

Workshop Organic Computing

The integration, deployment and management of complex computing systems begins to overwhelm the capabilities of software developers and system administrators. The only viable long-term solution is to create computer systems that manage themselves, perhaps utilizing mechanisms taken from biological systems, in accordance with high-level guidance from humans. Organic Computing investigates the design and implementation of self-organizing systems that are self-configuring, self-optimizing, self-healing, self-protecting, self-describing, context aware, and anticipatory. Thus Organic Computing includes the autonomic computing objectives of the IBM initiative. Organic Computing emphasizes on large scale collections of cooperating systems, and on the aspects of self-organization and emergence, inspired by the behavior and functionality of systems observable in nature. Meeting the grand challenge of Organic Computing requires scientific and technological advances in a wide variety of fields.

The GI-Workshop on Organic Computing assembles researchers from university and industry addressing different aspects of organic computing. The program committee selected 14 out of 18 papers and organized the papers into four sessions. The morning sessions concern "Self-organization and Basic Techniques" respectively "Organic System Architecture". The topics of the afternoon sessions are "Organic Computing and Vision" and "Applications".

Organic Computing will be fostered by a newly established Priority Programme (Schwerpunktprogramm) of the German Research Foundation (Deutsche Forschungsgemeinschaft). Organic Computing will also be the topic of the "International Conference on Architecture of Computing Systems" (ARCS 05), which will be held in Innsbruck, Austria, in March 2005.

Christian Müller-Schloer (Universität Hannover)
Hartmut Schmeck (Universität Karlsruhe)
Wolfgang Trumler (Universität Augsburg)
Theo Ungerer (Universität Augsburg)