

**Second Call for Papers**  
**7th Workshop on Agents Applied in Health Care**  
<http://deim.urv.cat/~itaka/workshops/aamas2012>

To be held in conjunction with the  
Eleventh International Conference on Autonomous Agents and Multi-Agent Systems  
(AAMAS 2012, 4th-8th June 2012, Valencia, Spain)

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**LATEST NEWS**

- If the quantity and quality of the papers submitted to the workshop is appropriate, those papers accepted for presentation at the workshop and presented in Valencia will be invited to present extended versions to a **special issue on agents applied in health care of the International Journal on Artificial Intelligence Tools (IJAIT), included in JCR.**
  - Paper submission deadline extended to **February 28<sup>th</sup>** (this deadline will not be further extended).
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**Technical description**

Intelligent agent-based systems constitute one of the most exciting research areas in Artificial Intelligence. Due to the growing interest in the application of agent-based systems in health care, a number of applications addressing clinical problems are already based in agent technology. Thus, it may now be a good time for the specialists in the field to meet and report on the results achieved in this area, to discuss the benefits (and drawbacks) that agent-based systems may bring to medical domains, and also to provide a list of the research topics that should be tackled in the near future.

This workshop will try to incorporate two novel aspects with respect to related workshops held in the last years:

- Interdisciplinary research: special efforts will be devoted to try to attract the attention of health care and biomedical specialists, so that they attend the workshop and realise the potential benefits of agent technology.
- Applied research: the organising committee will also pay special attention to papers describing applications which are not just academic, but are already deployed and running in a real medical environment.

Current topics of research include personalized health systems for remote and autonomous tele-assistance, communication and co-operation between distributed intelligent agents to manage patient care, information agents that retrieve medical information from distributed repositories, intelligent and distributed data mining, and multi-agent systems that assist the doctors in the tasks of monitoring and diagnosis. Several methodological and technical problems have been discovered by the researchers that attempt to deploy agent-based systems in the medical area; just to name a few, the growing number of huge databases that need to be integrated (*e.g.* genetic data from next generation sequencing), the difficulty to integrate new agent-based systems with legacy software, the need to apply changing national and international laws and regulations concerning the privacy of medical data and the security of the transaction of patient information between agents.

Submitted papers should address at least one of the following issues:

- Co-operation between intelligent agents to improve patient management (e.g. distributed patient scheduling).
- Agents that provide autonomous and remote care delivery.
- Agents that provide information about medical services.
- Multi-agent systems for patient monitoring and diagnosis.
- Successful applications of agents and multi-agent systems in health care.
- MAS that improve medical training or education (e.g. tutoring systems).
- Medical agent-based decision support systems.
- Information agents that gather compile and organise medical data and knowledge available on Internet.
- Solutions to the basic methodological and technological problems associated to the real deployment of health-care agent-based systems:
  - Security, privacy of medical data.
  - Social acceptance of agent-based systems.
  - Integration and use of medical ontologies.
  - Lack of centralised control.
  - Communication standards.
  - Integration with other types of software.
- Legal and ethical issues related to the use of agents in health care.
- Surveys providing an up to date view of the state of the art in the area of agents in health care.

Submissions must be formatted following the guidelines of the main AAMAS conference. Papers must not be longer than 10 pages.

The workshop organisers would appreciate that anyone intending to submit a paper to the workshop communicates this intention before February 1st to the workshop contact person.

### **Previous editions of the workshop**

- First edition - ECAI 2002 in Lyon, France. Expanded versions of selected papers published in a special issue of AI Communications (Ed: A.Moreno, 2003).
- Second edition - ECAI 2004 in Valencia, Spain. Expanded versions of selected papers published in a special issue of AI Communications (Ed: J.Nealon, 2005).
- Third edition - IJCAI 2005 in Edinburgh, Scotland. Expanded versions of selected papers published in a special issue of IEEE Intelligent Systems (Ed: A.Moreno, December 2006).
- Fourth edition - ECAI 2006 in Riva del Garda, Italy. Expanded versions of selected papers published in a volume of the Whitstein series in Software Agent Technologies and Autonomic Computing (December 2007).
- Fifth edition - AAMAS 2008 in Estoril, Portugal.
- Sixth edition - e-Health 2010 in Casablanca, Morocco. Papers published by Springer in a book of the series ICST Transactions on e-health.

## **Preliminary workshop agenda**

The workshop will feature some of the following activities:

- 1-2 invited presentations by international experts in the field
- Presentation of state-of-the-art papers with the latest developments in the field.
- Possible demos of practical applications of MAS in health care.
- Panel discussion of the main problems that have to be faced to deploy real agent-based health-care applications.

## **Important dates**

- **February 28th, 2012: Deadline for paper submission (this deadline will not be further extended)**
- March 28th, 2012: Notifications of acceptance/rejection sent
- April 10th, 2012: Deadline for sending camera-ready papers to workshop organisers.
- June 4th, 2012: Workshop.
- Autumn-Winter 2012: Possibility of publishing revised and expanded versions of selected papers in a special issue of an appropriate scientific journal or book.

## **Paper review process**

All the submitted papers will be revised by at least three members of the Program Committee. The main aspects to be reviewed will be originality, technical accuracy and relevance to the workshop.

## **Post –proceedings: special issue in IJAIT**

If the quantity and quality of the papers submitted to the workshop is appropriate, those papers accepted for presentation at the workshop and presented in Valencia will be invited to present extended versions to a special issue on agents applied in health care of the International Journal on Artificial Intelligence Tools (IJAIT), included in JCR.

## **Organising committee**

Antonio Moreno (contact person)

University Rovira i Virgili (URV), Tarragona, Spain.

e-mail: antonio.moreno@urv.net

Ulises Cortés

Technical University of Catalonia (UPC), Barcelona, Spain

Magí Lluch-Ariet

Informatics Research Institute, Barcelona, Spain

David Isern

University Rovira i Virgili (URV), Tarragona, Spain.

## **Scientific committee**

M.Beer, Sheffield Hallam Univ., UK

D.Glasspool, Deontics, UK

F.Grasso, Univ. of Liverpool, UK

A.Irarramendi, Univ. of the Basque Country, Spain

P.Kostkova, City Univ., UK

L.Lhotska, Czech Technical Univ., Czech Republic

B.López, Univ. of Girona, Spain

M.Schumacher, Univ. of Applied Sciences Western Switzerland, Switzerland

A.Valls, Univ. Rovira i Virgili, Spain

J.Vázquez-Salceda, Technical Univ. of Catalonia, Spain

L.Varga, ELTE University, Hungary