
Foreword

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Leonard Barolli is a Full Professor at the Department of Information and Communication Engineering, Fukuoka Institute of Technology (FIT), Japan. He received BE and PhD from Tirana University and Yamagata University in 1989 and 1997, respectively. He has published about 300 papers in journals, books and international conferences. He has served as a Guest Editor for many

journals. He was PC Chair of IEEE AINA-2004 and ICPADS-2005. He was General Co-Chair of IEEE AINA-2006, AINA-2008 and AINA-2010. He is Steering Committee Chair of CISIS International Conference. His research interests include, P2P, intelligent algorithms, ad-hoc and sensor networks. He is a member of IEEE, IEEE Computer Society, IPSJ and SOFT.

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With the fast development in Internet technologies, several distributed computing paradigms, such as Grid and Cloud computing systems, has emerged to satisfy the need for more computational resources in science, engineering, business and other fields. One underlying feature of such large-scale distributed systems is their heterogenous nature, which poses many distributed problem challenges. In order to cope with the heterogeneity, distributed system services have been envisaged as efficient means to provide querying, management, scheduling, workows, etc.

This special issue brings advances in distributed systems services with an emphasis on Grid and Cloud computing systems. The special issue follows from the 14th NBiS-2011 Conference (The 14th International Conference on Network-Based Information Systems, <http://www.takilab.org/conf/nbis/2011/>) held at Polytechnic University of Tirana, Albania, 7–9 September 2011). The special issue is composed of six papers organised as follows.

The authors of the first paper (Larrea et al.) present specification and analysis of algorithms for leader service in distributed systems under dynamics and stability requirements.

The second paper (Brunner et al.) deals with self-adaptation for approximate queries in information retrieval in large-scale information systems. The authors have proposed a novel algorithm, which makes trade-offs among usage of computational resources of the network, response time and accuracy requirements of approximate queries.

The service interchange and inter-operability is addressed in the third paper (Anjum et al.). The authors present a service-oriented approach to achieve interchange of services and enable the use of a wider range of services. The approach has been exemplified for the case of heterogeneous Grid and Cloud infrastructure.

The authors of the fourth paper (Apostol and Cristea) deal with the multimedia mobile service across heterogeneous environments. A mobility service architecture for multimedia environments, which handles multimedia streaming adaptation under QoS requirements is presented and tested under different scenarios.

Cloud services are used in the fifth paper (Hung) to build services for a smart travel system under personalised requirements of mobile users. The proposed system support smart phone users and includes human-centred recommendation service and travel-gaming service.

Finally, in sixth paper (Rodila et al.), the authors have done a comparative study on the parallel execution in Multicore and Grid systems for large-scale applications. The paper presents a real-life case study, namely the parallel execution of SWAT model (Soil and Water Assessment tool) for Multicore and Grid systems.

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