Lecture Notes in Computer Science 2858

Edited by G. Goos, J. Hartmanis, and J. van Leeuwen

Springer
Berlin
Heidelberg
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High Performance Computing

5th International Symposium, ISHPC 2003
Tokyo-Odaiba, Japan, October 20-22, 2003
Proceedings

Springer

Volume Editors

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Cataloging-in-Publication Data applied for

A catalog record for this book is available from the Library of Congress

Bibliographic information published by Die Deutsche Bibliothek
Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliographie; detailed bibliographic data is available in the Internet at <http://dnb.ddb.de>.

CR Subject Classification (1998): D.1, D.2, F.2, E.4, G.1-4, J.1-2, J.6, I.6

ISSN 0302-9743
ISBN 3-540-20359-1 Springer-Verlag Berlin Heidelberg New York

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Springer-Verlag Berlin Heidelberg New York
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http://www.springer.de

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Printed in Germany

Typesetting: Camera-ready by author, data conversion by Steingräber Satztechnik GmbH, Heidelberg
Printed on acid-free paper SPIN: 10963302 06/3142 5 4 3 2 1 0

Preface

The 5th International Symposium on High Performance Computing (ISHPC–V) was held in Odaiba, Tokyo, Japan, October 20–22, 2003. The symposium was thoughtfully planned, organized, and supported by the ISHPC Organizing Committee and its collaborating organizations.

The ISHPC-V program included two keynote speeches, several invited talks, two panel discussions, and technical sessions covering theoretical and applied research topics in high–performance computing and representing both academia and industry. One of the regular sessions highlighted the research results of the ITBL project (IT–based research laboratory, http://www.itbl.riken.go.jp/). ITBL is a Japanese national project started in 2001 with the objective of realizing a virtual joint research environment using information technology. ITBL aims to connect 100 supercomputers located in main Japanese scientific research laboratories via high–speed networks.

A total of 58 technical contributions from 11 countries were submitted to ISHPC-V. Each paper received at least three peer reviews. After a thorough evaluation process, the program committee selected 14 regular (12-page) papers for presentation at the symposium. In addition, several other papers with favorable reviews were recommended for a poster session presentation. They are also included in the proceedings as short (8-page) papers.

The program committee gave a distinguished paper award and a best student paper award to two of the regular papers. The distinguished paper award was given for "Code and Data Transformations for Improving Shared Cache Performance on SMT Processors" by Dimitrios S. Nikolopoulos. The best student paper award was given for "Improving Memory Latency Aware Fetch Policies for SMT Processors" by Francisco J. Cazorla.

The third International Workshop on OpenMP: Experiences and Implementations (WOMPEI 2003) was held in conjunction with ISHPC–V. It was organized by Mitsuhisa Sato of University of Tsukuba, and Eduard Ayguadé of UPC. The ISHPC–V program committee decided to include the WOMPEI 2003 papers in the symposium proceedings.

We hope that the final program was of significant interest to the participants and served as a launching pad for interaction and debate on technical issues among the attendees. Last but not least, we thank the members of the program committee and the referees for all the hard work that made this meeting possible.

October 2003 Alex Veidenbaum

Foreword

I wish to welcome all of you to the proceedings of International Symposium on High Performance Computing 2003 (ISHPC–V), an event we were delighted to hold in Odaiba, a new city area of Tokyo. ISHPC 2003 was the fifth in the ISHPC series, ISHPC 1997 (Fukuoka, November 1997), ISHPC 1999 (Kyoto, May 1999), ISHPC 2000 (Tokyo, October 2000) and ISHPC 2002 (Kyoto, May 2002). The success of these symposia proves the importance of this area and indicates the strong interest of the research community. I am very pleased to serve as General Chair at a time when high–performance computing (HPC) plays a crucial role in the era of the "IT (Information Technology)" revolution.

The objective of this symposium was to provide a forum for the discussion of all aspects of HPC (from system architecture to real applications) in a more informal and friendly atmosphere. This symposium included excellent invited talks and workshops as well as high–quality technical papers. We hope that all the participants enjoyed not only the symposium but also the stay in Odaiba.

This symposium would not have been possible without the significant help of many people who devoted tremendous time and efforts. I thank all of those who worked diligently to make ISHPC 2003 a great success. In particular I would like to thank the Organizing Chair, Hideharu Amano of Keio University, and the Organizing Committee members for their great contribution to the planning and organization of ISHPC 2003. I would also like to thank the Program Chair, Alex Veidenbaum of UCI, the Program Co-chairs, Nicholas Carter of UIUC (architecture track), Jesus Labarta of UPC (software track), Yutaka Akiyama of CBRC (applications track), and the program committee members for their contribution to a technically excellent symposium program. Thanks are due to the Workshop Chairs, Mitsuhisa Sato of the University of Tsukuba and Eduard Ayguadé of UPC for organizing the International Workshop on OpenMP: Experiences and Implementations (WOMPEI 2003) as usual.

The ITBL special session was proposed and organized by Masahiro Fukuda of NAL. His contribution was very timely, as everybody is now looking at Grid Computing, and this made the symposium very practical. A last note of thanks goes to the people who were involved with the ITBL project.

October 2003

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General Chair

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