

Call for papers
Agents, Logic and Theorem Proving
Workshop at Tableaux'2007
<http://tableaux2007.univ-cezanne.fr/>

1 Aims and Scope

Over the recent years, the agent paradigm gained popularity, due to its applicability to many domains, from search engines to educational aids to electronic commerce and trade, e-procurement, recommendation systems, simulation and routing, to cite only some.

Multi-Agent Systems are systems composed of multiple interacting problem-solving entities known as agents. They perceive and act upon their environments to achieve individual as well as joint goals. The work on such systems integrates many technologies and concepts in artificial intelligence and other areas of computer science.

Logic provides a well-defined, general, and rigorous framework for studying syntax, semantics and procedures for individual agents and multi-agent systems. The predominant approach for reasoning about multiagent systems has been modal logics. They are especially suited as a tool for a formal description of agents. They have widely been used to characterize mental states of agents and their interaction.

On the other hand, analytic tableaux are one of the favorite proof methods for modal logics. Therefore it seems that modal logic is on the cross roads of agents and tableaux theorem proving.

The objective of this workshop is to bring together these two communities: agent community and tableaux community.

In particular, the purposes of this workshop are:

- to present research, based on tableaux and aimed at representing, programming and reasoning about agents and multi-agent systems in a formal way,
- to promote tableaux for multi-agent systems,
- to compare and evaluate existing formalisms,
- to identify the most important open problems and research questions and
- to identify possibilities of solution transfer between the two domains.

2 Topics

Relevant topics include, but are not limited to

- logical foundations of (multi-)agent systems
- modal logic approaches to (multi-)agent systems
- non-monotonic reasoning in (multi-)agent systems
- agent and multi-agent hypothetical reasoning and learning
- theory and practice of argumentation for agent reasoning and interaction
- knowledge and belief representation and updates in (multi-)agent systems
- model checking algorithms, tools, and applications for (multi-)agent logics
- semantics of interaction and agent communication languages
- temporal reasoning for (multi-)agent systems
- distributed theorem proving for multi-agent systems
- logic-based implementations of (multi-)agent systems
- specification and verification of interaction protocols in (multi-)agent systems

3 Submission

The goal of this workshop is to enhance cooperation between participants with an agent background and the tableaux community. Contributors should be willing to interact between the different workshop areas. The programm committee will care to have a balanced number of participants from the different areas concerned.

To encourage an atmosphere appropriate for a workshop, we plan to:

- have a 15 mn discussion at the end of each session,
- have a panel on future directions of logic and tableaux proving for agent systems
- have system demos

Submission format: We welcome short papers (max 4 pages), describing projects or ongoing research and long papers (max. 8 pages), that relate more established results. We solicit electronic submissions by e-mail to:

Camilla Schwind
LIF, Laboratoire d'informatique fondamentale
Parc Scientifique et Technologique de Luminy,
163 avenue de Luminy - case 901
13288 Marseille cedex 9, (France)
Phone: +33 4 91 82 94 96 or +33 4 91 82 90 70 (secre.)
Fax: +33 (0)4 91 82 92 75
camilla.schwind@lif.univ-mrs.fr

4 Important Dates

Submission: May 1, 2007
Notification: June 5, 2007
Final version due: June 15, 2007
Workshop: July 3, 2007

5 Programm Committee

Leila Amgoud, IRIT, Toulouse, France
Jürgen Dix, Technische Universität Clausthal, Germany
Thomas Eiter, Technische Universität Wien, Austria

Laura Giordano, Università del Piemonte orientale, Alessandria, Italy laura@mfu.unipmn.it
Marc-Philippe Huget, LISTIC, Université de Savoie, Annecy, France
John-Jules Meyer, Universiteit Utrecht, Netherlands
Camilla Schwind , LIF-CNRS, Université de la Méditerranée, Marseille, France
Cees Witteveen, Technical University Delft, The Netherlands