



# The 6<sup>th</sup> International Conference on Autonomic Computing & Communications (ICAC-09)

## Call for Papers

Barcelona, Spain

June 15 – 19, 2009

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

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The ICAC 2009 programming committee is an internationally recognized group of leading researchers covering a broad range of topics related to the conference themes.

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### SPONSORS (PENDING)

IEEE Computer Society and ACM

### INFORMATION

WWW: [www.autonomic-conference.org](http://www.autonomic-conference.org)  
E-mail: [icac@autonomic-conference.org](mailto:icac@autonomic-conference.org)

To deal with the increasing complexity of large-scale computing systems, computers and applications must learn to manage themselves in accordance with high-level guidance from humans – a vision that has been referred to as **autonomic computing**. Meeting the grand challenges of autonomic computing requires scientific and technological advances in a wide variety of fields, as well as new software and system architectures that support the effective integration of the constituent technologies. The purpose of the 6<sup>th</sup> International Conference on Autonomic Computing and Communications (ICAC-09) is to bring together researchers and practitioners addressing all aspects of self-management in computing systems and applications. In doing so, we hope to further build and nurture a community that can work together to realize the vision of large-scale self-managing systems. The conference builds on previous highly influential meetings in New York, Seattle, Dublin, Jacksonville and Chicago.

Papers are solicited on a broad array of topics of relevance to autonomic computing, particularly those that bear on connections and relationships among different areas of research or report on prototype systems or experiences. Topics of interest include, but are not limited to:

- **Autonomic computing systems or prototype systems** that exhibit self-monitoring, self-configuration, self-optimization, self-healing, and/or self-protection.
- **Fundamental science of self-managing systems:** understanding, controlling, or exploiting emergent behavior, fault-tolerance, machine learning, control theory, predictive methods and their use to automate manual operations and enforce behavior.
- **Software engineering principles and architectures** for self-managing systems, based on interoperable Grid Services, agent-based systems, Web Services, model-based systems or novel paradigms such as biological, economic or social.
- **System-level technologies, middleware or services** that entail interactions among two or more components of self-managing systems in standalone, distributed, cluster, and Grid computing environments (e.g., health monitoring, dependency analysis, problem localization or remediation, workload management, and provisioning).
- **Toolkits, environments, models, languages, runtime and compiler technologies** for building self-managing components, systems or applications.
- **Specific self-managing components**, such as server, storage, network, data center or specific application elements. Emphasis should be placed on techniques or lessons that may generalize to other components.
- **Management topics**, such as specification and modeling of service-level agreements, negotiation/conversation support, behavior enforcement, etc., tie in with IT governance, and interaction with legacy systems.
- **Interfaces to autonomic systems**, including user interfaces, interfaces for monitoring and controlling behavior, techniques for defining, distributing, and understanding policies.
- **Experiences with autonomic system or component prototypes:** measurements, evaluations, or analyses of system behavior, user studies, experiences with large-scale deployments of self-managing systems or applications.
- **Applications of autonomics to real and complex problems** in science, engineering, business and society.

### PAPER/POSTER SUBMISSIONS AND PUBLICATION

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 as indicated above. All manuscripts will be reviewed and judged on merits including correctness, originality, technical strength, quality of presentation, and relevance to the conference themes. Submitted papers must include original work, and may not be under consideration for another conference or journal. They should also not be under review or be submitted to another forum during the ICAC-09 review process. Authors should submit full papers or posters electronically (PDF or postscript) via EDAS using the link on the ICAC-09 conference web site. Formatting instructions will also be posted at the web site. Accepted papers and posters will appear in proceedings published by ACM (to be confirmed), which will be distributed at the conference. Authors of accepted papers/poster are expected to present their work at the conference.

### WORKSHOPS, DEMONSTRATIONS AND EXHIBITION

ICAC-09 welcomes proposals for co-located workshops on specific topics of general interest to the autonomic computing community. Workshops are expected to publish proceedings, and should cover areas that may not be properly addressed in the main scientific program. ICAC-09 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 subcommittee led by the demo/exhibit chair.

### INDUSTRY SESSION

A singular value of ICAC is the confluence of top researchers and practitioners from both academia and industry. ICAC-09 will provide a readout of various technologies currently in play from product perspectives. Among the areas to be addressed are core enablers for autonomic capabilities to be realized, such as frameworks, protocols and autonomic engines in production systems. The industry session also will address current areas of difficulty that present direct opportunities for both academic and corporate research. Topics will be relevant to entrepreneurs, product developers, architects, managers, marketers and end users. Papers and posters reflecting such industry perspectives are especially encouraged and can be submitted as described above.

### 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 & hotel costs. (A student paper is defined as one in which the principal (not sole) author is a student.) The student will be required to present the paper to receive the award.

### IMPORTANT DATES

Full paper submission: 11:59 EST, January 19, 2009  
Author notification: March 9, 2009  
Final manuscripts due: April 06, 2009

Workshop proposals: September 25, 2008  
Hot Topics submission: 11:59 EST, March 20, 2009  
Demo/Exhibit proposals: March 20, 2009