A MESSAGE FROM THE CHAIR

The DATC has started to gear up for 2010. The first priority was to recruit some new blood to the committee, and I am very pleased to announce that Yuan Xie (Pennsylvania State University), Deming Chen (University of Illinois), and Jinjun Xiong (IBM T.J. Watson Research Center) have accepted my invitation and will be helping us drive the new agenda. Each of them is well accomplished in his field of research. Yuan Xie is a leading expert in 3D integration and has contributed extensively in architectural exploration, design tools, and test methodology for 3D. Deming Chen makes his mark in system-level design automation, but has a keen eye in post-CMOS applications such as nanoelectronic design methodology for nano-FPGAs that targets novel modeling, patterning, synthesis, and architecture building for nanoscale reconfigurable circuits. Jinjun Xiong, a young researcher, has already made tremendous contributions to the area of statistical timing and pioneered the research on “at speed” structural test based on statistical timing. I will be relying on them to lead focus areas close to their heart and to serve on the DATC as potential subcommittee chairs.

We have an exciting agenda ahead of us. We will be building from our strong base of design methodology and microelectronics system education. I will be coordinating with Gary Smith and Dwight Hill to plan a thought-provoking program for the EDP workshop next April. You will hear more details about the workshop from us soon.

Our Events and Initiatives Chair, Andrzej Rucinski, has been tirelessly charting a roadmap for microelectronics education in the global era. He has made tremendous inroads in the emerging countries of Europe, and the DATC will help him extend his reach in Asia. On that front, I am planning to invite participation from design automation luminaries from Asia. In 2010, the DATC will also be shepherding new focus areas, and I will highlight several potential ones in the new year. In my opinion, the design automation community has a breadth and depth of technical know-how that few other research communities can beat. With the worldwide focus on environmental and energy issues, I believe that it will be very fruitful to apply DA techniques to these adjacent areas and make our planet smarter.

As the worldwide economy is recovering, industry, academia, and nations too are seeking synergy and collaboration to maximize return on investment. The DATC can help dissolve some of the boundaries and promote collaboration between these different parties. Technical areas deserve our attention as well. 3D IC is an emerging technology that holds the promise to extend density scaling and enhance chip performance, but a major roadblock is the lack of mature and comprehensive design automation support. The value proposition in hardware design is moving up the stack, and a higher level of abstraction is required to combat the increasing system complexity. If we promote system-level design methodology among university students, we might be developing a new generation of hardware designers and tool developers who will adopt the new paradigm.

At this point, you might be thinking, so many interesting ideas yet so little time. Well, let me invite you to join DATC and help us spur on these initiatives and perhaps come up with even more ideas. If you are interested, please drop me a line at kung@us.ibm.com

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MESSAGE FROM THE EDITOR

David Kung is bringing a fresh approach to the many areas that are arising as huge challenges. Let’s all join in David’s efforts and rekindle the great spirit and drive of the DATC. Join the DATC Team!

Please visit our website at http://www.datc.info, which has links to all our phone meeting minutes as well as to our newsletter, along with links to other DATC resources. Please take some time to critique the site; I would very much appreciate your suggestions.

Joe Damore
Newsletter Editor

CALENDAR

Technology Conference 2010
6th International Conference on Technology, Knowledge and Society
15–17 January 2010
Freie Universitat Berlin, Germany
http://www.technoloogy-conference.com

24–26 February 2010
Iguacu Falls, Brazil
http://www.int.ufrgs.br/lascas

11th International Symposium & Exhibits on Quality Electronic Design (ISQED 2010)
22–24 March 2010
San Jose, California
http://www.isqed.org

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2009 Editorial Calendar

JANUARY/FEBRUARY: SEMANTIC SCIENTIFIC KNOWLEDGE INTEGRATION
Concurrent with the growing demand for new information technology for scientific research is a growth in semantic technologies. This issue will report on the state of the art in semantic e-science, focusing on research bridging the semantic-technologies and scientific-information-technology communities in the area of knowledge integration.

MARCH/APRIL: AI & CULTURAL HERITAGE
This issue will explore the problems and solutions of cultural heritage in the digital age. To what extent can computers, and particularly knowledge-based technologies, facilitate authentication, preservation, and archiving of physical and digital artifacts?

MAY/JUNE: AGENTS & DATA MINING
The nature and complementarity of agents and data mining foreshadows the increasing interaction and integration between these two vigorous areas. This issue will present research demonstrating interaction between agents and data mining that produces mutual enhancement and superintelligent techniques and synergism.

JULY/AUGUST: HUMAN-LEVEL INTELLIGENCE
This issue will present research that increases our ability to build broad models of human intelligence or to engineer intelligent systems with many different human-like cognitive abilities.

SEPTEMBER/OCTOBER: TRANSFORMING E-GOVERNMENT AND E-PARTICIPATION
An interesting and demanding application domain and testbed for emerging information systems technologies is e-government and e-participation. Advancements in this area could also improve democracy, active participation, and public-service delivery. This special issue will bring together researchers from these different fields and e-government and e-participation communities, covering areas of common interest.

NOVEMBER/DECEMBER: SOCIETY ONLINE
A significant proportion of everyday life in many countries is spent online. This issue will explore how people and organizations behave online and how the design of the Web of the future can ensure that a system on which democracy and commerce depends will remain stable and pro-human.

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