



The 7th International Conference on Autonomic Computing and Communications Call For Papers

June 7-11, 2010. Washington, DC, USA

<http://www.autonomic-conference.org>

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Important Dates

Abstracts: Jan 11 2010, 6pm PST
Full papers: Jan 18 2010, 6pm PST
(HARD DEADLINE)
Notification: March 8, 2010
Camera-ready: April 2010
Workshop
proposals: Sep. 25, 2009
Demo/exhibit
proposals: Mar. 29, 2010
Conference: June 7-11, 2010

OVERVIEW

Large-scale computer systems present numerous challenges: from Grids and clouds to enterprise datacenters and Internet services, resources and applications must be managed to maximize performance and power efficiency while maintaining predictable and reliable behavior in the face of varying workloads and failures. A system that addresses these challenges by integrating monitoring, decision-processing and actuation is an **Autonomic Computing System**.

Research in autonomic computing spans a variety of areas, from computer systems, architecture, databases and networks to machine learning and control theory. The purpose of ICAC is to bring together researchers and practitioners across these disciplines to address the multiple facets of self-management in computing systems and applications.

Papers are solicited from all areas of autonomic computing, including:

- End-to-end techniques for management of **resources, workloads, faults, power/thermal, and other challenges.**

- **Self-managing components**, such as server, storage, network, data center or specific application elements, and embedded and mobile end systems.
- **Decision and analysis techniques**, such as machine learning, control theory, predictive methods, emergent behavior, self-organizing networks and rule-based systems.
- **Monitoring systems**
- **Virtual machine, operating systems, hardware techniques or application frameworks** in autonomic computing.
- **Novel human interfaces** for monitoring and controlling systems.
- **Management topics**, such as specification and modeling of service-level agreements, behavior enforcement and tie-in with IT governance.
- **Toolkits, frameworks, principles and architectures**, from software engineering practices and experimental methodologies to agent-based techniques and virtualization.
- **Fundamental science and theory of self-managing systems**: understanding, controlling or exploiting system behaviors to enforce autonomic properties
- **Experience with existing systems**
- **Applications of autonomics** to real-world problems in science, engineering, business and society.

Papers will be judged on originality, significance, interest, correctness, clarity and relevance to the broader community. Papers should report on experiences, measurements, user studies, or other evaluations, as appropriate. Evaluations of a prototype or large-scale deployment of systems and applications is expected.

PAPER AND POSTER SUBMISSIONS

Full papers (a maximum of 10 pages in length) and posters (2 pages) are invited on a wide variety of topics relating to autonomic computing. Submitted papers must be original work, and may not be under consideration for another conference or journal. Complete formatting and submission instructions can be

found on the conference web site. Accepted papers and posters will appear in proceedings distributed at the conference and be available electronically. Authors of accepted papers and posters are expected to present their work at the conference.

WORKSHOPS, DEMONSTRATIONS AND EXHIBITION

ICAC-10 welcomes proposals for co-located workshops on topics of interest to the autonomic computing community. Workshops are expected to publish proceedings, and should cover areas that complement the main program. ICAC-10 will also feature a demonstration and exhibition session consisting of prototypes and technology artifacts such as demonstrating autonomic software or autonomic computing principles. Entries will be judged by a separate committee led by the demo/exhibit chair.

INDUSTRY SESSION

One of ICAC's important roles is to bring together researchers and practitioners from academia and industry. In its industry session, ICAC helps fulfill this role by presenting an industry viewpoint on technologies, products, and market needs. The industry session also addresses current challenges, and opportunities for academic and corporate research collaborations. We encourage industry leaders, including entrepreneurs, product developers, architects, managers, marketers and end users, to submit their papers and posters reflecting such industry perspectives as part of the regular submission process.

STUDENT AWARDS

A student best paper award will be presented, consisting of a commemorative plaque, complimentary student registration to the conference and an honorarium that will partially cover travel and hotel costs. A student paper is defined as one in which the principal author and presenter is a student.