

**Special Section Call for Papers: IEEE Transactions on Computer-Aided
Design of Integrated Circuits and Systems (TCAD)
PAR-CAD: Parallel CAD Algorithms and CAD for Parallel
Architectures/Systems**

Description:

The advent of multicore architectures and systems has created an impetus for developing Computer-Aided Design (CAD) algorithms and design automation (DA) tools specifically for such platforms. Indeed, most existing CAD flows and DA tools assume a sequential underlying computing paradigm and do not exploit the availability of parallel computing resources. Furthermore, such parallel architectures/systems require a complete revamp of DA tools that need to address scalable solutions for modeling, analysis, and optimization for multicore systems. Finally, from an application perspective, emerging nano and biological applications require CAD tools for their modeling, analysis, and optimization. Due to their sheer complexity, such systems require fast and scalable tools that take advantage of the available parallel resources existing in current and future platforms.

The IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems (TCAD) welcomes original contributions that address these and other related issues. More specifically, research papers with in-depth development and coverage on the following topics are of particular interest:

1. Novel parallel CAD algorithms
2. Hardware-specific parallel acceleration of CAD applications
3. Design automation and architecture exploration for multi-core system design
4. Parallel runtime optimization and support for CAD
5. Parallel algorithms for emerging nano and biological CAD applications

Submissions:

Authors are encouraged to submit high-quality research contributions in areas mentioned above, or other areas related to parallel CAD algorithm implementation or CAD for parallel architectures/systems. In cases where the submission is an extended version of one of more previously published papers (including conference papers), please identify clearly the additional material from the original paper(s) in your submitted manuscript. All manuscripts are subject to standard IEEE Transactions on CAD review process. Prospective authors should submit their manuscripts electronically on the TCAD Web site: <http://tcad.polito.it>. Authors should clearly identify their papers as submissions for the "Special Section on PAR-CAD 2010" on their manuscript and use the prefix "PAR-CAD 2010:" before their paper title during the review process. Instructions on how to submit a paper can be found at <http://tcad.polito.it>.

Guest Editors:

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Dates:

Submission due: January 30, 2011

Notification: July 30, 2011

Final paper due: August 10, 2011