

AAMAS'06
Fifth International Joint Conference on
Autonomous Agents and Multiagent Systems

MAS*BIOMED'06
Second International Workshop on
Agents in Medicine, Computational Biology,
and Bioinformatics

Call for papers / participation

Important Dates

Submission Deadline: February 1, 2006
Notification of Acceptance: February 19, 2006
Camera ready: March 5, 2006
Workshop: May 9, 2006

Motivation and Description

There is growing evidence that agent technology can be useful in designing and implementing solutions aimed at supporting the automation of medical and biological procedures. While it is essential for computer scientists and software developers to understand the specific problems in medicine and biology, it is also essential for an expert of either domain to understand the capabilities of agent technology. The main purpose of this workshop is to bring together and create synergies between researchers on these fields in order to discuss relevant issues and approaches aimed at assessing and promoting the adoption of agent technology. It is intended that the workshop mainly focuses on the benefits of adopting agent technology in:

- I. storing, accessing, and distributing relevant medical or biological data,
- II. implementing the automation of information-gathering and information-inference processes in medical and biological settings,
- III. supporting e-Health,
- IV. simulating and modeling biological systems.

This workshop aims to attract both theoretically and practically oriented papers in these thriving areas in the intersection of medicine and biology with computer science. The workshop will also focus on supporting infrastructures, such as agent-based systems, tools, languages, ontologies, and networking facilities for medicine, bioinformatics and computational biology. Papers on the application and evaluation of agent approaches to the solution of problems in these fields will be particularly sought.

Topics of interest include but are not limited to:

- * Multi-Agent Interaction in Medical or Biological Settings
 - Coordination of tasks and data
 - Collaboration in peer-to-peer networks
 - Multi-strategy and meta- learning for cooperative information agents
- * Analysis and Modelling of Data and Tasks
 - Multi-agent systems for medical pre-detection, diagnosis, and treatment
 - Multi-agent systems for patient scheduling, transplant management, community care, information access, training, internal hospital and clinic tasks, etc.
 - Integrated genotyping and gene linkage analysis
 - Multi-agent approaches to gene expression analysis
 - Modelling of biological processes
- * Architectures, Languages, Tools, and Applications
 - Agent-based architectures and frameworks tailored for medical or biological domains
 - Customization of agent-based tools, languages, and libraries for medical or biological domains

- * Knowledge management
 - Agent-based integration of biological knowledge
 - Agent-based data mining and knowledge discovery in medical or biological domains
 - Multi-agent information gathering in medical or biological settings
 - Integration of heterogeneous data sources and/or services
- * Ontologies for Medical or Biological Domains
 - Collaborative ontology construction
 - Distributed ontology management

Submission Procedure

Those wishing to participate in the workshop are requested to submit an original research paper, not published or submitted elsewhere. Papers will be peer reviewed by at least two referees from the workshop's program committee based on the technical relevance, quality, clarity of presentation, objective analysis of the reported experiences, and novelty. High-profile survey papers could be also considered for publication. The length of a paper must not exceed 15 single-spaced A4 pages including figures, tables, and references. Papers should be formatted using the Springer LNCS style. Templates are available at Springer. The language of the workshop is English. At least one of the authors per each accepted paper should be able to register with and attend the workshop and present the paper.

All submissions should be sent by email, either in PDF or in PostScript format, to biomed06 AT diee.unica.it. The subject of the email should contain "*medicine*" or "*biology*" within square brackets to facilitate the organizing committee in the task of associating papers to referees.

All the accepted papers will be printed in the workshop proceedings of the workshop. A selection of the best papers presented at this workshop will be considered for a special issue on the same theme at "Multiagent and Grid Systems - an International Journal" by IOS press.

Organizing Committee

Giuliano Armano (giuliano.armano@diee.unica.it)
 Dept. of Electrical and Electronic Engineering – Univ. of Cagliari (Italy)
 Piazza D'Armi – 09123 Cagliari (Italy)

Andrew Martin (martin@biochem.ucl.ac.uk)
 Dept. of Biochemistry & Molecular Biology – Univ. College London (UK)
 Darwin Building - Gower Street London WC1E 6BT - England

Huaglory Tianfield (h.tianfield@gcal.ac.uk)
 Glasgow Caledonian University, School of Computing and Mathematical Sciences, SRIF/SHEFC
 Centre for Virtual Organization Technology Enabling Research (VOTER) – Director
 70 Cowcaddens Road, Glasgow, G4 0BA, UK

Rainer Unland (UnlandR@informatik.uni-essen.de)
 Inst. for Computer Science and Business Information Systems (ICB), University of Duisburg-Essen
 Schuetzenbahn 70, 45117 Essen, Germany

Publishing Chair

Eloisa Vargiu (vargiu@diee.unica.it)
 Dept. of Electrical and Electronic Engineering – Univ. of Cagliari (Italy)
 Piazza D'Armi – 09123 Cagliari (Italy)

Preliminary Program Committee

Martin Beer, Sheffield Hallam University (UK)
 Hans Czap, Univ. of Trier (Germany)
 Joerg Denzinger, Univ. of Calgary (Canada)
 Jürgen Klüver, University of Duisburg-Essen (Germany)
 Patty Kostkova, City University (UK)
 Emanuela Merelli, Univ. of Camerino (Italy)
 Luciano Milanese, Institute of Biomedical Technologies - National Research Council (Italy)

Simon Miles, University of Southampton (UK)
Agostino Poggi, Univ. of Parma (Italy)
David Riaño, Rovira i Virgili University (Spain)
Margarita Sordo, Harvard Medical School (US)
Jürgen Stausberg, University of Duisburg-Essen (Germany)
Christina Stoica, University of Duisburg-Essen (Germany)
Mihaela Ulieru, The University of New Brunswick (Canada)
Eloisa Vargiu, Univ. of Cagliari (Italy)