Euro-Par is an annual series of international conferences dedicated to the promotion and advancement of all aspects of parallel and distributed computing. It covers a wide spectrum of topics from algorithms and theory to software technology and hardware-related issues, with application areas ranging from scientific to mobile and cloud computing. Euro-Par provides a forum for the introduction, presentation, and discussion of the latest scientific and technical advances, extending the frontier of both the state of the art and the state of the practice.

The main audience of Euro-Par are the researchers in academic institutions, government laboratories, and industrial organizations. Euro-Par’s objective is to be the primary choice of such professionals for the presentation of new results in their specific areas. As a wide-spectrum conference, Euro-Par fosters the synergy of different topics in parallel and distributed computing. Of special interest are applications that demonstrate the effectiveness of the main Euro-Par topics.

In addition, Euro-Par conferences provide a platform for a number of accompanying technical workshops. Thus, smaller and emerging communities can meet and develop more focused topics or as yet less established topics.

Euro-Par 2013 was the 19th conference in the Euro-Par series, and was organized in Aachen, Germany, by the German Research School for Simulation Sciences (GRS), Forschungszentrum Jülich, and RWTH Aachen University in the framework of the Jülich Aachen Research Alliance. Previous Euro-Par conferences took place in Stockholm, Lyon, Passau, Southampton, Toulouse, Munich, Manchester, Paderborn, Klagenfurt, Pisa, Lisbon, Dresden, Rennes, Las Palmas, Delft, Ischia, Bordeaux, and Rhodes. Next year, the conference will be held in Porto, Portugal. More information on the Euro-Par conference series and organization is available on the website at http://www.europar.org.

Euro-Par 2013 covered 16 topics. The paper review process for each topic was managed and supervised by a committee of at least four people: a global chair, a local chair, and two members. Some specific topics with a high number of submissions were managed by a larger committee with more members. The final decisions on the acceptance or rejection of the submitted papers were made at a meeting of the conference co-chairs and local chairs of the topics.

The call for papers attracted 261 full-paper submissions, representing 45 countries. A total of 1,016 review reports were collected, which is an average of 3.9 review reports per paper. The Program Committee members hailed from 22 different countries. We selected 70 papers to be presented at the conference and included in the conference proceedings, representing 26 countries from all continents, and resulting in an acceptance rate of 26.8%.

Euro-Par 2013 was very pleased to present three invited speakers of high international reputation, who discussed important developments in very interesting areas of parallel and distributed computing:
As part of Euro-Par 2013, three tutorials and 13 workshops were held prior to the main conference. The three tutorials were:

1. Tools for High-Productivity Supercomputing
2. Introduction to OpenACC Programming on GPUs
3. Advanced OpenMP

The 13 workshops were:

1. Big Data Management in Clouds (BigDataCloud)
2. Dependability and Interoperability in Heterogeneous Clouds (DIHC)
3. Federative and Interoperable Cloud Infrastructures (FedICI)
4. Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar)
5. High Performance Bioinformatics and Biomedicine (HiBB)
6. Large-Scale Distributed Virtual Environments on Clouds and P2P (LSDVE)
7. Middleware for HPC and Big Data Systems (MHPC)
8. On-chip Memory Hierarchies and Interconnects (OMHI)
9. Parallel and Distributed Agent Based Simulations (PADABS)
10. Productivity and Performance (PROPER)
11. Resiliency in High-Performance Computing with Clusters, Clouds, and Grids (Resilience)
12. Runtime and Operating Systems for the Many-core Era (ROME)
13. UnConventional High-Performance Computing (UCHPC)

Workshop papers will be published in a separate proceedings volume.

The 19th Euro-Par conference in Aachen would not have been possible without the support of many individuals and organizations. We owe special thanks to the authors of all the submitted papers, the members of the topic committees, and the reviewers in all topics for their contributions to the success of the conference. We would also like to express our gratitude to the members of the Organizing Committee. Moreover, we are indebted to the members of the Euro-Par Steering Committee for their trust, guidance, and support. Finally, a number of institutional and industrial sponsors contributed to the organization of the conference. Their names and logos appear on the Euro-Par 2013 website: http://www.europar2013.org.

It was a pleasure and an honor to organize and host Euro-Par 2013 in Aachen. We hope that all participants enjoyed the technical program and the social events organized during the conference (despite the fact that the conference building did not overlook the beach, as it did last year).

August 2013

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