

## 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 42 revised contributions presented at the Seventh European PVM/MPI Users' Group Meeting, which was held in Balatonfüred, Hungary, 10–13 September 2000. The conference was organized by the Laboratory of Parallel and Distributed Systems of the Computer and Automation Research Institute of the Hungarian Academy of Sciences.

This conference was previously held in Barcelona, Spain (1999), Liverpool, UK (1998) and Cracow, Poland (1997). The first three conferences were devoted to PVM and were held at the Technische Universität München, Germany (1996), Ecole Normale Supérieure Lyon, France (1995), and University of Rome, Italy (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 existing ideas 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 four tutorials and five invited talks on advances in MPI, cluster computing, network computing, grid computing, and SGI parallel computers and programming systems. These proceedings contain papers on the 35 oral presentations together with 7 poster presentations.

The seventh Euro PVM/MPI conference was held together with DAPSYS 2000, the third Austrian-Hungarian Workshop on Distributed and Parallel Systems. Participants of the two events shared invited talks, tutorials, a vendor session and social events while contributed paper presentations proceeded in separate tracks in parallel. While Euro PVM/MPI was dedicated to the latest developments of PVM and MPI, DAPSYS was a major event to discuss general aspects of distributed and parallel systems. In this way the two events complemented each other and participants of Euro PVM/MPI could benefit from the joint organization of the two events.

Invited speakers of Euro PVM/MPI were Al Geist, Miron Livny, Ewing Lusk, Thomas Sterling, and Bernard Tourancheau.

We would like to express our gratitude for the kind support of Silicon Computers, Microsoft, Myricom, and the Foundation for the Technological Progress of the Industry. Also, we would like to say thanks to the members of the Program Committee for their work in refereeing the submitted papers and ensuring the high quality of Euro PVM/MPI.

September 2000

Jack Dongarra  
Peter Kacsuk  
Norbert Podhorszki

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