

International Conference on Autonomic Computing (ICAC-04)

Call for Papers

In conjunction with the 13th International World Wide Web Conference ([WWW2004](http://www.ww2004.org))

Sheraton Hotel, New York, NY, May 17-18, 2004

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

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- ❖ IEEE Computer Society
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IMPORTANT DATES

- ❖ Paper submissions: January 12, 2004
- ❖ Poster submissions: February 9, 2004
- ❖ Author notification: February 16, 2004
- ❖ Final manuscripts due: March 8, 2004

INFORMATION

ICAC-04: www.autonomic-conference.org

E-mail: ac04@caip.rutgers.edu

The increasing complexity of integrating, deploying and managing computing systems is beginning to overwhelm the capabilities of software developers and system administrators. The only viable long-term solution is to create computer systems that manage themselves in accordance with high-level guidance from humans – a vision that is sometimes referred to as *autonomic computing*. Meeting the grand challenge of autonomic computing requires scientific and technological advances in a wide variety of fields, and new architectures that support effective integration of the constituent technologies.

The purpose of the International Conference on Autonomic Computing is to bring together researchers in diverse fields who are addressing important aspects of self-management in computing systems. In so doing, we hope to establish a unified community that can work together to realize the ultimate vision of large-scale self-managing systems. 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. Topics of interest include, but are not limited to:

- **Specific self-managing system components**, such as storage, server, client, database, or network elements. Emphasis should be placed on interactions with other components, or techniques or lessons that may generalize to other components.
- **AI and other generic technologies for self-managing components** including statistical, machine learning, and optimization techniques, planning, knowledge representation, reasoning, fault diagnosis, policies, sensing, and monitoring.
- **General architectures** for individual components or for autonomic computing systems as a whole, based on Open Grid Services, Web Services, or more novel paradigms based on biological, economic, social, or other analogies.
- **Toolkits, development environments, and languages** for autonomic computing. Support for building individual components of autonomic computing systems or applications.
- **Technologies that support inter-element interactions**, such as service-level agreements, negotiation protocols and algorithms, and conversation support.
- **System-level technologies or services** that entail interactions among two or more components of self-managing systems, such as dependency analysis, problem localization or remediation, workload management, provisioning, and health monitoring.
- **Autonomic computing systems or prototype systems** that exhibit self-configuration, self-optimization, self-healing, and/or self-protection.
- **Human interaction with autonomic systems**, including user studies, interfaces for monitoring and controlling behavior, and techniques for defining, distributing, and understanding policies.
- **Fundamental science of self-managing systems**: understanding, controlling, or exploiting emergent behavior, theoretical investigations of coupled feedback loops, robustness, and other related topics.

PAPER AND POSTER SUBMISSIONS

Full papers (up to 8 pages in length) and posters (2 pages) are invited on a wide variety of topics relating to self-managing systems, as indicated above. Submissions will be evaluated on relevance, technical quality, and exposition. Papers must not have appeared before (or be pending) in a journal or conference with published proceedings, nor may they be under review or submitted to another forum during the ICAC-04 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-04 conference web site at <http://www.autonomic-conference.org>, and should use [IEEE CS format](http://www.ieee.org/cs/format). Appropriate style files can be found at [ftp://pubftp.computer.org/Press/Outgoing/proceedings/](http://pubftp.computer.org/Press/Outgoing/proceedings/).

PUBLICATION

Accepted papers and posters will appear in proceedings published by IEEE Computer Society Press, to be distributed at the conference.