

# Preface

The seventh Distributed and Parallel Systems conference (DAPSYS) is organized by MTA SZTAKI Computer and Automation Research Institute in Debrecen. The series of DAPSYS events started as a small regional meeting early in the nineties, and since then it evolved a lot and became an acknowledged international scientific event. The scope of the event has changed as well during the years following the new trends in technology. The first event was dedicated to transputers whereas in recent years, it is tagged with cluster and grid computing.

This year the whole conference was devoted to grid computing. Since desktop grid systems were underrepresented at other conferences that deal with grid computing we decided to give a special emphasis on desktop grids. According to this, David Anderson was invited to give a keynote talk on BOINC systems, a large session was organized with talks on various aspects of desktop grid systems and finally, the EDGeS User and Industry Forum had also got a special session where talks and discussions addressed the problem of how to integrate service grids and desktop grids.

The papers presented in this volume give a good overview of recent advances in various aspects of grid computing. The proceedings is composed of five parts according to the major topics of the conference - albeit they cover a much broader range in this field. Part I is devoted to various aspects of desktop grid computing. Several papers discuss how to integrate desktop grids with existing service grids like the EGEE grid. One of the most important aspects of grid computing is how to port applications to the grid. Part II shows several case studies in the field of medical grid applications, climate modelling and digital library management. Grid resource management and scheduling is still an important issue in large production grid systems. Part III shows several new research directions in this field. Grid programming environments and particularly organization of grid workflow systems represent a major issue for the grid users. Part IV shows two systems (Kepler and P-GRADE) how to handle security issues and database resources in such workflow systems. Part V contains papers dealing with other important aspects of grid computing like QoS capabilities of grids, check-pointing in grids, batch query systems and finally a reputation-policy based trust model for grid resource selection.

There were three invited talks at the conference delivered by David Anderson, Denis Caromel and Márk Jelasity. David Anderson was talking on the future of volunteer desktop grid computing that was now aimed towards the exa-scale performance target. Denis Caromel gave presentation on the ProActive Parallel Suite, a GRID Java library for parallel, distributed, and concurrent computing, also featuring mobility and security in a uniform framework. ProActive aims at simplifying the programming of applications that are distributed on Local Area Network (LAN), on cluster of workstations, or on the grid. ProActive promotes a strong NoC approach, Network On Ship, to cope seamlessly with both distributed and shared-memory multi-core machines. Mark Jelasity explained how to combine P2P protocols into more complex, but still self-organizing and decentralized, protocols and frameworks. He also illustrated this compositional approach via an example application: heuristic function optimization, that was a common Grid application for solving very hard combinatorial or real valued optimization problems.

We would like to thank the members of the Program Committee and the additional reviewers for their work in refereeing the submitted papers and ensuring the high quality of DAPSYS 2008. Special thanks to those who helped us beyond their duties. We are grateful to Susan Lagerstrom-Fife and her assistant, Sharon Palleschi at Springer for their endless patience and valuable support in producing this volume. The conference could have never been realized without the devoted work of the local organizers: János Végh, Piroska Biró and Kornél Kovács. The proceedings was compiled in endless hours of checking every details by the tireless Eva Feuer. Special thanks to the webmasters Károly Göschl and Attila Csaba Marosi and Philippe Rigaux for providing the MyReview system.

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