



The 4th IEEE/ACM International Conference on Autonomic Computing (ICAC07)

Call for Papers



11 – 15 June, 2007, Jacksonville, Florida, USA

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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 referred to as **autonomic computing (AC)**. Meeting the grand challenges of AC requires scientific and technological advances in a wide variety of fields, in addition to new software and system architectures that support the effective integration of the constituent technologies.

The purpose of the 4th International Conference on Autonomic Computing (ICAC) is to bring together researchers and practitioners addressing aspects of self-management in computing systems, thereby developing and nurturing a community that can work together to realize the vision of large-scale self-managing systems. Papers are solicited on a broad array of topics of relevance to AC particularly those that bear relationships among different areas of research or report on prototype systems or experiences. Topics of interest include, but are not limited to:

- **Production or prototype AC systems** that exhibit self* features such as self-monitoring, self-configuration, self-optimization, self-healing, and/or self-protection.
- **Self-managing element** such as server, storage, network, or application. Emphasis should be placed on techniques or lessons that may generalize to other elements.
- **Management topics** such as specification and modeling of business-level policies and their mapping to runtime management, including service-level agreements, negotiation or conversation support, and behavior enforcement, design processes, tie in with IT governance, and interaction with legacy systems.
- **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 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 such as health monitoring and performance understanding, dependency analysis, problem localization or remediation, workload management, and provisioning).
- **Operating system** support for autonomic systems, including virtualization, migration, and distributed systems technologies.
- **Interfaces to autonomic systems**, including user interfaces, interfaces for monitoring and controlling behavior, techniques for defining, distributing, and understanding policies.
- **Toolkits, environments, models, languages, runtime and compiler technologies** for building self-managing components, systems or applications.
- **Experiences with autonomic system or component prototypes:** measurements, evaluations, or analyses of system behavior, user studies, or experiences with large-scale deployments of self-managing systems or applications.

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 AC-related topics 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-07 review process. Posters are not subject to any of these restrictions. Authors should submit full papers or posters electronically (PDF or postscript) via the ICAC-07 conference web site at <http://www.autonomic-conference.org>, and should follow **IEEE CS format** - style files can be found at <ftp://pubftp.computer.org/Press/Outgoing/proceedings/>. Accepted papers and posters will appear in proceedings published by IEEE Computer Society Press, which will be distributed at the conference.

DEMOS/EXHIBITS SESSION

ICAC07 will feature demos and exhibits session consisting of prototypes and technology artifacts such as demonstrating autonomic software or autonomic computing principles. A separate call for demonstrations and exhibits will be issued. Entries will be judged by a separate subcommittee led by the demo/exhibit chair. Please see the conference web site for more information.

WORKSHOPS & TUTORIALS

ICAC07 will feature workshops and tutorials on topics related to autonomic computing. The objectives of the workshops are to complement the main program and to extend the scope of the conference. Proposals for half-day and full day workshops and tutorials are solicited. Entries will be judged by a separate subcommittee, headed by the workshop and tutorial chairs respectively.

STUDENT AWARDS

A student best paper award will be presented. It will consist of a 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.

VENUE

ICAC07 will be held in Jacksonville, Florida, USA, at the Hyatt Regency Jacksonville Riverfront Hotel, 225 East Coastline Drive, Jacksonville, FL 32202.

IMPORTANT DATES

Title/Abstract submissions: 10:00 PM PST, Jan 5, 2007

Extended to: 10:00 PM PST, Jan 12, 2007

Demo/Exhibit/Tutorial Proposal submissions: March 3, 2007

Author notification: February 27, 2007

Workshop proposals submissions: December 11, 2006

Full paper submissions: 10:00 PM PST, Jan 10, 2007

Extended to: 10:00 PM PST, Jan 22, 2007

Final manuscripts due: April 03, 2007

INFORMATION

Web Page: <http://www.autonomic-conference.org> E-mail: icac@caip.rutgers.edu