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**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.

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**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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