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.

ERSA explores emerging trends and novel ideas in the area of parallel, reconfigurable, heterogeneous, high-performance computing architecture, design methods and applications. ERSA is promoting multidisciplinary research and new visionary approaches including bio-inspired architectures, computational biology, physics etc.

Since 2012, ERSA brings a new emphasis on the commercial and industrial challenges in preparing commercial applications for systems using reconfigurable, heterogeneous technology.

The proceedings of the ERSA Conference have been approved, by the evaluation board of science citation index (SCI) databases, for indexing, integrating, and inclusion into Elsevier indexing databases (Elsevier indexing databases include, among others: Scopus, SCI Compendex, Engineering Village, EMBASE, and others)

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 broad area, from all aspects of reconfigurable heterogeneous computing, from simple applications on programmable logic to complex, intelligent, high-performance, embedded systems implemented as multicore systems and heterogeneous parallel processing systems. All these complex systems involve reconfigurability on software and/or hardware level.

The range of topics covers theory, architecture, algorithms, design systems, and applications that demonstrate the benefits of reconfigurable computing:

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

ERSA conference brings together leading scientists and researchers from academia and industry. ERSA 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. All conference proceedings/books are considered for inclusion in major database indexes.


This year, to support young and talented, ERSA launched the contest for “ERSA - NVIDIA Best Young Entrepreneur Award”. The Award is devoted for entrepreneurs developing tools, advanced technologies and opportunities for supporting applications, both academic and commercial, across broad
area of high-performance, embedded systems implemented as multicore systems and reconfigurable heterogeneous parallel processing systems.

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

I would like to thank the authors for submitting their papers to ERSA’13 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 13 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 2013 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
June, 2013

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