

CALL FOR PAPERS
Computer Arithmetic
IEEE Transactions on Computers
Special Section
September Issue of 2008

IEEE Transactions on Computers seeks original manuscripts for a Special Section on Computer Arithmetic scheduled to appear in **the September issue of 2008**.

Computer arithmetic is fundamental to the design of general-purpose and application-specific processors. Novel arithmetic algorithms and hardware designs are needed to satisfy the requirements of numerically-intensive applications in a variety of areas including scientific computing, cryptography, multimedia, graphics and digital signal processing. Specialized number representations and encodings of these play a significant role in the design of efficient arithmetic algorithms and their implementations. Thus also understanding fundamental properties of finite precision number systems is essential in the engineering of efficient arithmetic algorithms, as well as the available and emerging technologies are important for the design, choice and implementation of such algorithms.

Topics of interest are recent advances in all aspects of computer arithmetic, including, but not limited to:

- Arithmetic processor design and implementation;
- Arithmetic algorithms and their analysis;
- High-performance arithmetic units and systems;
- New floating-point units and systems;
- Foundations of number systems and arithmetic;
- Implementations of arithmetic units using reconfigurable logic;
- Verification, testing and error analysis for computer arithmetic;
- Standards for number representations and arithmetic;
- Elementary and special function evaluation;
- Decimal arithmetic
- Low power arithmetic; and
- Applications of computer arithmetic in cryptography, DSP, multimedia, data compression, graphics, etc.

Submitted articles must not have been previously published or currently submitted for journal publication elsewhere. As an author, you are responsible for understanding and adhering to our submission guidelines. You can access them by clicking on <http://www.computer.org/mc/tc/author.htm>. Please thoroughly read these before submitting your manuscript.

Please submit your paper to Manuscript Central at <http://cs-ieee.manuscriptcentral.com/>. Please feel free to contact the Peer Review Supervisor, Suzanne Werner at swerner@computer.org or the guest editors at kornerup@imada.sdu.dk, paolo.montuschi@polito.it, Jean-Michel.Muller@ens-lyon.fr, eschwarz@us.ibm.com if you have any questions. Please note the following important dates.

Important dates:

Submission Deadline: July 22, 2007

Reviews Completed: November 30, 2007

Major Revisions Due (if Needed): January 13, 2008

Reviews of Revisions Completed (if Needed): March 14, 2008

Minor Revisions Due (if Needed): April 6, 2008

Notification of Final Acceptance: April 22, 2008

Publication Materials for Final Manuscripts Due: April 30, 2008

Please address all other correspondence regarding this special issue to Guest Editors **P. Kornerup, P. Montuschi, J.-M. Muller, E. Schwarz**.

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