

CALL FOR PAPERS
Networks-on-Chip: Modeling, Analysis and Optimization
IEEE Transactions on Computers
Special Section
August Issue of 2008

IEEE Transactions on Computers seeks original manuscripts for a Special Section on Networks-on-Chip (NoCs) scheduled to appear in **the August issue of 2008**.

Systems-on-Chip designed at nanoscale will soon contain billions of transistors. Consequently, the traditional approaches based on using buses and point-to-point communication architectures become less attractive for systems where dozens, and soon hundreds, of pre-designed IP cores need to be assembled together into chips with complex functionality. In contrast to these methods, the NoC architectures consist of heterogeneous cores connected through an interconnection network. Hence, communication between the nodes is achieved by routing packets rather than wires. As a result, the NoC approach represents a highly scalable communication alternative where modularity and standard network interfaces facilitate reusability across many different applications.

Starting from these overarching ideas, this special section aims at exploring the concept of “network” in the context of multiprocessor Systems-on-Chip. Topics of interest are recent advances in all aspects of NoCs, including, but not limited to:

- Synthesis, mapping, routing, scheduling
- Modeling and performance analysis
- Low-power, reliability, and fault-tolerant issues
- Resource and QoS management. Reconfigurability.
- Programming models and protocols
- Synchronous and asynchronous communication. Clocking issues
- Testing and benchmarking
- Design flows and tools
- Case studies and prototypes
- Applications to multimedia, games, automotive, nano-systems, 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 Editor at radum@cmu.edu, if you have any questions. Please note the following important dates.

Important dates:

Submission Deadline: July 2, 2007

Reviews Completed: October 15, 2007

Major Revisions Due (if Needed): December 14, 2007

Reviews of Revisions Completed (if Needed): January 30, 2008

Minor Revisions Due (if Needed): February 29, 2008

Notification of Final Acceptance: March 14, 2008

Publication Materials for Final Manuscripts Due: April 4, 2008

Please address all other correspondence regarding this special issue to Guest Editor **R. Marculescu**.

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