



SASO 2007

International Conference on Self-Adaptive and Self-Organizing Systems

Boston, Mass., USA, July 9-11, 2007
<http://projects.csail.mit.edu/saso2007/>

*****Deadline Extended*****

Sponsored by IEEE Computer Society,
Task Force on Autonomous and Autonomic Systems
(approval pending)

Technical co-sponsors: ACM SIGOPS, ACM SIGART
and IEEE Systems, Man, and Cybernetics Society (approval pending)

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The complexity of current computer systems has led the software engineering, distributed systems and management communities to look for inspiration in diverse fields (e.g., robotics, artificial intelligence or biology) to find new ways of designing and managing networks, systems and services. In this endeavor, self-organization and self-adaptation have emerged as two promising facets of a paradigm shift.

Self-adaptive systems work in a top-down manner. They evaluate their own global behavior and change it when the evaluation indicates that they are not accomplishing what they were intended to do, or when better functionality or performance is possible. Self-organizing systems work bottom-up. They are composed of a large number of components that interact locally according to simple rules. The global behavior of the system emerges from these local interactions, and it is difficult to deduce properties of the global system by studying only the local properties of its parts.

This edition of SASO will focus on engineering, as opposed to speculative and conjectural visions. Contributions should present novel theoretical results, or practical experience with building systems, tools, frameworks, etc. Contributions contrasting different approaches for engineering a given family of systems, or demonstrating the applicability of a certain approach for different systems are particularly encouraged.

Topics

- Self-* properties: self-organization, self-adaptiveness, self-management, self-monitoring, self-tuning, self-repair, self-configuration, etc.
- Theories, frameworks and methods for self-* systems
- Management and control of self-* systems
- Robustness and dependability of self-* systems
- Engineering and control of emergent properties in self-* systems
- Biologically and socially inspired self-* systems

Submission Instructions

See conference website. All submissions should be 10 pages and formatted according to the IEEE Computer Society Press style guide.

Systems & Technologies

- P2P applications
- Mobile robots
- Sensor networks
- Mobile ad hoc networks
- Grids
- Embedded systems, ubiquitous computing
- Autonomic computing, autonomic communications
- Computer networks, telecommunication networks
- Multi-agent systems
- E-business systems and services
- Complex adaptive systems

Research Communities

- Distributed artificial intelligence
- Networking
- Software engineering
- Distributed systems
- Integrated management
- Robotics
- Knowledge-based systems
- Machine learning
- Control theory
- Mathematical optimization

Important Dates

Submission: February 14, 2007
Notification: March 26, 2007
Final paper: April 15, 2007