

## Preface

Clusters of workstations/PCs connected by off-the-shelf networks have become popular as a platform for cost-effective parallel computing. Hardware and software technological advances have made this network-based parallel computing platform feasible. A large number of research groups from academia and industry are working to enhance the capabilities of such a platform, thereby improving its cost-effectiveness and usability. These developments are facilitating the migration of many existing applications as well as the development of new applications on this platform.

Continuing in the tradition of the two previously successful workshops, this 3rd Workshop on Communication, Architecture and Applications for Network-based Parallel Computing (CANPC'99) has brought together researchers and practitioners working in architecture, system software, applications and performance evaluation to discuss state-of-the-art solutions for network-based parallel computing systems. This workshop has become an excellent forum for timely dissemination of ideas and healthy interaction on topics at the cutting edge in cluster computing technology.

Each submitted paper underwent a rigorous review process, and was assigned to at least 3 reviewers, including at least 2 program committee members. Each paper received at least 2 reviews, most received 3 and some even had 4 reviews. We have selected the 15 best papers for this workshop. We evaluated not only the technical content of each submission, but also the potential for stirring debate and bringing about controversial discussions. This CANPC workshop was sponsored by the IEEE Computer Society, and was held in conjunction with the Fifth International Symposium on High Performance Computer Architecture (HPCA-5), Orlando, Florida. The workshop itself took place on January 9, 1999.

Several people deserve credit for the success of this workshop. Dhabelaeswar Panda and Craig Stunkel, the organizers of the previous two CANPC workshops, deserve special mention for guiding us along the way. We would like to thank all the authors who submitted papers and the program committee for doing an excellent job of helping us select the papers with detailed and timely reviews. Thanks are also due to the HPCA-5 organizing committee (D. Agrawal, J-L. Gaudiot and B. Lecussan in particular) for their support of this workshop. Ajay Hampapur and Shailabh Nagar did a wonderful job of handling the electronic submission and review process at Penn State. Finally, we would like to thank the editorial staff of Springer-Verlag for agreeing to publish a final version of this proceedings.

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