

CFP ESAS 2012

The 7th IEEE International Workshop on Engineering Semantic Agent Systems

Held in conjunction with the 36th COMPSAC, the IEEE Signature Conference on Computers, Software, and Applications.

COMPSAC 2012 will be held in Izmir, Turkey, July 16-20.

GOAL OF THE WORKSHOP

Semantic web technologies render dynamic, heterogeneous, distributed, shared semantic content equally accessible to human reader and software agents. Here the vision is to achieve a synergy with multi-agent systems (MAS) technologies whereby agents will be in the center stage. Other workshops have so far missed to garner the synergy of these technologies by taking up either the semantic web aspect or the agent aspect of the shared research issue. ESAS 2012 has two complementary objectives:

1. To inquire into the theory and practice of engineering semantic multi-agent systems, especially methods, means, and best cases.
2. To explore into unifying software engineering methodologies employed in implementing semantic MAS applications across domains.

We expect to create a lively discussion and exchange medium for experts from the two fronts: agent-based systems and ontology-based systems. Equal representation of both by papers is being aimed at.

THEME AND SCOPE OF THE WORKSHOP

Applying Semantic Technologies in Research and Development of Ontology-Enabled Multi-Agent Systems. Semantic Web technology topics are welcome.

Semantic web technologies render dynamic, heterogeneous, distributed, shared content equally accessible to human reader and software agents. Distributed agents functioning autonomously can utilize semantic Web content to gather and aggregate knowledge, reason and infer new results towards achieving their goals and generating new knowledge. Such knowledge in turn may be disseminated and used to achieve the shared goal of the agents system. Here the vision is to achieve a synergy with multi-agent systems (MAS) technologies whereby both semantics and agents will be equally in the center stage.

ESAS workshop series aims at garnering the synergy of both technologies by taking up both the semantic web and the agent aspects of the common research issue. Topics of interest span a wide spectrum in both theory and practice of autonomous semantic agents, context-aware intelligent agents, agents as semantic web services, software agents, mobile agents, agent architectures, multi-agent systems, agent communities, cooperation and goal seeking through sharing policy and ontology, safety & security in systems, other QoS issues, and so on.

Mobile agent and MAS technologies are crucial in realizing multi-party dynamic application systems. Semantic Web technologies augment MAS by enabling agents with functioning based on the semantics of their mission and of the world around them. Agents, implemented as Web services in developing distributed control and processing applications, entail interesting consequences such as situation awareness, semantic composition of services, context sensitive long-lasting transactions, effecting service policies and quality levels, etc. Complex applications

could become realizable with novel features such as factory floor automation for flexible production, collaborative discovery of uncharted geography (for example, cooperative labyrinth discovery), traffic management and info dissemination with facilitation of emergency services, financial markets forecasting with optimization of portfolio gain, etc.

We envisage a strong undercurrent of intelligent software agents, mobile agents, and MAS running through this workshop; side by side with the use of semantic technologies, there are several foci of interest:

- ***Software Agents, Mobile Agents, and MAS:*** issues relating to architecture, implementation, coordination, service levels, security of pervasive semantic or otherwise agents.
- ***Agent, MAS and Semantic Web Technologies:*** concomitant utilization of specific technologies in agent, MAS, and semantic Web implementations; semantic agent communities & applications; case studies of best-practice MAS applications; projects in the making;
- ***Ontologies for Agents and MAS:*** agent cooperation and coordination ontology; ontology of workflow in MAS; ontologies for distributed applications and integration; sharing and semantic interoperability; discovery and operations on ontologies; trust & security issues;
- ***Platforms for semantic agent and MAS implementation:*** languages, frameworks, tools, integrated development environments and software engineering practices supporting semantic or otherwise software agent & MAS architectures, coordination, trust & security mechanisms, description, discovery and composition of agent-based services.
- ***Other subjects of relevance in*** semantic technologies, semantic software agents, mobile agents, agent-based and multi-agent systems.

In unison with the main conference, the main theme of ESAS 2012 will be '*Applying semantic Web technologies in developing software agents, mobile agents and multi-agent systems towards achieving trustworthy software systems*'.

