Koen Bertels
João M.P. Cardoso
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Reconfigurable Computing: Architectures and Applications

Second International Workshop, ARC 2006
Delft, The Netherlands, March 2006
Revised Selected Papers

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Volume Editors

Koen Bertels
Stamatis Vassiliadis
Delft University of Technology
Computer Engineering Lab
Mekelweg 4, 2628 CD Delft, The Netherlands
E-mail: {k.l.m.bertels,s.vassiliadis}@ewi.tudelft.nl

João M.P. Cardoso
INESC-ID
Instituto Superior Técnico (IST)
Av. Alves Redol 9, 1000-029 Lisbon, Portugal
E-mail: jmpc@acm.org

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Preface

The International Workshop on Reconfigurable Computing (ARC)[1] started in 2005 in Algarve, Portugal. The major motivation was to create an event where on-going research efforts as well as more elaborated, interesting and high-quality work on applied reconfigurable computing could be presented and discussed.

Over the last couple of years reconfigurable computing has become a well-known and established research area producing interesting as well as important results in both general and embedded computing systems. It is also getting more and more interest from industry which is attracted by the (design and development) flexibility as well as the performance improvements that can be expected from this technology. As reconfigurable computing has blurred the gap between software and hardware, some even speak of a radical new programming paradigm opening a new realm of unseen applications and opportunities.

The logo of the ARC workshop is the Nonius, a measurement instrument used in the Portuguese period of discoveries that was invented by Pedro Nunes, a Portuguese mathematician. As the logo suggests, the main motto of ARC is to help to navigate the world of reconfigurable computing. Driven by this motto, we hope ARC contributes to solid advances on reconfigurable computing.

The second edition of the International Workshop on Applied Reconfigurable Computing (ARC2006) was held at Delft University of Technology, Delft, The Netherlands, on March 1-3, 2006. More than 60 participants contributed to the success of this second edition. It is also a clear sign that the need exists for a high-level international forum to discuss and exchange ideas on reconfigurable computing.

Ninety-four papers were submitted to the workshop from 22 countries. After a careful review process, 22 papers were accepted as full papers (acceptance rate of 23.4%) and 35 as short papers (global acceptance rate of 60.64%). There were also keynote presentations by two invited, distinguished, international speakers. Besides the keynotes, the workshop also had a panel discussing hot issues related to reconfigurable computing. The workshop talks were organized around a number of themes, namely, applications, power, image processing, organization and architecture, networks and telecommunications and security.

Several persons contributed to the success of the workshop. We would like to acknowledge the support of the Program Committee members in reviewing papers and giving valuable suggestions for the workshop. Special thanks also to the auxiliary reviewers that contributed to the reviewing process, to all the authors that submitted papers to the workshop, and to all the workshop attendees.

[1] http://www.arc-workshop.org

For the second time, improved versions of the best papers of the workshop will be published in a special edition of the *Journal of Electronics,* a Taylor & Francis journal.

We consider the accepted papers to constitute a representative overview of ongoing research initiatives in this rapidly evolving field. We hope you have a pleasant reading, as we had.

Delft, The Netherlands
March 2006

Koen Bertels
João Cardoso
Stamatis Vassiliadis

Organization

ARC 2006 was organized by the Department of Electrical Engineering, Computer Science and Mathematics, Delft University of Technology, The Netherlands.

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