# Preface

Parallel Virtual Machine (PVM) and Message Passing Interface (MPI) are the most frequently used tools for programming according to the message passing paradigm, which is considered one of the best ways to develop parallel applications.

This volume comprises 67 revised contributions presented at the Sixth European PVM/MPI Users' Group Meeting, which was held in Barcelona, Spain, 26-29 September 1999. The conference was organized by the Computer Science Department of the Universitat Autònoma de Barcelona.

This conference has been previously held in Liverpool, UK (1998) and Cracow, Poland (1997). The first three conferences were devoted to PVM and were held at the TU Munich, Germany (1996), ENS Lyon, France (1995), and University of Rome (1994).

This conference has become a forum for users and developers of PVM, MPI, and other message passing environments. Interaction between those groups has proved to be very useful for developing new ideas in parallel computing and for applying some of those already existent to new practical fields.

The main topics of the meeting were evaluation and performance of PVM and MPI, extensions and improvements to PVM and MPI, algorithms using the message passing paradigm, and applications in science and engineering based on message passing. The conference included 3 tutorials on advances in PVM and MPI, 6 invited talks on various message passing issues such as advanced use of MPI and PVM and integration of tools and environments, and high performance clusters; and 33 oral presentations together with 34 poster presentations. These proceedings reflect the final results of the meeting.

This final version of the invited talks and presentations has been made possible by the kind contributions of the members of the PVM/MPI '99 program committee. Each paper submitted to the conference has been reviewed by at least two reviewers. We would like to congratulate the reviewers for their efforts.

This conference has received the kind support of the following companies and administrations: Ministerio de Educación y Ciencia, Generalitat de Catalunya, Universitat Autònoma de Barcelona, EuroTools consortium, SGI and Microsoft.

September 1999
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Jack Dongarra
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