CALL FOR PAPERS
IEEE Transactions on CAD Special Section on
Physical Design Techniques for Advanced Technology Nodes

IEEE Transaction on Computer Aided Design (TCAD) seeks original manuscripts for a special section on **Physical Design Techniques for Advanced Technology Nodes.**

Advanced technology nodes bring forward new challenges in design of Integrated Circuits (ICs) which must be addressed by developing new physical design techniques and algorithms. From a physical design perspective these challenges stem from many factors such as more complex manufacturing design rules, cell pin access in technologies utilizing multiple patterning and FinFETs, various types of restrictions and blockages on the routing layers, and complexity of the physical floorplan for example due to irregular shapes of placeable areas.

Examples of physical design algorithms which need to be revised or completely redesigned to account for the above factors include place and route algorithms to address the routability challenge, and interconnect timing and power optimization techniques in light of significant restrictions on how routing resources may be used. Physical design algorithms may further need to be redesigned to address these challenges in emerging technologies such as 3D ICs.

The IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems (TCAD) welcomes original contributions that address the above and other related issues. More specifically, research papers with emphasis on the following topics are of particular interest:
- Physical design techniques targeting routability of Integrated Circuits
- Physical design techniques for advanced manufacturing options such as multiple patterning
- Signal and clock optimization techniques in the presence of irregular routing and placeable areas
- Impact of the above factors within physical design of emerging technologies such as 3D IC

Submission Guidelines: All submitted manuscripts must (i) conform to TCAD's normal formatting requirements and page limit (14 pages for regular-length papers and 5 pages for short papers); (ii) incorporate at least 30% of original (i.e., not previously published) material, if the work has already been published in a conference; (iii) be submitted online at http://mc.manuscriptcentral.com/tcad; (iv) add to the title the prefix "PD14".

In your cover letter, please clearly list any preliminary versions of this work (e.g., conference versions or versions submitted to other journals/conferences) and describe how this manuscript differs from those versions. Please also justify how the manuscript fits the above theme. Manuscripts that do not fit the theme will be returned without reviews.

Please note the following important dates:
- **Submission Deadline: July 18, 2014**
- **Reviews Completed: August 15, 2014**
- **Major Revisions Due (if needed): September 19, 2014**
- **Notification of Final Acceptance: December 12, 2014**

For more information, please contact the Guest Editors:

Dr. Cliff C. N. Sze IBM Research csze@us.ibm.com	Prof. Azadeh Davoodi Department of Electrical and Computer Engineering University of Wisconsin - Madison adavoodi@wisc.edu