In relation to ***trustworthiness***, topics of interest include the following among others:

- software development,
- software systems,
- systems and agent technology,
- systems and reasoning,
- systems and semantic technology,
- database systems,
- embedded systems,
- game and entertainment systems,
- healthcare information systems,
- Internet access and use for children,
- education,
- entertainment, and so on.

IMPORTANT DATES

Mar 15, 2012: Workshop paper submissions

Apr 09, 2012: Workshop paper notification

May 02, 2011: Camera-ready copy and registration

SUBMISSION

Click here to access the
submission site.

Papers must be submitted electronically via the ESAS 2012 Submission Page (<http://myreview.cs.iastate.edu/ESAS2012/>). Please follow the IEEE Computer Society Press Proceedings Author Guidelines to prepare your papers <http://www.computer.org/portal/web/cscps/submission>. All papers will be carefully reviewed by at least three reviewers. Papers can be submitted as regular papers (six pages), and the acceptance will depend on reviewer feedback. Accepted papers will be published in the workshop proceedings of the IEEE Computer Software and Applications Conference (COMPSAC 2012) by the IEEE CS Press. At least one of the authors of each accepted paper must register as a full participant of the workshop in order to have the paper published in the proceedings. **Each accepted paper must be presented in person by one of its authors.**

The authors of selected papers may be invited to submit an extended version of their papers for possible publication in a special issue of a relevant journal and/or an edited book. Details will be revealed pending conclusion of negotiations.

A special issue of the best papers of ESAS 2006 has been published with Multiagent and Grid Systems - An International Journal, IOS Press, ISSN 1574-1702; [Volume 4, Number 3, 2008, pp: 293-346](#).

The authors of the papers accepted at ESAS 2007 and 2008 were invited to submit extended versions of their papers for publication in the Special Issue on Engineering Semantic Agent Systems of [Expert Systems: The Journal of Knowledge Engineering](#) by Wiley-Blackwell Publishing. This special issue has now appeared in Vol 28, Issue 5, 410-487.

The authors of ESAS 2009/10 were invited to submit an extended and revised version of their papers for publication in an edited volume titled Semantic Agent Systems: Foundations and Applications by Springer-Verlag; the book has been published (<http://www.springer.com/engineering/mathematical/book/978-3-642-18307-2>).

ORGANIZERS

Duygu CELIK

Department of Computer Engineering
Istanbul Aydin University
Istanbul, Turkey
E-mail: duygucelik@aydin.edu.tr

Rainer UNLAND

University of Duisburg-Essen, Germany
Email: Rainer.Unland@icb.uni-due.de

Rolf SCHWITTER

Department of Computing
Macquarie University
Sydney, NSW 2109, Australia
Email: rolfs at comp.mq.edu.au

Behnam RAHNAMA

Department of Computer Engineering
European University of Lefke
Gemikonagi, North Cyprus
E-mail: behnam at brahnama.com

Mehmet A. ORGUN

Department of Computing
Macquarie University
Sydney, NSW 2109, Australia
Email: mehmet.orgun at mq.edu.au

Atilla ELCI (honorary)

Computer & Educational Technology Dept.
Suleyman Demirel University, Isparta, Turkey
Email: atilla.elci at gmail.com

PROGRAM COMMITTEE

Alex Abramovich, Alexander Kostin, Angus F.M. Huang, Aneesh Krishna, Bo Hu, Chattrakul Sombatheera, Constantine Mantratzis, Eui-Hyun Jung, Frank F. P. Dignum, Ibrahim Gokcen, Kaile Su, Laurentiu Vasiliu, Levent Yilmaz, M. Osman Unalir, Markus Schall, Maurice Pagnucco, Mehmet Emin Aydin, Michael Stollberg, Michel C. A. Klein, Mustafa Jarrar, Pieter De Leenheer, R. Cenk Erdur, R. Rajesh, Rym Z. Mili, Stijn Christiaens, Sule Yildirim Yayilgan, Vijayan Sugumaran, Vitaliy Mezhuev, Zeki Bayram, Deshendra Moodley, Natalie van der Wal, Fabiano Dalpiaz.

Please see the contact details at http://compsac.cs.iastate.edu/workshop_details.php?id=49&y=
updated 20.12.2012.