Call for Papers

The 5th International Conference on Self-organization and Adaptation of Computing and Communications (SACC 2009)

Leipzig, Germany, 23-25 March 2009

http://siwn.org.uk/2009leipzig/SACC09.htm

Synopsis

Over recent years, Autonomic Computing has emerged as a cross-disciplinary computing paradigm, which provides mechanisms for the autonomous management of systems' complexity in highly dynamic operating environments. Initially, the majority of such mechanisms were of a centralised nature, and often follow a model-based design of self-* properties. The widespread adoption of autonomic principles in large-scale decentralised SOA, P2P networks and/or grids, however, has rendered current autonomic designs ineffective in dealing with the scale, complexity and unpredictable dynamics of such systems. To this end, much research is underway leveraging the science of complex systems and self-organisation to support large-scale autonomicity. Little is known, however, regarding the foundation of decentralized autonomicity, and how to develop principled methods for the design, deployment and management of large-scale complex autonomic systems of systems, such as those required in supporting new computational models of the Internet of Services and Clouding Computing, to name but two.

Building on the success of previous SACC gatherings, this year's conference aims to bring together active researchers and practitioners to report on advancements in (and/or limits of) the state-of-the-art self-adaptive and self-organising design and engineering methods including their applications in large-scale systems.

Important Dates (New)

05 January 2009   Submission of manuscripts
31 January 2009   Notification of acceptance
15 February 2009 Camera-Ready Version (CRV) due

23-25 March 2009   Conferences

Submission and Publication

Submissions must be original contributions that neither have been published nor have been under review for publication elsewhere. All submissions must be in English and no more than 7 pages in the format specified in the Instructions for Authors, which are available on http://siwn.org.uk/press/ita.pdf

All manuscripts submitted will be sent to 3-4 members of the International Technical Program Committees of the Conferences for peer reviews and assessed according to the technical merits and presentation, on which the acceptance decision will be based.

Accepted papers will be included in the CD-ROM Proceedings of SIWN 2009, which will be available for participants at the Conferences.

All accepted papers of the conference are invited to publish their revised versions in the international journal <<Communications of SIWN>> (CoSIWN) (ISSN 1757-4439) after the conference. Details can be seen on the SIWN 2009 website.

Themes & Topics

We welcome original research papers reporting on the latest results of foundational and empirical studies into decentralised autonomic models, and associated design and management methods for self-organising networks of autonomic systems. It is hoped that this will contribute towards the science of self-adaptive and self-organising systems. Hence, the themes & topics of interest for this year's conference include, but are not limited to the followings.

Themes:
(1) Basic Principles and Methodologies for Self-Organization and Adaptation
(2) Self-Organization and Emergence
(3) Self-Organization/Adaptation of Multi-Agent Systems
(4) Autonomic Computing in General
(5) Self-Organization and Self-Management in Distributed and Grid Computing
(6) Self-Organization and Self-Management in Communications

Indicative Topics:
- Software engineering methods and support for self-adaptive and/or self-organising systems including modelling techniques, frameworks, languages and architectures.
- Model-driven approaches to the design or management of adaptive systems versus emergence-driven approaches
- Comparative studies of centralised versus decentralised models of autonomy and self-*
- Engineering self-organisation and the principles of emergent behaviour in large networks or assemblies of services, components, applications, etc.
- Robustness, stability and dependability theory and/or empirical studies of self-organisation in autonomic systems of systems or autonomic networks
- Theoretical or empirical studies of scalability and/or complexity of self-organising networks of autonomic systems.
- Characterisation and detection of emergent properties in self-organising networks including tools and techniques for management and control of emergence.
- Evaluation and measurement approaches for autonomic systems or applications.
- AI and cognitive models for design-time or runtime autonomy design and adjustment for large-scale autonomic or self-organising systems including machine learning studies and support.
- Security, trust and privacy concerns, and design and management supports for autonomy and self-organising emergence.
- Service level management and quality of service concerns, and design and management supports for autonomy and self-organising emergence.
- Social and interaction concerns, and design and management supports for autonomy and self-organising emergence.
- Novel approaches to decentralised policy-based control and management for autonomic and/or self-organising systems.
- Novel self-* paradigms, architectures and/or mechanisms

inspired from biological, social, and economic models.

- Autonomy for Cloud computing including new tools and techniques for designing, deploying and managing autonomic applications and services
- Autonomy and self-organising design models for Service Oriented Architecture, applications, infrastructure and services.
- Autonomy for the Internet of Services, including new tools and techniques for designing, deploying and managing autonomic applications and services
- Application domains such as: Peer-to-Peer (P2P) networks; Multi-layered networks; Mobile robots; Sensor networks, Mobile Ad Hoc Networks (MANETs); Computational Grids; Embedded systems, Pervasive and Ubiquitous computing; Computer networks, Multi-agent systems; E-business systems and services.

Online Submission Website

http://www.easychair.org/conferences/?conf=sacc09

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