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Job Scheduling Strategies for Parallel Processing

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Proceedings

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Preface

This volume contains the papers presented at the fourth workshop on Job Scheduling Strategies for Parallel Processing, which was held in conjunction with IPPS/SPDP '98 in Orlando, Florida, on March 30, 1998. All the papers have gone through a complete refereeing process, with the full version being read and evaluated by five or six members of the program committee in most cases. We would like to take this opportunity to thank the program committee, Stephen Booth, Allan Gottlieb, Atsushi Hori, Phil Krueger, Richard Lagerstrom, Miron Livny, Virginia Lo, Reagan Moore, Bill Nitzberg, Uwe Schwiegelshohn, Ken Sevcik, Mark Squillante, John Zahorjan, and Songnian Zhou, for an excellent job. Thanks are also due to the authors for their submissions, presentations, and final revisions for this volume. Finally, we would like to thank the MIT Laboratory for Computer Science and the Computer Science Institute at Hebrew University for the use of their facilities in preparation of these proceedings.

As multi-user parallel supercomputers become more widespread, job scheduling takes on a crucial role. The number of users of parallel supercomputers is growing at an even faster pace and so there is an increasing number of users who must share a parallel computer's resources. Job scheduling strategies must address this need.

There is a spectrum of groups that are interested in job scheduling strategies for parallel processors. At one end are the vendors of parallel supercomputers who supply the scheduling software for managing jobs on their machines. In the middle are researchers in academia, National Labs, and industrial research labs who propose new scheduling strategies and methods for evaluating and comparing them. At the other end of the spectrum are the users and system administrators of parallel processing facilities who have a set of demands and requirements.

The goal of the workshop was to bring together people from all three groups, in order to exchange ideas and discuss ongoing work. Indeed, many interesting discussions took place, and the workshop was quite lively. We were encouraged by this since we believe it is important to increase communication so that academics work on the right problems and vendors and computation centers make the best use of the novel solutions. We hope these proceedings help parallel supercomputing to achieve its fundamental goal of satisfying the needs of the user.

This was the fourth annual workshop in this series, which reflects the continued interest in this field. The previous three were held in conjunction with IPPS '95 through IPPS '97. Their proceedings are available from Springer-Verlag as volumes 949, 1162, and 1291 in the Lecture Notes in Computer Science series.

Jerusalem, May 1998

Dror Feitelson
Larry Rudolph

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