Welcome to DSD 2000, the Euromicro workshop on Digital Systems Design. The topic addressed in this symposium is the first that was established within Euromicro in the summer of 1974, when the idea of setting up an European organisation to foster research on microelectronics and computing along the lines of the then emerging paradigm of a “microprocessor” was first conceived. Year after year this symposium has been witness to a plethora of activities in digital systems design that have contributed indeed to the advance of information technologies in the world.

The Euromicro DSD and PDP communities are also the main driving forces behind the Journal of Systems Architecture that ten years ago replaced the historic Microprocessing and Microprogramming journal.

But the world keeps spinning and Digital Systems Design is facing new challenges as it enters a new century. The DSD symposium will grow to a full conference next year and will establish within itself new specialisation workshops. With this move, DSD will be able to accommodate many more and very much focused papers reporting on cutting-edge research work conducted worldwide in the area, while keeping and extending its 26 year record of high quality papers.

Architectures, methods, tools, circuit design, logic and higher level synthesis, special architecture synthesis, hardware/software co-design, field-programmable and reconfigurable design, system on chip design, platform design and virtual component reuse methods, design languages, front-end and back-end design flows, deep submicron effects aware circuit design and optimization, signal integrity issues, low power consumption design, very high speed design, testability of very dense ICs... are probably among the current core topics of DSD. These techniques are being developed to cope with demanding application fields for digital systems design in multimedia, datacommunications circuits, telecommunication circuits, wireless communications, digital signal processors, microprocessors, memories and peripheral circuits, data acquisition, digital instrumentation and control circuitry, electrooptical interfaces or imaging circuitry to name a few.

This year we received 85 papers in the required full paper format, many of them of a very high quality. After the review process the DSD Programme Committee gathered in Budapest could only accept 50 papers filling the available time slots of the Conference. In addition to that the Committee scheduled three keynote speakers of great interest to the Digital Systems Design community: Yale Patt, Hugo De Man and Pierre Paulin. You will find a summary of their keynotes in these proceedings, but unless you attend their presentations you sure will miss the very enriching and rewarding experience of listening and learning from these top “digital design engineers” that have contributed so much to the field.

I would like to thank all persons who have cooperated in making once again DSD a success. In particular Krzysztof Kuchcinski and Lech Józwiak from the DSD Steering Committee, and all the Programme Committee members and reviewers listed separately in the proceedings, for their important role in the paper selection process that has lead to a high quality Symposium. And above all to the authors from 31 countries that submitted a paper to DSD and in particular to those of them whose work is reported in these proceedings. Special thanks also to Ferenc Vajda, General Chair of the Euromicro Conference in Maastricht, and Mario Stevens as Organising Chair. I could not end these lines without acknowledging the assistance and help of my colleague Pedro P. Carballo, and Enrique Montesdeoca, Jesús Pacho and Agustín Quintana, from the IUMA technical staff, in all matters related to organising the databases, and the electronic call, paper submission and review processes and for help and support provided to authors in editing or assisting in the FTP procedures to the IEEE web site for DSD.

In the coming years DSD will take place in Warsaw’01, Dortmund’02, Rennes’03 and Madrid’04. I look forward to all those events. Have a great Euromicro DSD Symposium, in its 26th anniversary. And enjoy Maastricht and The Netherlands, our beautiful host this year.
Workshop on Digital Systems Design

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