems, trust and reputation, agents on the web, multi-agent simulation and modeling, industrial agent applications), satellite networks (including architectures, simulation and modeling, on-board processing and switching, internet services over satellite, advances in coding, modulation schemes, satellite security), and sensor networks (including deployment, localization, synchronization, link characteristics, MAC protocols and routing, capacity and lifetime optimization, security). There will be invited talks and tutorials given by leading researchers in these fields.

Paper Submission and Publication

Authors are invited to submit manuscripts written in English. Submitted papers should address original work not published elsewhere. All submissions will be refereed by experts in the field based on originality, significance, quality, and clarity. The proceedings of the symposium will be published by Springer-Verlag in the prestigious Lecture Notes in Computer Science series.

Papers should not exceed 10 pages (including all references, tables, and figures). Initial submissions of papers up to 12 pages are allowed and will be considered for review, but once accepted, the length must be reduced to at most 10 pages. (An additional fee will be charged for each extra page.)

Papers should comply with LNCS style and be submitted in either PostScript (.ps) or PDF (.pdf) format. Please refer to Instructions for Authors (http://www.springeronline.com/sgw/cda/frontpage/0,11855,5-164-2-72376-0,00.html) for formatting the manuscript. The conference organizers reserve the right to reject submissions that exceed the specified page limit or
that do not follow the LNCS proceedings format.

Manuscripts should be submitted using the on-line submission system available at http://iscis-reg.cmpe.boun.edu.tr/iscis05reg/submit.html.

One of the authors should register to the system by sending the abstract of the paper. The paper will be assigned a paper id. The author should then log on using the paper id and his/her password, and upload the paper in order to complete the submission process. For an accepted paper to appear in the LNCS proceedings of the conference, at least one author

must register.

Best Student Paper and Award

The purpose of this award is to recognize excellence in a conference contribution whose primary author is a student. The award will be presented to the winner at the time of the conference.

Important Dates

Submission of full papers: April 15, 2005
Notification of acceptance: June 15, 2005
Camera-Ready copies: July 15, 2005

Calendar of Events

Third international Workshop on Programming Multi-Agent Systems

Utrecht, Netherlands
2005, July 25th or 26th
http://www.cs.uu.nl/ProMAS/2005/

The ProMAS workshop series aims to address the practical programming issues related to developing and deploying multi-agent systems. In particular, ProMAS aims to address how multi-agent systems designs or specifications can be effectively implemented.

10th International Conference on Artificial Intelligence and Law (ICAIL-05)

Bologna, Italy
2005, May 23-28
ICAIL provides a forum for the presentation and discussion of the latest research results and practical applications and stimulates interdisciplinary and international collaboration. Previous ICAIL conferences have taken place in Oxford (1991), Amsterdam (1993), College Park, Maryland (1995), Melbourne (1997), Oslo (1999), St. Louis (2001), and Edinburgh (2003).

CP-AI-OR

2005 May 30 - June 1
Prague, Czech
http://cpaior05.mff.cuni.cz/index.html

The aim of the conference is to bring together interested researchers from AI and OR, and to give them the opportunity to show how the integration of techniques from AI and OR can lead to interesting results on large scale and complex problems. We explicitly welcome new ideas and methods for integrating OR and AI techniques that have arisen from real-world applications.

TIME – 12th International Symposium on Temporal Representation and Reasoning

Burlington, Vermont, USA
2005, June 23-25
http://time2005.cse.buffalo.edu

The purpose of this symposium is to bring together active researchers from distinct research areas involving the representation of and reasoning about temporal phenomena. As with previous meetings in this unique and well established series, one of the main goals of the TIME symposium will be to bridge the gap between theoretical and applied research in temporal representation and reasoning.

Fifth Panhellenic Logic Symposium

2005, July 25-28,
Athens, Greece
http://www.di.uoa.gr/~pls5

The Fifth Panhellenic Logic Symposium will take place at the University of Athens, Greece, from July 25 to 28, 2005. The scientific program of the symposium will consist of hour-long invited talks, tutorials, a panel discussion, and presentations of accepted papers.

CLIMA VI

London, UK
2005, June 27- 29
http://clima.deis.unibo.it/

The purpose of this workshop is to discuss techniques, based on computational logic, for representing, programming and reasoning about multi-agent systems in a formal way.

CMSRA-IV

Lisbon, Portugal
2005, September 21-23
centria.di.fct.unl.pt/~greg/conf/CMSRA-IV.html

The CMSRA workshops are an international forum for researchers from the fields of Logic & Decision, Knowledge Representation & Reasoning, Formal Epistemology, Computational Logic and Cognitive Science to discuss recent work in computational models of scientific reasoning.

7th Augustus de Morgan Workshop on Games and Logic

London, UK
2005, November
Game theory has become increasingly applicable in logic, argumentation and in theoretical computer science. This conference is intended to explore the potential of the interdisciplinary connections not only with the above areas but with decision theory as well.