Call for Papers: CLIMA IV

Fourth International Workshop on Computational Logic in Multi-Agent Systems

January 6-7, 2004, Fort Lauderdale, Florida, USA

http://centria.di.fct.unl.pt/~jleite/climaIV/index.htm

Co-located with the 7th LPNMR and the 8th AIMATH

ABOUT THE WORKSHOP

Over recent years, the notion of agency has claimed a major role in defining the trends of modern research. Influencing a broad spectrum of disciplines such as Sociology, Psychology, Philosophy and many more, the agent paradigm virtually invaded every sub-field of Computer Science, not least because of the Internet and Robotics.

Multi-agent Systems (MAS) 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. There is a full spectrum of MAS applications that have been and are being developed; from search engines, educational aids to electronic commerce and trade.

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, by virtue of its nature both in substance and method, provides a well-defined, general, and rigorous framework for systematically studying computation, be it syntax, semantics, procedures, or implementations, environments, tools, and standards.

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. This is clearly a major challenge for computational logic, to deal with real world issues and applications.

Following the workshop on Multi-Agent Systems in Logic Programming affiliated with ICLP'99, the first CLIMA workshop took place in London, UK, affiliated with CL'2000. The 2001 edition of CLIMA, took place in Paphos, Cyprus, affiliated with ICLP'01. CLIMA'02 took place in Copenhagen, Denmark, and was affiliated with ICLP'02 and part of FLOC'02.

We solicit unpublished papers that address formal approaches to multi-agent systems.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:

- Nonmonotonic reasoning in MAS
- Planning under incomplete information in MAS
- Logical foundations of MAS
- Usage of abduction in MAS
- Representation of knowledge and belief in MAS
- Knowledge and belief updates in MAS
- Temporal reasoning for MAS
- Theory of argumentation for MAS
- Negotiation and co-operation for MAS
- Communication languages for MAS
- Distributed constraint satisfaction in MAS
- Modal logic approaches to MAS
- Logic based programming languages for MAS
- Distributed theorem proving for MAS
- Logic based implementations of MAS
- Decision theory for MAS
- Logic based agents for the Internet

SUBMISSION INSTRUCTIONS

We welcome and encourage the submission of high quality, original papers, which are not simultaneously submitted for publication elsewhere. Please refer to the workshop web pages for further instructions concerning the submission procedures.

IMPORTANT DATES

- Submission: **September 26th, 2003**
- Notification of Acceptance: October 31st, 2003
- Final version due: November 28th, 2003
- CLIMA IV: January 6-7th, 2004

PROCEEDINGS

Post-proceedings will be published by **Springer-Verlag** as a volume of the **Lecture Notes on Artificial Intelligence (LNAI)** series. Informal proceedings will be available at the workshop and online.

PROGRAM COMMITTEE

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INQUIRIES:

Please send program suggestions and inquires to either of the organizers.