

Parallels Le User Guide

The two-volume set LNCS 6852/6853 constitutes the refereed proceedings of the 17th International Euro-Par Conference held in Bordeaux, France, in August/September 2011. The 81 revised full papers presented were carefully reviewed and selected from 271 submissions. The papers are organized in topical sections on support tools and environments; performance prediction and evaluation; scheduling and load-balancing; high-performance architectures and compilers; parallel and distributed data management; grid, cluster and cloud computing; peer to peer computing; distributed systems and algorithms; parallel and distributed programming; parallel numerical algorithms; multicore and manycore programming; theory and algorithms for parallel computation; high performance networks and mobile ubiquitous computing.

This book constitutes the refereed proceedings of the 4th European Parallel Virtual Machine and Message Passing Interface Users' Group Meeting, PVM/MPI '97, held in Cracow, Poland in November 1997. Parallel Virtual Machine and Message Passing Interface are the most popular tools for programming in accordance with the message passing paradigm which, at present, is considered to be the best way to develop effective parallel programs. The book presents 63 carefully selected papers covering the whole range of PVM/MPI issues. The papers are organized in sections on evaluation and performance, extensions and improvements, implementation, tools, algorithms, and applications in science and engineering.

It is widely recognized that the complexity of parallel and distributed systems is such that proper tools must be employed during their design stage in order to achieve the quantitative goals for which they are intended. This volume collects recent research results obtained within the Basic Research Action Qmips, which bears on the quantitative analysis of parallel and distributed architectures. Part 1 is devoted to research on the usage of general formalisms stemming from theoretical computer science in quantitative performance modeling of parallel systems. It contains research papers on process algebras, on Petri nets, and on queueing networks. The contributions in Part 2 are concerned with solution techniques. This part is expected to allow the reader to identify among the general formalisms of Part I, those that are amenable to an efficient mathematical treatment in the perspective of quantitative information. The common theme of Part 3 is the application of the analytical results of Part 2 to the performance evaluation and optimization of parallel and distributed systems. Part 1. Stochastic Process Algebras are used by N. Gotz, H. Hermanns, U. Herzog, V. Mertsiotakis and M. Rettelbach as a novel approach for the struc tured design and analysis of both the functional behaviour and performability (i.e performance and dependability) characteristics of parallel and distributed systems. This is achieved by integrating stochastic modeling and analysis into the powerful and well investigated formal description techniques of process algebras.

Parallel Virtual Machine (PVM) and Message Passing Interface (MPI) are the most frequently used tools for programming according to the message passing paradigm, which is considered one of the best ways to develop parallel applications. This volume comprises 42 revised contributions presented at the Seventh European PVM/MPI Users' Group Meeting, which was held in Balatonfr ed, Hungary, 10 13 September 2000. The conference was organized by the Laboratory of Parallel and Distributed Systems of the Computer and Automation Research Institute of the Hungarian Academy of Sciences. This conference was previously held in Barcelona, Spain (1999), Liverpool, UK (1998) and Cracow, Poland (1997). The first three conferences were devoted to PVM and were held at the Technische Universit t M nchen, Germany (1996), Ecole Normale Supérieure Lyon, France (1995), and University of Rome, Italy (1994). This conference has become a forum for users and developers of PVM, MPI, and other message passing environments. Interaction between those groups has proved to be very useful for developing new ideas in parallel computing and for applying existing ideas to new practical fields. The main topics of the meeting were evaluation and performance of PVM and MPI, extensions and improvements to PVM and MPI, algorithms using the message passing paradigm, and applications in science and engineering based on message passing. The conference included four tutorials and five invited talks on advances in MPI, cluster computing, network computing, grid computing, and SGI parallel computers and programming systems.

Practical Aspects of Declarative Languages

Information Sciences and Systems 2014

11th International Conference, PPAM 2015, Krakow, Poland, September 6-9, 2015. Revised Selected Papers, Part I

17th International Euro-ParConference, Bordeaux, France, August 29 - September 2, 2011, Proceedings

4th European PVM/MPI User's Group Meeting Cracow, Poland, November 3-5, 1997, Proceedings

4th International ACPC Conference Including Special Tracks on Parallel Numerics (ParNum'99) and Parallel Computing in Image Processing, Video Processing, and Multimedia Salzburg, Austria, February 16-18, 1999, Proceedings

Daily life relies more and more on safety critical systems, e.g. in areas such as power plant control, traffic management, flight control, and many more. MOVEP is a school devoted to the broad subject of modeling and verifying software and hardware systems. This volume contains tutorials and annotated bibliographies covering the main subjects addressed at MOVEP 2000. The four tutorials deal with Model Checking, Theorem Proving, Composition and Abstraction Techniques, and Timed Systems. Three research papers give detailed views of High-Level Message Sequence Charts, Industrial Applications of Model Checking, and the use of Formal Methods in Security. Finally, four annotated bibliographies give an overview of Infinite State Space Systems, Testing Transition Systems, Fault-Model-Driven Test Derivation, and Mobile Processes.

