

International Workshop on Agent based Grid Computing

at
6th IEEE International Symposium on Cluster Computing and the Grid (CCGrid'2006)
May 16-19, 2006, Singapore
<http://www.cs.cf.ac.uk/agc2006/>

Grid Computing is an active research area which promises to provide a flexible infrastructure for complex, dynamic and distributed resource sharing. Recent research on Grid has largely focused on issues of performance, scalability and standardisation. Managing access to computing and data resources is a complex and time consuming task. As Grid computing matures, deciding which systems to use, where the data resides for a particular application domain, how to migrate the data to the point of computation (or vice versa), and data rates required to maintain a particular application "behaviour" become significant. There are still issues to be tackled such as: semantically enhanced service descriptions and specification of resources, autonomy, collaboration and economic models, self-organisation and learning, intelligence and adaptability. Many of these research areas offer new opportunities to Grid Computing researchers. Some have already been addressed within the multi-agent systems community.

Agent and multi-agent technologies provide a promising approach to make Grid technologies and solutions based on Grid and Cluster technologies smarter, more flexible, and adaptable. Often, within the multi-agent community, agents are restricted to small numbers of agents -- and often agents undertake similar tasks. To support Grid computing, agents can offer different roles, be organised into dynamic "groups", and be able to migrate between groups to support load balancing. Therefore agents could play an important role in Grid Computing, and Grid Computing can offer useful testbeds for investigating agent services. The Grid is not only a low level infrastructure for supporting computation, but can also facilitate and enable information and knowledge sharing at the higher semantic levels, to support knowledge integration and dissemination.

The aim of this workshop is to bring together infrastructure developers, applications developers, and researchers, who are working towards the vision of a Grid using agent and multi-agent based technologies. The workshop will also aim to inspire and encourage collaboration between these two communities.

Workshop Chairs/Organisers:

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INFORMATION FOR PROSPECTIVE AUTHORS:

Authors should submit papers of not more than 8 pages of double column text using single spaced 10 point size type on 8.5 x 11 inch pages, as per IEEE 8.5 x 11 manuscript guidelines (see <http://www.computer.org/cspress/instruct.htm> for instructions). All papers must be original work authorized to be released. No submission of material that has been previously published. Papers must be written in English language.

Authors should submit a PostScript (level 2) or PDF file that will print on a PostScript printer. Please do not embed specialist fonts (such as Asian fonts) in the PDF. Electronic submission by e-mail is strongly encouraged. Hard copies should be sent only if electronic submission is not possible. Submission implies the willingness of at least one of the authors to register and present the paper. Please e-mail your papers to Liviu Joita - l.joita@cs.cardiff.ac.uk, Bjoern Schnizler - Bjoern.Schnizler@iw.uni-karlsruhe.de, or Pablo Chacin - pchacin@ac.upc.edu, which is the preferred method for submission. Put "AGC-CCGrid2006-Workshop" in the e-mail subject.

In addition, authors should submit an ASCII abstract with the following information: title of the paper; names and affiliations of authors; name, e-mail, snail mail, phone number and fax number of the primary contact. The same information should be included on the first page of submitted papers. Submitted papers will be reviewed by the program committee members. All correspondence will be with the specified primary contact.

PROCEEDINGS: Papers are expected to be published in the conference proceedings by IEEE Computer Society.

STEERING COMMITTEE:

Torsten Eymann, University of Bayreuth, Germany
Omer F. Rana, Cardiff University, UK
Daniel Veit, University of Karlsruhe, Germany

IMPORTANT DATES:

Submission Deadline (extended): 15th December 2005
Notification to authors: 22nd January 2006
Camera ready versions: 15th February 2006

Authors are encouraged (but not restricted) to submit in the following areas:

- Performance analysis/modeling of multi-agent communities
- Performance enhancement methodologies for mobile and multi-agent systems
- Agent frameworks and infrastructure to support the Grid
- Software engineering support for scalable multi-agent systems
- Support for managing and establishing multi-agent communities
- Approaches for managing Grid systems (such as nature-inspired approaches)
- Grid Economics and Business Models
- Supporting service discovery and service management using agent-based approaches
- Recommender agents for scientific problem solving
- Ontology support for scientific applications
- Integrating ontologies with Grid Services
- Agent-based resource and service management in Grid environments
- Agent-based load balancing and metacomputing support
- Agent-based network monitoring and characterisation
- Data migration and management via agents
- Grid markets mechanisms and agent-based technologies
- Agent-based computational economics
- Agent application in simulation environments
- Modeling of economic systems using agent-based paradigms
- Empirical results using agent-based simulation environments
- Environment description and metric definitions for Grid simulations
- Evaluation of dynamic pricing and trading mechanisms using autonomous agents
- Generation of knowledge in complex decision situations using autonomous agents
- Experience reports and application demonstrators are particularly welcomed.

Program Committee (as on November 14 2005):

- Mark Baker, University of Portsmouth, UK
- Bernhard Bauer, University of Augsburg, Germany
- Rajkumar Buyya, The University of Melbourne, Australia
- Geoffrey Fox, University of Indiana, USA
- Felix Freitag, University of Catalonia, Spain
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