Message from the Symposium Chairs

Welcome to CODES'02!

This meeting marks the tenth anniversary of the forum that traces its roots to the first Hardware/Software Codesign Workshop held in Estes Park in fall 1992. A retrospective over a decade of the meeting reveals a strong and vibrant community of researchers that took the very first bold steps into uncharted territory. With researchers coming together from such diverse backgrounds as logic design, artificial intelligence and software engineering, the convergence was also as much marked by technical challenges as by the cultural understanding of what goes on the other side. The yin-and-yang of hardware and software gyrated around technical issues such as system modeling, system partitioning and synthesis. Through discussions the community cross pollination was especially remarkable, with software community coming to appreciate that "software synthesis" has little to do with erstwhile automatic program generation but optimization of software from formal models and specifications much the same way logic synthesis results in optimized logic netlists. That software can be optimized (against multiple competing criteria) much as hardware is routinely optimized by EDA tools was as much a revelation as the understanding that hardware/software codesign is really about systems engineering rather than application of a chain of automatic computer-aided design tools. Indeed, the discussions brought up similarities and lessons learnt in complex system designs from submarines to the Space Shuttle. This community was still shy of using the term "Embedded Systems," for in those days embedded systems often referred to microcontroller-based systems marked by low criticality, low performance and cost sensitive designs. Over a decade, however, as mainstream computing has increasingly become a part of our daily lives -- and indeed often incorporates components and technologies that are on the cutting edge of performance and functionality achievable today -- that reticence has been abandoned. Embedded systems, particularly those for microelectronic on-chip implementations, have come to characterize a major component of the meeting. CODES sessions in recent years have addressed issues such as architectural design, design space exploration and validation of such systems. Energy efficiency and performance modeling (including real-time performance) have become major research themes.

We are happy to report that after ten active years of discussions, presentations and follow-ups, the CODES forum remains an active and vibrant community. We received a total of 76 papers out of which 25 papers were selected for full presentations and 11 papers for short presentations after a thorough review process that included, on average, 4 to 5 reviews per paper. As always, the technical program at CODES is actively put together through discussions within the entire technical program committee of the symposium. It is a tribute to you -- the audience, authors and participants -- that the CODES keeps going strong. As we complete ten years of an active community participation, given the momentum and relevance of the technical challenges that we face in putting together complete systems (particularly for on-chip implementations) we are confident that CODES can look forward to many more years of technical contributions.

We would like to take this moment to especially thank members of the technical program committee for their dedication, sincerity and fairness in the paper review process and their feedback in putting together this program. Many thanks to IEEE Circuits and System Society for their financial support that makes participation of the students possible through travel grants. Our thanks to Ron Harber for his help with local arrangements. Many thanks to Melanie Sanders for pulling together the digest and to Adrienne Griscti, Program Coordinator at ACM, for its timely publication. But most importantly, we thank you, the attendee, for your participation in the technical program. We hope you like the program.

Rajesh Gupta
Sri Parameswaran
Technical Program Chairs

Joerg Henkel
Sharon Hu
General Chairs
10th International Symposium on Hardware/Software Codesign

CODES 2002

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Kees Vissers, TriMedia Tech. Inc. & UCB
Wayne Wolf, Princeton University, USA
Hiroto Yasuura, Kyushu University, Japan
We gratefully acknowledge the time and energy put into reading and reviewing the papers by all the reviewers.

Andrea Acquavia
Bilge Saglam Akgul
Christopher Andrews
Tamal Basu
Davide Bertozzi
Axel Braun
Oliver Bringmann
Andy Cassidy
Ozgur Celebican
Chris Chang
Elaine Cheong
Juan del Cuvillo
Alban Douillet
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Fabrizio Ferrandi
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Yumin Zhang
Dirk Ziegenbein
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