This book constitutes the refereed proceedings of the 4th International Conference on Parallel Computation, ACPC'99, held in Salzburg, Austria in February 1999; the conference included special tracks on parallel numerics and on parallel computing in image processing, video processing, and multimedia. The volume presents 50 revised full papers selected from a total of 75 submissions. Also included are four invited papers and 15 posters. The papers are organized in topical sections on linear algebra, differential equations and interpolation, (Quasi-)Monte Carlo methods, numerical software, numerical applications, image segmentation and image understanding, motion estimation and block matching, video processing, wavelet techniques, satellite image processing, data structures, data partitioning, resource allocation and performance analysis, cluster computing, and simulation and applications.

Euro-Parisaninternationalconferencededicatedtothepromotionandadvan- ment of all aspects of parallel computing. The major themes can be divided into the broad categories of hardware, software, algorithms and applications for p- allel computing. The objective of Euro-Par is to provide a forum within which to promote the development of parallel computing both as an industrial te- nique and an academic discipline, extending the frontier of both the state of the art and the state of the practice. This is particularly important at a time when parallel computing is undergoing strong and sustained development and experiencing real industrial take-up. The main audience for and participants in Euro-Parareseenasresearchersinacademicdepartments.governmentlabora- ries and industrial organisations. Euro-Par's objective is to become the primary choice of such professionals for the presentation of new results in their specic areas. Euro-Par is also interested in applications which demonstrate the e - tiveness of the main Euro-Par themes. There is now a permanent Web site for the series http://brahms.fmi.uni-passau.de/cl/europar where the history of the conference is described. Euro-Par is now sponsored by the Association of Computer Machinery and the International Federation of Information Processing. Euro-Par'99 The format of Euro-Par'99follows that of the past four conferences and consists of a number of topics eachindividually monitored by a committee of four. There were originally 23 topics for this year's conference. The call for papers attracted 343 submissions of which 188 were accepted. Of the papers accepted, 4 were judged as distinguished, 111 as regular and 73 as short papers.

Parallel CFD 2000, the Twelfth in an International series of meetings featuring computational fluid dynamics research on parallel computers, was held May 22-25, 2000 in Trondheim, Norway. Following the trend of the past conferences, areas such as numerical schemes and algorithms, tools and environments, load balancing, as well as interdisciplinary topics and various kinds of industrial applications were all well represented in the work presented. In addition, for the first time in the Parallel CFD conference series, the organizing committee chose to draw special attention to certain subject areas by organizing a number of special sessions. We feel the emphasis of the papers presented at the conference reflect the direction of the research within parallel CFD at the beginning of the new millennium. It seems to be a clear tendency towards increased industrial exploitation of parallel CFD. Several presentations also demonstrated how new insight is being achieved from complex simulations, and how powerful parallel computers now make it possible to use CFD within a broader interdisciplinary setting. Obviously, successful application of parallel CFD still rests on the underlying fundamental principles. Therefore, numerical algorithms, development tools, and parallelization techniques are still as important as when parallel CFD was in is infancy. Furthermore, the novel concepts of affordable parallel computing as well as metacomputing show that exciting developments are still taking place. As is often pointed out however, the real power of parallel CFD comes from the combination of all the disciplines involved: Physics, mathematics, and computer science. This is probably one of the principal reasons for the continued popularity of the Parallel CFD Conferences series, as well as the inspiration behind much of the excellent work carried out on the subject. We hope that the papers in this book, both on an individual basis and as a whole, will contribute to that inspiration. Further details of Parallel CFD'99, as well as other conferences in this series, are available at http://www.parcfd.org

PC Mag

Monthly Weather Review

Computational Fluid Dynamics on Parallel Systems

IFIP International Conference, NPC 2010, Zhengzhou, China, September 13-15, 2010, Proceedings

5th International Workshop, PARA 2000 Bergen, Norway, June 18-20, 2000 Proceedings

Euro-Par'98 Parallel Processing

Euro-Par 2011 Parallel Processing

User's Guide to the Parallel Processing Extension of the Prognosis ModelMonthly Weather Review**Parallel Computing on Heterogeneous Networks**John Wiley & Sons

This text provides an excellent balance of theory and application that enables you to deploy powerful algorithms, frameworks, and methodologies to solve complex optimization problems in a diverse range of industries. Each chapter is written by leading experts in the fields of parallel and distributed optimization. Collectively, the contributions serve as a complete reference to the field of combinatorial optimization, including details and findings of recent and ongoing investigations.

