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Euro-Par 2012 Parallel Processing

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Proceedings

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Preface

Euro-Par is an annual series of international conferences dedicated to the promotion and advancement of all aspects of parallel and distributed computing.

Euro-Par 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 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 focussed topics or as-yet less established topics.

Euro-Par 2012 was the 18th conference in the Euro-Par series, and was organized by CTI (Computer Technology Institute and Press "Diophantus"). Previous Euro-Par conferences took place in Stockholm, Lyon, Passau, Southampton, Toulouse, Munich, Manchester, Padderborn, Klagenfurt, Pisa, Lisbon, Dresden, Rennes, Las Palmas, Delft, Ischia, and Bordeaux. Next year the conference will take place in Aachen, Germany. More information on the Euro-Par conference series and organization is available on the website `http://www.europar.org`

The conference was organized in 16 topics. The paper review process for each topic was managed and supervised by a committee of at least four persons: 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 in a meeting of the Conference Co-chairs and Local Chairs of the topics.

The call for papers attracted a total of 228 submissions, representing 44 countries (based on the corresponding authors' countries). A total of 873 review reports were collected, which makes an average of 3.83 review reports per paper. In total 75 papers were selected as regular papers to be presented at the conference and included in the conference proceedings, representing 29 countries from all continents, and yielding an acceptance rate of 32.9%. Three papers were selected as distinguished papers. These papers, which were presented in a separate session, are:

1. Ricardo J. Dias, Tiago M. Vale, and João M. S. Lourenço "Efficient Support for In-Place Metadata in Transactional Memory"

2. Wesley Bland, Peng Du, Aurelien Bouteiller, Thomas Herault, George Bosilca, and Jack Dongarra "A Checkpoint-on-Failure Protocol for Algorithm-Based Recovery in Standard MPI"
3. Konstantinos Christodoulopoulos, Marco Ruffini, Donal O'Mahony, and Kostas Katrinis "Topology Configuration in Hybrid EPS/OCS Interconnects"

Euro-Par 2012 was very happy to present three invited speakers of high international reputation, who discussed important developments in very interesting areas of parallel and distributed computing:

1. Ewa Deelman (Information Sciences Institute, University of Southern California, USA)
2. Burkhard Monien (University of Paderborn, Germany)
3. Thomas Schulthess (CSCS, ETH Zurich, Switzerland)

In this edition, 11 workshops were held in conjunction with the main track of the conference. These workshops were:

1. 10th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (Heteropar)
2. 7th Workshop on Virtualization in High-Performance Cloud Computing (VHPC)
3. 5th Workshop on Unconventional High-Performance Computing (UCHPC)
4. 5th Workshop on Productivity and Performance (PROPER)
5. Third Workshop on High-Performance Bioinformatics and Biomedicine (HiBB)
6. Workshop on Resiliency in High-Performance Computing (Resilience)
7. CoreGRID/ERCIM Workshop on Grids, Clouds, and P2P Computing (CGWS)
8. First Workshop on Big Data Management in Clouds (BDMC)
9. Workshop on Architecture and Systems Software for Data Intensive Supercomputing
10. First Workshop on On-chip Memory Hierarchies and Interconnects: Organization, Management and Implementation (OMHI)
11. Paraphrase Workshop

The 18th Euro-Par conference in Rhodes was made possible thanks to the support of many individuals and organizations. Special thanks are due to the authors of all the submitted papers, the members of the Topic Committees, and all the reviewers in all topics, for their contributions to the success of the conference. We also thank the members of the Organizing Committee. We are grateful to the members of the Euro-Par Steering Committee for their support. We acknowledge the help we had from Emmanuel Jeannot of the organization of Euro-Par 2011. It was our pleasure and honor to organize and host Euro-Par 2012 in Rhodes. We hope all the participants enjoyed the technical program and the social events organized during the conference.

August 2012   Christos Kaklamanis
                                                  Theodore Papatheodorou
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Mark Stillwell

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Pedro Trancoso

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Aqun Zhao
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Table of Contents

Topic 3: Scheduling and Load Balancing

Topic 4: High-Performance Architecture and Compilers

Topic 5: Parallel and Distributed Data Management

Topic 6: Grid, Cluster and Cloud Computing

Topic 7: Peer to Peer Computing

Topic 8: Distributed Systems and Algorithms

Topic 9: Parallel and Distributed Programming

Topic 10: Parallel Numerical Algorithms

Topic 11: Multicore and Manycore Programming

Topic 12: Theory and Algorithms for Parallel Computation

Topic 13: High Performance Network and Communication

Topic 14: Mobile and Ubiquitous Computing

Topic 15: High Performance and Scientific Applications

Topic 16: GPU and Accelerators Computing