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Jack Dongarra Jerzy Waśniewski (Eds.)

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Series Editors

Gerhard Goos
Universität Karlsruhe
Postfach 69 80, Vincenz-Priessnitz-Straße 1, D-76131 Karlsruhe, Germany

Juris Hartmanis
Department of Computer Science, Cornell University
4130 Upson Hall, Ithaka, NY 14853, USA

Jan van Leeuwen
Department of Computer Science, Utrecht University
Padualaan 14, 3584 CH Utrecht, The Netherlands

Volume Editors

Jack Dongarra
Department of Computer Science, University of Tennessee
107 Ayres Hall, Knoxville, Texas 37996-1301, USA

Jerzy Waśniewski
DTU, UNI•C
Building 304, DK-2800 Lyngby, Denmark

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Preface

The First International Workshop on Parallel Scientific Computing (PARA94) and Tutorial on Heterogeneous Network Computing was held in Copenhagen–Lyngby, Denmark during the four days of June 20-23, 1994. The Conference was organized and sponsored by the Danish Computing Centre for Research and Education (UNI•C) and the Institute for Mathematical Modelling (IMM) of the Technical University of Denmark (DTU). Support was also received from the the Danish Centre for Applied Parallel Computing (CAP) and some computing hardware and software organizations.

The purpose of the workshop was to bring together scientists working with large computational problems, and specialists in the field of parallel methods and efficient exploitation of modern high-speed computers. Some classes of numerical methods appear again and again during the numerical treatment of many problems in different fields of science and engineering. The aim of this workshop was to select some of these numerical methods and plan further experiments on several types of parallel computers. The key lectures showed an overview of different parallel and vector computers. They reviewed the most important numerical algorithms and scientific applications on parallel computers. The invited speakers were made up of physicists, chemists, and engineers, as well as numerical analysts and computer experts.

The Workshop was preceded by a one-day tutorial on heterogeneous network computing. The PVM (Parallel Virtual Machine) and HeNCE (Heterogeneous Network Computing Environment) were presented and discussed. During the tutorial, time was allocated for practical exercises on clusters of workstations that were provided by various manufacturers. More than 60 peoples attended the tutorial.

The Conference attracted more than 100 participants from around the world. Authors from over 15 countries submitted 62 papers, of which 20 were from invited speakers and 35 were contributed papers; in addition there were a number of posters presented. Lectures were also presented by the various parallel computer manufacturers about their newest hardware and software products. Based on the quality of the papers presented and the response and excitement of the participants, the Programme Committee has decided to hold biennial meetings (PARA9x) on the subject on Parallel Scientific Computing which will be sponsored by the Danish Computing Centre for Research and Education (UNI•C), and the Institute for Mathematical Modelling (IMM) of the Technical University of Denmark (DTU). These meetings will be held during the month June of the even years.

Jack Dongarra
Jerzy Waśniewski

September 1994

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