Welcome to the 2005 International Conference on Parallel Processing (ICPP-2005) and to the beautiful city of Oslo. It is our pleasure to present the proceedings for this conference, the oldest in the field of parallel processing and one of the leading forums for the presentation of forefront research in this field.

Recent trends in the evolution of computing systems clearly show that the performance of uniprocessor systems is reaching its ceiling, being limited by both heat dissipation and data dependencies. Therefore, there has been a renewed interest in parallel processing. As a consequence of this renewed interest and also thanks to the excellent work of the Publicity Co-Chairs, the number of submissions this year was significantly higher than in previous editions of this conference.

This year, the conference received 241 submissions from over 20 countries. Each submission was assigned to at least one of the 13 Vice Chairs (VCs) of the conference to obtain at least 3 reviews. Some interdisciplinary papers were assigned to two VCs to obtain reviews from two different perspectives. The meeting of the VCs was held in Raleigh on March 12, 2005 to discuss the submissions. The VCs thoroughly evaluated the papers, providing their own insights in addition to the reviews delivered by the corresponding PC members. Special attention was paid to papers with conflicting reviews, providing additional on-site reviews when necessary. Differences in harshness among areas were also considered in order to make a fair decision. The result is the outstanding technical program with the 69 papers contained in these proceedings. These papers present state-of-the-art work in both traditional and emerging areas of parallel processing, including architecture, compilers, algorithms and applications, resource management, tools, cluster and grid computing, mobile computing, peer-to-peer technology, multimedia and network services, just to name a few. We are thankful to all the authors who submitted their papers to the conference. We are also thankful to the members of the program committee and to the external reviewers for their efforts to read and evaluate the papers within such a short period of time. The high quality of the papers in these proceedings is a testament to the hard work and dedication of all the authors and of all the reviewers.

The achievement of a successful conference relies on many people, whose efforts and hard work must be acknowledged. Olav Lysne and Lionel Ni, the conference’s General Co-Chairs, provided invaluable support, guidance and constant encouragement. The VCs, Angelos Bilas, Eduard Ayguade, Yavuz Oruc, Anand Sivasubramaniam, Daniel Reed, Allan Snavely, Hideharu Amano, Matt Mutka, Micah Beck, Dongyan Xu, Hank Dietz, Xiaodong Zhang, and Sudhakar Yalamanchili, all made a superb effort in forming the program committee and have all put in many hours of their valuable time to evaluate and discuss the submissions. Timothy Pinkston and Cho-Li Wang did a wonderful job of publicizing the conference and attracting a high number of submissions. Steve H. Lai and Makoto Takizawa provided guidance in selecting the best paper. Daniel Reed and Sue Gambill provided local arrangements for the meeting of the VCs in Raleigh. Nils Agne Nordbotten provided invaluable assistance with Confman, the tool we used to handle electronic submissions and reviews. Mark Gardner also provided valuable technical support during the PC meeting. Finally, Thomas Baldwin provided invaluable assistance in the production of these proceedings.

And last, and by no means least, we would like to express our gratitude to Professor Tse-yun Feng, Professor Ming T. Liu, and Professor Steve H. Lai for their support of this conference in particular, and of the field of parallel processing in general.

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