GI

ARCS 2004

ITG

17ᵀᴴ INTERNATIONAL CONFERENCE ON ARCHITECTURE OF COMPUTING SYSTEMS

- ORGANIC AND PERVASIVE COMPUTING -

Augsburg, Germany

March 23 – 26, 2004

http://www.uni-augsburg.de/arcs04

CALL FOR PAPERS

Submission Deadline: September 15, 2003

Future processors become smaller, provide higher performance and consume less power than today's devices. Such processors will spark off new applications in particular in the area of everyday consumer devices. Mobile telecommunication systems increase bandwidth and will yield highly connected, ubiquitous computing systems. System design and management complexity increase to a level where a new paradigm may provide help: Organic computing (also known as autonomic computing) borrows from analogies between complex technical and biological systems. It follows a human-centered approach by leveraging self-organization capabilities. Organic computing investigates the design and implementation of self-managing systems that are self-configuring, self-optimizing, self-healing, self-protecting, context aware, and anticipatory.

ARCS'2004 will emphasize the design, realization and analysis of the emerging organic and pervasive systems and their scientific, engineering, and commercial applications. The conference focuses on system aspects of organic and pervasive computing in software and hardware. In particular, the system integration and self-management of hardware, software and networking aspects of up-to-now unconnected devices is a challenging research topic.

ARCS 2004 continues and replaces the biennial series of German Conferences on Architecture of Computing Systems. This 17ᵗʰ conference in the series serves as a forum to present current work on all aspects of computer and systems architecture. Besides its main focus, the conference is open for more general and interdisciplinary themes in operating systems, networking, and computer architecture. Papers pertaining to all aspects of computer and systems architecture, in particular in the field of organic and pervasive computing are sought, including but not limited to the following:

Enabling Technologies and Infrastructure
- middleware for organic, pervasive and peer-to-peer computing
- operating systems
- multi-agent and mobile agent systems
- bio-analogue and artificial-life systems
- context and locality
- low power systems design
- machine-learning, prediction, pro-activity
- system design and simulation
- reconfigurable hardware and software systems
- safety, security, reliability
- self-managing service configuration
- user interfaces and human-machine interaction

Architectures and Systems
- computer and system architecture
- modular distributed devices

- self-managing systems
- self-healing and fault-tolerant systems
- real-time systems
- mobile and wearable devices
- intelligently connected devices
- embedded systems (consumer electronics, automotive)

Applications
- scenarios for ubiquitous and pervasive computing
- autonomic environments
- network server architectures
- network based applications
- mobile computing
- network computing (clusters and grids)
- semantic networks
- home and wireless networking
- e-learning

The conference is organized by the special interest group on Computer and Systems Architecture of the GI (Gesellschaft für Informatik - German Informatics Society) and ITG (Informationstechnische Gesellschaft-Information Technology Society), supported by CEPIS and EUREL, and held in cooperation with IFIP, ACM and IEEE (approvals requested). In addition to technical sessions of contributed paper presentations, the conference will offer invited presentations, workshops, and tutorials.

The conference proceedings are planned to be published in the 'Lecture Notes in Computer Science' series by Springer-Verlag. Papers should not exceed 15 pages (approximately 5000 words) in Springer LNCS style (see: http://www.springer.de/comp/lncs/authors.html). We accept only electronic submissions in postscript or pdf format. The URL of the submission site is http://www.sra.uni-hannover.de/arcs_04/ . Selected papers will be published in the Personal and Ubiquitous Computing Journal.

IMPORTANT DATES

September 15, 2003	Conference paper submission due
October 1, 2003	Workshop and tutorial proposal due
December 1, 2003	Notification of acceptance/rejection
January 4, 2004	Camera-ready paper due

Official Address

For any questions related to ARCS 2004 please refer to our web site:
http://www.uni-augsburg.de/arcs04 or e-mail to: arcs04@informatik.uni-augsburg.de

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Workshop and Tutorial Chair: Uwe Brinkschulte, University of Karlsruhe, brinks@ira.uka.de

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