

Proceedings

2001 International Conference on

Parallel Architectures and Compilation Techniques

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2001 International Conference on Parallel Architectures and Compilation Techniques

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General Chair's Message

Welcome to lovely Barcelona. The city represents a unique combination of beauty, culture, history, charm and advanced technology, and fosters an ideal environment for the enjoyable and stimulating exchange of ideas. From the old-world allure of the gothic quarter to the more modern, abstract appeal of the works of Gaudi, Barcelona will captivate you with a diversity of interesting places and museums to visit, charming people to meet, peaceful places to relax or simply the relaxing atmosphere of the beautiful Mediterranean beaches. Just to finish, the catalan cuisine is one of the most select and varied in the Mediterranean area and for this reason we suggest trying it in the many restaurants of the city.

The conference has been possible because of the many people who have collaborated in its making. I would like to thank all of them. In particular, I would like to thank the Steering Committee for their help and support in all the aspects of the conference and in particular to Kemal Ebcioğlu for his constant tracking of all the organization issues. John Shen, Todd Mowry and the Programme Committee for the high quality programme they have put together. I also want to thank the Tutorials and Workshops chairs, Mikko Lipasti and, Gabby Silberman and Evelyn Duesterwald for their thoughtful choice of topics. The rest of chairs also did a great job; Publicity Chair, Sally McKee; Financial Chair, Josep Torrellas and Publications chair, Guang Gao.

Barcelona is the city of volunteering work. The city still remembers the more than 20,000 volunteers that helped during the Olympic Games of 1992. Although our volunteers were 1,000 times less, they did a work worth that of the 20,000 of 1992. Thanks to all of them! In particular, I want to thank the local arrangements responsables, Larri (Josep-L. Larriba-Pey) and Eduard Ayguadé (also doing the job of conference webmaster), and the rest of the team: Alex Ramírez, Antonio González, Ayose Falcón, Carlos Álvarez, Carlos Molina, David López, Dolors Royo, Enric Gibert, Ester Salamí, Fernando Latorre, Francisco Jesús Sánchez (Suso), Javier Zalamea, Joan Manuel Parcerisa, Jordi Garcia, Jordi Torres, José Ignacio Navarro (Nacho), Josep Llorenç Cruz, Josep Maria Codina, Manel Fernández, Marc González, Marisa Gil, Marta Jiménez, Oliver Santana, Ramón Canal, Toni Juan and all those academic, technical, and administrative members of the Computer Architecture Department of the UPC whose names were not available at the moment of printing these proceedings.

Finally, I would like to thank the local sponsors of the conference: the hosting University "Universitat Politècnica de Catalunya", the "Comisión Interministerial de Ciencia y Tecnología" (CICYT) of the Spanish Government and the "Comissió Interdepartamental de Recerca i Innovació Tecnològica" (CIRIT) of Generalitat de Catalunya. Last, but not least, I want to thank Compaq Spain, IBM Spain and SGI Spain for their generous conference sponsoring and HP Labs., IBM Research, Intel Corp. and Microsoft for providing funding to offer student travel grants.

General Chair

Mateo Valero

UPC, Barcelona

Program Chairs' Message

It is a great honor and a pleasure to introduce this collection of papers for the 2001 International Conference on Parallel Architectures and Compilation Techniques (PACT). In this tenth incarnation of the conference, our focus is once again on cutting-edge interdisciplinary research that spans the areas of computer architecture and compilers.

This year we accepted 26 papers out of the 126 submissions received. Our reviewers wrote over 650 reviews for these papers, for an average of 5.1 reviews per paper. Almost all papers received 5 or more reviews, and no papers received fewer than 3 reviews. A typical paper was reviewed by 3 program committee members and 2 external reviewers who were chosen by program committee members. The entire submission process was handled electronically, and our web-based review forms allowed us to give explicit instructions to the reviewers on how to calibrate their various recommendations.

We added a new question to the review form this year, which was: "Assuming that you were attending the PACT-2001 conference, and basing your answer only on the technical content of the paper (i.e. not the speaking style of the likely presenter, etc.), how excited would you be about attending the presentation of this paper?" The motivation for this question is that one metric of a successful conference is that the technical material in the papers is sufficiently interesting and thought-provoking that the conference attendees won't want to miss any of the talks. (The flipside of this is a conference with papers that may be technically sound, but where the material is boring: it is either sufficiently dry, incremental, or has such a narrow focus that most conference attendees would rather chat in the hallway than attend the talks.) Since we were striving for the former type of conference, we used this question to help capture the excitement level regarding the technical content of the papers.

The program committee meeting was held at Carnegie Mellon University in Pittsburgh on May 12, 2001 with 23 of the 27 program committee members in attendance. At least two (and in most cases three) program committee members in attendance had read or reviewed each paper. We deemphasized the rank ordering of the papers and instead focused on the technical arguments raised by the reviewers. We paid special attention to papers that the reviewers had classified as "new idea" papers, and ones where the reviewers had indicated a strong excitement level about attending the actual presentation of the paper.

A total of 14 papers had members of the program committee as co-authors. These papers were discussed using the "hot seat" model: i.e. in the order in which the members were seated around the meeting table, rather than a rank order. Program committee papers were held to a higher standard than those that did not have program committee co-authors. The outcome of a program committee member's paper was not made public until the very end of the meeting, by which time all final decisions on papers had been made.

There are many people who we wish to thank for making this technical program a success. We begin by thanking the program committee members for their hard work: a typical program committee member wrote 17 or more reviews personally and collected 10 or more reviews from external reviewers, all during the busy final weeks of the academic year. We were impressed not only by the fact that they produced over 98% of the solicited reviews during this hectic time, but also by the very high level of intellectual discourse during the meeting itself that made this one of the most pleasant and enjoyable program committee meetings that we can remember. We would also like to give special thanks to Chris Colohan for his invaluable service as the program committee webmaster: Chris's hard work in modifying and developing new scripts for our web-based submission and review systems (which we were very pleased to inherit from Joel Emer) made our lives much easier. We also thank Maury Burgwin for making all of the local arrangements for the program committee meeting. Finally, we especially thank all of the authors who created the technical content that we are very pleased to present to you now.

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Carnegie Mellon University

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