Welcome to ICCD’99

Welcome to the 1999 International Conference on Computer Design! This year is the seventeenth meeting of this conference, the fifth to be held in Austin, Texas USA. ICCD is a multidisciplinary conference, bringing together researchers and developers from around the world to present their latest results in five areas relating to computer design; Architecture and Algorithms, Design and Technology, Integrated Systems, Tools and Methodology, and Verification and Test.

ICCD has a proud tradition of participation from the top academic institutions and high-technology companies worldwide. For 1999, the program includes 107 technical presentations from 14 different countries. Of the 220 papers originally submitted to the conference, the program committee selected 71 as regular papers (32%), 19 as poster papers (9%). The conference also includes eight invited papers, two embedded tutorials, six invited talks and one panel discussion. ICCD is also pleased to host the “1999 Workshop on Hardware Support for Objects and Microarchitectures for Java”. This workshop is held at the conference site on October 9th, one day before the ICCD program begins. The workshop provides a forum for researchers to present their very latest results and works in progress in the exciting new area of Java processors and microarchitectures. The proceedings for the workshop is available under separate cover.

The ICCD program begins with a dual presentation from one of the most influential academic research centers in the United States, at the University of California at Berkeley. Alberto Sangiovanni-Vincentelli will deliver a keynote speech titled “System Design: Traditional Concepts and New Paradigms” and will discuss how system design practices have changed in response to increasing performance, quality safety, cost and time-to-market pressures. Richard Newton will then deliver an overview of the MARCO/DARPA Gigascale Silicon Research Center, a multi-university, high-profile research program that is not only helping to define the next-generation of semiconductor technology, but is also helping to reshape and redefine how academic research is performed. On Tuesday, Uri Weiser of the Intel Texas Design center, will deliver a plenary speech “MicroProcessor Architecture; Trends and Directions.” And Wednesday’s plenary will be given by Harvey Cragon of the University of Texas at Austin, “Forty Five Years of Computer Architecture — All That’s Old is New Again.”

Embedded systems are an important focus for this year’s ICCD and two tutorials relating to embedded technology are included in this year’s conference at no additional cost to the participants. Wayne Wolf from Princeton University will deliver a two-hour tutorial on “CAD Techniques for Embedded Systems-on-Silicon” on Monday. On Tuesday Ronald Stence from Motorola and Alan Weiss from EEMBC will present a ninety-minute tutorial on “Benchmarking, Selection and Debugging of Microcontrollers.” Media and signal processing is also highlighted in the program with two invited special sessions. Texas Instruments will present three papers on Tuesday on the design, architecture and implementation of their digital signal processors. Philips Research Laboratories will present four papers on Wednesday on the TriMedia CPU64 processor. Laurence R. Simar, Jr. from Texas Instruments will give the luncheon speech on Monday, “Evolution of DSP Architecture.”

A traditional element of ICCD, the Monday Night Panel Discussion returns for 1999, with a lively debate planned on the topic of timing analysis and optimization. The panel, titled “Iteration-Free Timing Closure”, will be moderated by Al Davis from the University of Utah. Panelists include Jacques Benkoski from Monterey Design, Joe Hutt from Magma Design Automation, Michael Jackson from Avant! Corporation, Sanjiv Kaul from Synopsys Corporation, Paul McClellan from Cadence Design Systems and Kevin Walsh from Sapphire Design Automation.
We would like to thank the Technical Program Committee and all of the reviewers for their hard work preparing the program. The publications chair, Chin Long Wey, local arrangements chair, Dan Elgin, and the other members of the Organizing Committee deserve special recognition for their efforts. Special thanks to the IEEE Computer Society and IEEE Circuits and Systems Society for their sponsorship and support. We thank Texas Instruments and Intel for their generous sponsorship of the conference luncheons. We gratefully thank all our authors, speakers and session chairs. Finally a special word of thanks to you, our conference attendees. We’ve worked hard to pack more technical bang into our short program without compromising the informal meeting time provided by coffee breaks and the receptions. We wish you a productive, informative and enjoyable conference experience.

*Andreas Kuehlmann, General Chair*

*Craig Chase, Technical Program Chair*