Message from the Chairs

Welcome to CODES+ISSS 2003!

After over a year of preparation and hard work on the part of the organizing committee and the program committee, it is our great pleasure to introduce you the technical program of the First International IEEE/ACM/IFIP Conference on Hardware/Software Co-design and System Synthesis. This conference represents the unification of the erstwhile CODES and ISSS communities. Both the International Symposium on Hardware/Software Codesign (CODES) and the International Symposium on System Synthesis (ISSS) have been active forums with over a decade of continuous community participation and technical community building in all aspects of embedded systems hardware and software. During this period, the community also saw the emergence of a number of new forums examining specific related areas: from compilers/architectures (CASES), software (EMSOFT) to validation and testing (HLDVT). These forums are a living testament to a growing thriving community in embedded systems.

Being the oldest forums, CODES and ISSS represented the greatest momentum as reflected by the number of submissions and attendee participation. There was also a great sense of camaraderie between the two communities: over one-third of technical program committee members in one forum could also be found in the other one. As an acknowledgment of this relationship between the two forums, we started an email discussion in May 2002 on the possibility of co-locating the two events. What followed the initial email was a torrential discussion on various possibilities including the merger of two events into creating the primary event in embedded systems design. This discussion led to a thorough examination of the effectiveness of each of the two forums and the possibility of leveraging these into creating a single forum that would reflect the best and brightest of the technical advances in the broad areas of embedded systems and system-level design. This forum – it was envisioned – would provide the greatest meeting point for industry and academia looking to make a direct impact on the industry practice in system design. Following open meetings at DAC and ISSS in 2002, we converged on the guidelines and organizing committee for the new forum. A “transition committee” of the CODES and ISSS volunteers was set up to guide the merger process and the formation of the new community. Two separate polls were conducted to gather detailed community feedback on substantive issues, such as the scope of the meeting, the structure of the meeting and, of course, the naming for the new event. We reached consensus on almost all items, though we decided to postpone the invention of a new name for the meeting in favor of the more straightforward CODES+ISSS.

As you attend the conference program and read through these proceedings, we are confident that one thing would be abundantly clear: the new combined event is much greater than the sum of the parts. This is reflected in many ways from the breadth of the program, and the depth of presentations to the diversity of the conference attendees and its sponsors. The CODES+ISSS call for papers received 143 full submissions. The TPC led by TPC Co-Chairs, Alex Orailoglu and Pai Chou, organized the massive review process where on an average each paper received 5 substantial reviews (on an average 3-4 pages of reviews for each paper). Each of the submitted papers went through a close scrutiny of the reviews received and the overall reviewer opinion. A subset of the papers – composed of the papers that were evaluated to be marginal and/or exhibiting excessive divergence in reviewer opinions – was selected for a newly introduced rebuttal process. The authors were invited to read the reviews and respond to specific questions prior to the program committee meeting. An ad hoc subcommittee with program committee members outside the original reviewers subsequently examined
the reviews and the rebuttal to make a recommendation to the whole Program Committee for each such paper. Following a marathon 11-hour TPC meeting in early June 2003, held under the strictest code of conduct on conflict of interest rules, the committee identified, based on the perceived strength of the technical contribution, 30 regular papers. Four more papers that were perceived to be highly innovative were additionally selected for presentation in an “innovative work-in-progress” session. We are convinced that the collection of papers selected represents substantial advances in theory or in practice in the area of embedded systems, and hope that you would agree with our assessment.

The CODES+ISSS conference this year also features a workshop, named ESTIMedia or the First Workshop on Embedded Systems for Real-Time Multimedia. This workshop is a result of our efforts to enhance the academia-industry participation by providing opportunities for discussions on specific application areas. The ESTIMedia workshop will provide a venue for bringing together experts in multimedia systems design, theory and practice. Under the leadership of ESTIMedia general chair, Hiroto Yasuura and technical program chairs Gerhard Fohler and Radu Marculescu, the response to ESTIMedia call for papers has been tremendous. This first workshop received 38 submissions, many of very high quality. This is clearly a testament to the importance of this emerging topic area. We thank Petru Eles for driving the process of workshop selection and its organization. We hope to welcome additional workshops and synergistic events like ESTIMedia, in the future.

An ambitious conference such as CODES+ISSS’03 could not have come about without the help and support from a large number of volunteers and supporters. Foremost among them are the transition committee members (listed on a separate page) who generously gave their time and worked with the conference organizers in providing timely and measured guidance that allowed us to keep the conference charter broad and in step with the exciting developments in the area. We thank our corporate supporters for their participation and financial support that makes various elements of the conference social program, awards and student participation possible. We sincerely thank our conference managers MP Associates for their help with conference logistics, Adrienne Griscti at ACM, Lisa Tolles at Sheridan Printing, and Kathy Preas at ACM/SIGDA for their support in putting together the conference proceedings and CD-ROMs. Our special thanks to Melanie Sanders for organizing the weekly committee meetings of the conference organizers and providing timely meeting minutes to a large number of volunteers. Finally, but most importantly, our sincere thanks to you, the conference attendee, for your participation and in making all this effort worthwhile.

As we close, we would like to express our wishes that you will all find CODES+ISSS not only highly informative and valuable but also enjoyable. We hope that you will have a chance to enjoy the beautiful Newport Beach area and its weather this October. We look forward to welcoming you to Newport Beach this year and also hope to see you in Sweden in 2004!

Rajesh Gupta
Yukihiro Nakamura
General Co-Chairs

Pai Chou
Alex Orailoglu
Technical Program Co-Chairs