



TF-AAS newsletter



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The *TF-AAS newsletter* is produced as a focal point for news concerning the (related) activities of the IEEE Computer Society Autonomous and Autonomic Systems Task Force. If you have any items for the next issue please contact r.sterritt@ulster.ac.uk

ICAC 2005

by Manish Parashar



The International Conference on Autonomic Computing (ICAC) series of conferences address both theoretical and practical issues in the field of Autonomic Computing with the primary goal of bringing together researchers from different fields of research who are addressing aspects of self-management in computing systems, and developing and nurturing a community that can work together to realize the vision of large-scale self-managing systems. ICAC 2005, the second conference in this series, was held between June 13 and 16, 2005 in Seattle, Washington, and was a resounding success with an attendance of 125 participants.

The ICAC 2005 call for papers received an overwhelming response, attracting approximately 140 paper and poster submissions from universities and industry labs all over the world, and representing a broad array of topics pertaining to autonomic computing. The technical program consisted of 25 full papers and 39 posters selected from these submissions after careful review. Reflecting the international nature of the field, the program included papers from the U.S., Europe, and Asia. Reflecting the breadth of the field, the papers addressed a wide range of issues pertinent to creating future self-managing computing systems and applications, with topics ranging from learning techniques and their use in pervasive systems, to self-management in databases, networks, and storage systems, to systems monitoring and self-healing technologies, to middleware- and system-level support for better understanding and managing the complex software systems now routinely being deployed in commercial and research settings.

ICAC 2005 also featured two exciting keynotes; the first titled "Looking Forward to the Future" by Richard ("Rick") F. Rashid, Senior Vice President, Research, Microsoft Corporation; and the second titled "Grassroots Approach to Autonomic Computing" by Ozalp Babaoglu, Professor of Computer Science, University of Bologna.

Alan Ganek, Vice President, Autonomic Computing, IBM, gave the keynote at the conference banquet titled "Autonomic Computing: Progress and Future Directions".



ICAC'05 Seattle 13th – 16th June 2005

Other important elements of the ICAC 2005 technical program were the tutorials preceding the conference and covering a range of subjects such as semantic services, autonomic computing toolkits and reinforcement learning; a special industry session exposing participants to some of the autonomic and adaptive technologies being developed in companies like IBM, Intel, and HP, an academic panel addressing the "Grand Challenges of Autonomic Computing," a poster session, and demonstrations from industry and academia.

ICAC 2005 was sponsored by the IEEE Computer Society (TCPP) and the National Science Foundation, and received support from BT, DoCoMo USA Labs, Hewlett-Packard, IBM Corporation, Intel, Microsoft Research and Raytheon.

Note in your diary, June 2006 for ICAC'06 taking place in DUBLIN, Ireland.
<http://www.autonomic-conference.org>

Also Self-Man 2006 is co-located with ICAC:
<http://research.ihost.com/selfman2006/>

Dates for the Diary

Some other dates to note in your diary are:

▫ Dec 2005 (cfp closed): Workshop on Trusted and Autonomic Ubiquitous and Embedded Systems;
<http://www.cs.iupui.edu/~ydai/TAUES05/TAUES05.htm>

▫ Mar/Apr 2006 (cfp 15 Nov'05): IEEE EASE (Engineering of Autonomic Systems);
<http://www.ulster.ac.uk/ease>

▫ Apr 2006 (cfp 31 Oct'05): IEEE Workshop on Trusted and Autonomic Computing Systems;
<http://cs.okstate.edu/~xiaolin/tacs06/>

▫ Sep/Oct 2006 (cfp 15 Apr'06): IEEE Dependable Autonomic and Secure Computing (DASC'06)
<http://www.cs.iupui.edu/DASC06/>

TF Chair's Column

Welcome to the debut issue of the TF-AAS newsletter which marks the formal representation for our self-managing systems research and development community within IEEE after the Technical Activities Board unanimously approved the Task Force in June 2005.

In the first couple of months since its inception several queries have been received asking why 'Autonomous and Autonomic Systems'? It was felt that the Task Force should reach wider than the growing self-managing initiatives to include the excellent research that has gone before within the autonomy and other communities.

In terms of computer-based systems design paradigms, autonomy implies 'self-governance' and 'self-direction' whereas autonomicity implies 'self-management'. That is, autonomy/self-governance is the automation of responsibility including some decision making for the success of *tasks/objectives* whereas autonomicity/self-management is the automation of responsibility including some decision making for the successful *operation* of the system.

