

Call For Papers

Workshop on Application Specific Processors (WASP'03)

To be held in conjunction with the International Conference on Hardware/Software Codesign and System Synthesis (CODES+ISSS)

September 7, 2004

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The dramatic embedded processor volumes and the associated market segments force a reevaluation of the best way to satisfy the possibly conflicting demands placed on processor designs. Domain-specific embedded processors, such as network, automotive, cellular and others, present interesting architectural refinements, albeit at the cost of splintering the embedded processor market. Reprogrammable and/or reconfigurable embedded processors provide an alternative approach, capable of delivering single, fixed-silicon architectures, thus amortizing design and manufacturing costs across large volumes, yet necessitating an answer to the challenge of effective customization of embedded processors.

The workshop papers explore (micro)architectural design approaches and trade-offs and compiler technologies, for both domain-specific and customizable embedded processors. The workshop aims at generating a forum wherein the various approaches to address the twin challenges of cost amortization over large volumes while delivering optimal cost, performance, and power characteristics for a wide segment of embedded processor market niches will be explored and compared. *WASP* explores emerging trends and novel concepts in application-specific processors. Major topics include, but are not limited to:

- Domain-specific processors (Network, multimedia, etc.)
- Application-specific hardware accelerators
- Microarchitectural customization techniques
- (Re)configurable processor architectures
- Dynamically reconfigurable processors (Microarchitectural, Coarse-grained, FPGA, etc.)
- Application-specific processors in System-on-a-chip (SOC)
- Application-specific customizations for low-power
- Compiler techniques for processor customizations
- OS and Middleware support for application-specific processors

The Program Committee invites authors to submit papers up to 8 pages in length, describing original, unpublished recent work. Clearly describe the nature of the work, explain its significance, highlight novel features, and describe its current status. Electronic submission through the workshop website is required.

The submission of a paper proposal will be considered evidence that upon acceptance, the author(s) will present their paper at the workshop. Final versions of accepted papers will be included in the *Workshop of Application Specific Processors Digest*, **informal handouts** given to the registered participants of the workshop. The top ranked papers may be invited for publication in a major technical journal. More than 85% of the papers from WASP 2003 were invited for publication at IEEE Micro and IEE Proceedings: Computers and Digital Techniques.

Important deadlines:

Abstract due: **July 1, 2004;**

Submission due: **July 8, 2004;**

Acceptance notification: **August 1, 2004;**

Final version due: **August 15, 2004**

For up-to-date workshop information: <http://dna.ucsd.edu/wasp04>