

PREFACE

The international conference *ParCo99* was held in August 1999, i.e. during one of the last few months of the century during which the first electronic and parallel computers were developed. The next millennium will see the increased use of parallel computing technologies at all levels of main stream computing. The majority of computer hardware will use these technologies to achieve higher compute speeds, high-speed access to very large distributed databases and greater flexibility through heterogeneous computing. These developments will result in the extended use of all types of parallel computers in virtually all areas of human endeavour. Compute intensive problems in emerging areas such as financial modelling and multimedia systems will, in addition to traditional application areas of parallel computing, such as scientific computing and simulation, stimulate this development. Parallel computing as a field of scientific research and development will change from a niche position concentrating on solving compute intensive scientific and engineering problems to becoming one of the fundamental computing technologies.

The invited and contributed papers gave a retrospective view of what was achieved in the parallel computing field during the past three decades, as well as a prospective view of expected future developments.

From the many papers submitted just more than one third were selected for presentation at the conference. The presented papers were refereed at and after the conference and those finally accepted for publication are included in these proceedings. Abstracts of all papers of which a full version was not accepted or not available in time are also included.

The editors are indebted to the members of the International Programme Committee, the Steering Committee and the Organising Committee for the time they spent in making this conference such a successful event. Special thanks are due to the staff of the Informatics Department of Delft University of Technology for the excellent way in which they organised the event. In this regard, particular mention should be made of the key roles played by Ruud Sommerhalder (Organising Committee Chair), Dick Epema and Toos Brusse in organising this venture. Without their exceptional support, the conference would not have been such a success.

The Editors are especially indebted to Ruud Sommerhalder for agreeing to also act as Co-Editor of the proceedings. Ruud took on this additional task in spite of all the other organisational tasks he executed.

The organisers are grateful to the various organisations, which financially supported the conference.

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January 2000