



<http://icac2012.cs.fiu.edu>

The 9th International Conference on Autonomic Computing (ICAC 2012)

September 16-20, 2012 San Jose, CA, USA

Important Dates

Paper and Poster Submission: March 9, 2012, 11:59pm PST

Notification: May 18, 2012

Camera-ready Due: June 8, 2012

Workshop Proposals: February 10, 2012

Organizers

General Chair

Dejan Milojevic, *HP Labs*

Program Chairs

Dongyan Xu, *Purdue University*

Vanish Talwar, *HP Labs*

Industry Chair

Xiaoyun Zhu, *VMware*

Workshops Chair

Fred Douglass, *EMC*

Posters / Demo / Exhibits Chair

Eno Thereska, *Microsoft Research*

Finance Chair

Michael Kozuch, *Intel*

Local Arrangement Chair

Jessica Blaine

Publicity Chairs

Daniel Batista, Vartan Padaryan, Ioan

Raicu, Jianfeng Zhan, Ming Zhao

Program Committee

Tarek Abdelzaher, *UIUC*

Umesh Bellur, *IIT, Bombay*

Ken Birman, *Cornell University*

Rajkumar Buyya, *Univ. of Melbourne*

Rocky Chang, *Hong Kong Poly. Univ.*

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Omer Rana, *Cardiff University*

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Rick Schlichting, *AT&T Labs*

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Karsten Schwan, *Georgia Tech*

Onn Shehory, *IBM Research*

Eno Thereska, *Microsoft Research*

Xiaoyun Zhu, *VMware*

Overview: ICAC is the leading conference on autonomic computing techniques, foundations, and applications. *Autonomic computing* refers to methods and means for automated management of performance, fault, security, and configuration with little involvement of users or administrators. Systems introducing new autonomic features are becoming increasingly prevalent, motivating research that spans a variety of areas, from computer systems, networking, software engineering, and data management to machine learning, control theory, and bio-inspired computing. ICAC brings together researchers and practitioners across these disciplines to address multiple facets of adaptation and self-management in computing systems and applications from different perspectives. Autonomic computing solutions are sought for clouds, grids, data centers, enterprise software, internet services, data services, smart phones, embedded systems, and sensor networks. In these environments, resources and applications must be managed to maximize performance and minimize cost, while maintaining predictable and reliable behavior in the face of varying workloads, failures, and malicious threats. Papers are solicited from all areas of autonomic computing, including (but not limited to):

- *End-to-end techniques* for management of resources, workloads, performance, faults, power/cooling, security, and others.
- *Self-managing components*, such as server, storage, network protocols, or specific application elements, and embedded and mobile end systems such as smart phones.
- *Decision and analysis techniques and their use*, such as machine learning, control theory, predictive methods, probability and stochastic processes, queuing theory methodologies, emergent behavior, rule-based systems, and bio-inspired techniques.
- *Monitoring systems* for autonomic computing.
- *Hypervisor, operating systems, hardware, or application support* for autonomic computing.
- *Novel human interfaces* for monitoring and controlling autonomic 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.
- *Applications of autonomic computing and experiences* with prototyped or deployed systems solving 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 the two-column ACM proceedings format) 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. Relevant top ICAC'12 papers will be invited for "fast-track" submissions to the ACM Transactions on Autonomous and Adaptive Systems (TAAS).

Workshops, Demonstrations, and Exhibitions: ICAC'12 welcomes proposals for co-located workshops on topics of interest to the autonomic computing community. Workshop proposals should be submitted to the Workshop Chair, Fred Douglass (f.douglass@computer.org) by February 10, 2012. Workshops are expected to publish proceedings, and should cover areas that complement the main program. ICAC'12 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.