

**PROCEEDINGS OF  
THE 2010 INTERNATIONAL CONFERENCE ON  
ENGINEERING OF RECONFIGURABLE SYSTEMS &  
ALGORITHMS**

# **ERSA 2010**

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Christian Plessl, Greg Stitt**



***WORLDCOMP'10***

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# ERSA'10

## ENGINEERING OF RECONFIGURABLE SYSTEMS AND ALGORITHMS

The international conference on Engineering of Reconfigurable Systems and Algorithms (ERSA) was founded in 2001 and, since then, has been held each year in Las Vegas. This year, ERSA conference celebrates the 10th anniversary.

ERSA conference focuses on different approaches in engineering of reconfigurable systems: in hardware design and in implementing of algorithms; including theory, architecture, algorithms, design systems and applications that demonstrate the benefits of reconfigurable computing. ERSA conference solicits papers from all aspects of reconfigurable computing, including classical programmable logic, as well as configurable multiprogramming related papers.

Topics of interest include but are not limited to:

- Theory - Synthesis, Mapping, Parallelization, Partitioning...
- Software - CAD, Languages, Compilers, Operating Systems...
- Hardware - Adaptive and Dynamic Hardware, Reconfigurable Architectures...
- Applications - Mobile Computing, Automotive Industry, Smart Cameras...

ERSA conference is aiming to provide a forum where new research results can be quickly published and presented to research community, where people can discuss and share the latest ideas without a long publishing time. Only one and half months are required from submitting a paper to presenting it at the conference when following late CFP option. Late papers, which are not ready for conference time publication, are published in post-conference proceedings, in the official ERSA proceedings.

After the conference, best ERSA papers are published in special issues of reputable international journals: in The Journal of Supercomputing (Springer), IEEE TVLSI, ACM Transactions on Embedded Computing Systems.

This year, the program includes keynote and invited papers, invited panel session, regular papers, short papers and posters. We have one keynote speaker for WORLDCOMP: Dr. Jon Huppenthal, President and CEO of SRC Computers, LLC, Colorado Springs, USA, presenting a talk on "Looking Ahead at Heterogeneous Systems: A Suppliers Perspective".

We have three Invited Panel Session:

- "Signal-Image Processing and Dynamic Partial Reconfiguration", chaired by Ronald F. DeMara and Jooheung Lee, School of Electrical Engineering and Computer Science University of Central Florida, USA.
- "Reconfigurable Supercomputing: Performance, Productivity, and Sustainability", chaired by Herman Lam and Greg Stitt, CHREC University of Florida, USA.
- "Processor Customization for Reconfigurable Fabrics" chaired by David Andrews, Univ. of Kansas, USA and Christian Plessl, University of Paderborn, Germany

I hope that the ERSA conference, covering different aspects of reconfiguration techniques, will raise your awareness about the scope of reconfigurable or adaptive computing.

I would like to thank the authors for submitting their papers to ERSA'10 and for preparing the final versions of their papers for due date. I hope you all will have successful and enjoyable meeting in Las Vegas this year and I hope to meet you again in next years. I would like to extend my deepest gratitude for the efforts extended by the ERSA'10 Program Committee and to all external reviewers for their careful reading of all of the submitted papers.

Last but not least, I would like to thank the organizing team of The 2010 World Congress in Computer Science, Computer Engineering, and Applied Computing, and, especially, the General Chair Prof. Hamid Arabnia, for the continuous support and help in organizing the ERSA conference.

Toomas P. Plaks  
ERSA Chairman  
London  
May, 2010

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