From this perspective It may be argued at the systems level that the success of autonomy requires successful autonomicity and vice-versa, for instance ultimately to ensure success in terms of the system's tasks requires that the system is reliable.

Autonomic is derived from the noun 'autonomy', and we hope in the future months and years we will benefit from each other's research to achieve the overarching strategic long term vision of self-managing systems.

Roy Sterritt, chair TF-AAS



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WRAC 2005



The 2nd Workshop on Radical Agent Concepts was held at NASA Goddard Space Flight Center from September 20-22, 2005. It was jointly sponsored by NASA and the IEEE Computer Society (TC-CCX and TF-AAS) with corporate sponsorship from IBM.

The workshop series provides opportunity to present new and evocative ideas on agent-based systems, covering emerging and incipient concepts and initial reports on research that could revolutionize agent-based systems, often strongly inspired by theoretical or empirical studies of human behavior, social intelligence, psychology, arts, biology, computer science and philosophy. The organizers aim for an inter-disciplinary program with original (out-of-the-box) thinking from industrialists and academics with an interest in radical (innovative) concepts.



WRAC at NASA Goddard Space Flight Center

This year's WRAC had encouraged submissions from the Autonomous Systems community where agents will play a pivotal role as well as seeking influence from the self-managing systems for creating radical self-managing agent based systems. Jeff Kephart,

from IBM TJ Watson Center, gave the workshop keynote on "The Role of Agents in Autonomic Computing".

The post workshop proceedings from WRAC will be published late this year/early next year by Springer in their LNCS series.

URL: <http://aaaprod.gsfc.nasa.gov/wrac>

In Brief: Other Community Activity

This section briefly lists some of the additional activity within the community (both within IEEE and beyond) over the last few months.

June 2005

ASMEA 2005

The 1st International Workshop on Adaptive and Self-Managing Enterprise Applications was held in Porto, Portugal on the 14 June 2005.

<http://www.elet.polimi.it/conferences/asmea05>

A&A-SES-1

A&A-SES-1 – a Special Session on Autonomic & Autonomous Space Exploration Systems was held as part of Software Engineering Research and Practice (SERP'05), June 27-30, 2005, Las Vegas.

<http://www.infi.ulst.ac.uk/~autonomic/AA-SES/>

July 2005

AEI Special Issue Journal

A Special Issue on *Autonomic Computing*, of Elsevier's Advanced Engineering Informatics edited by H. Tianfield and R. Unland was released in July. Issue details are volume 19, no. 3, Pages 179-252 (July 2005), ISSN 1474-0346

<http://www.sciencedirect.com/science/journal/14740346>

RAMPDS 2005

A Workshop on Reliability and Autonomic Management in Parallel and Distributed Systems (RAMPDS-05) was held in Fukuoka, Japan at ICPADS-2005.

<http://www.cs.iupui.edu/~ydai/RAMPDS05/RAMPDS05.htm>

August 2005

IJCAI'05 AI+ACOMMs 2005:

A Workshop on AI and Autonomic Communications was held as part of IJCAI'05 in Edinburgh, Scotland on 31 July 2005, focusing on how to achieve the Knowledge Plane within next generation self-managing communications.

<http://www.infi.ulst.ac.uk/~acomms/ijcai-05/>

SAACS 2005

The 3rd International Workshop on Self-Adaptive and Autonomic Computing Systems connected with DEXA, was held in Copenhagen, Denmark, 22 - 26 August 2005.

<http://cms1.gre.ac.uk/conferences/saacs-2005/>

October

WAC 2006

The 2nd IFIP TC6 International Workshop on Autonomic Communication (WAC 2005) took place Oct. 3-5, 2005, in Vouliagmeni, Athens, Greece.

http://cqi.di.uoa.gr/%7Eistavrak/WAC_2005/

Join IEEE TF AAS

If you have not already done so, you are invited to join the IEEE Computer Society Autonomous and Autonomic Systems Task Force online.

Details can be found at the web site

<http://www.computer.org/tab/>

Where you can sign-up to TF-AAS and three others free

<http://www.computer.org/TCsignup/index.htm>

If you have already signed up, manage your Technical Activity through TECA:

<http://www.computer.org/services/teca>

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