The Parallel Computing '91 International Conference was a continuation of the series of conferences held in 1983, 1985 and 1989. The aim of this proceedings volume is to provide an overview of new and recent developments, applications and trends in parallel computing. The emphasis is on applications, with the invited lectures covering thriving topics including: artificial intelligence, neural networks, parallel computer performance, parallel numerical and non-numerical algorithms. Contributed papers address a wider variety of topics. Main Features: Surveys of recent work in parallel computing involving computer architectures, parallel software and algorithms, and applications. Recent work in parallel computing presented by active researchers. Information on parallel computing activities.

Proceedings -- Parallel Computing.

The Use of the Parallel Market Rate as a Guide to Setting the Official Exchange Rate

The official reference for developing and deploying parallel, scalable OpenGL applications using the Equalizer parallel rendering framework

Proceedings of the 1993 International Conference on Parallel Processing

Computational Combinatorial Optimization

16th International Symposium, PADL 2014, San Diego, CA, USA, January 19-20, 2014, Proceedings

User's Guide to the Parallel Processing Extension of the Prognosis Model

Recent Advances in Parallel Virtual Machine and Message Passing Interface

This book contains a refereed collection of revised papers selected from the presentations at the France-Japan Workshop on Object-Based Parallel and Distributed Computation, OBPDC'95, held in Tokyo in June 1995. The 18 full papers included in the book constitute a representative, well-balanced set of timely research contributions to the growing field of object-based concurrent computing. The volume is organized in sections on massively parallel programming languages, distributed programming languages, formalisms, distributed operating systems, dependable distributed computing, and software management.

This book constitutes the refereed proceedings of the IFIP International Conference, NPC 2010, held in Zhengzhou, China, in September 2010. The 39 papers presented were carefully selected from 89 submissions. The papers are organized in topical sections on Parallelization and Optimization, Parallel Algorithms, Network, CPU and Multicore, Cloud and Grid Infrastructure, Network on Chip.

This two-volume set LNCS 9573 and LNCS 9574 constitutes the refereed proceedings of the 11th International Conference of Parallel Processing and Applied Mathematics, PPAM 2015, held in Krakow, Poland, in September 2015.The 111 revised full papers presented in both volumes were carefully reviewed and selected from 196 submissions. The focus of PPAM 2015 was on models, algorithms, and software tools which facilitate efficient and convenient utilization of modern parallel and distributed computing architectures, as well as on large-scale applications, including big data problems.

The refereed proceedings of the International Workshop on OpenMP Applications and Tools, WOMPAT 2003, held in Toronto, Canada in June 2003. The 20 revised full papers presented were carefully reviewed and selected for inclusion in the book. The papers are organized in sections on tools and tool technology, OpenMP implementations, OpenMP experience, and OpenMP on clusters.

Optimal or Provably Near-Optimal Solutions

Parallel Computational Fluid Dynamics '95

Euro-Par' 99 Parallel Processing

Parallel Combinatorial Optimization

Vector and Parallel Processing - VECPAR'98

Parallel Processing and Applied Mathematics

Proceedings of the Seventh SIAM Conference on Parallel Processing for Scientific Computing

New approaches to parallel computing are being developed that make better use of the heterogeneous cluster architecture Provides a detailed introduction to parallel computing on heterogenous clusters All concepts and algorithms are illustrated with working programs that can be compiled and executed on any cluster The algorithms discussed have practical applications in a range of real-life parallel computing problems, such as the N-body problem, portfolio management, and the modeling of oil extraction

This book constitutes the refereed proceedings of the 8th European PVM/MPI Users' Group Meeting held in Santorini (Thera), Greece in September 2001. The 50 revised papers presented together with seven abstracts of invited talks were carefully reviewed and selected. The papers are organized in topical sections on implementation, evaluation, and performance of PVM/MPI; extensions and improvements on PVM/MPI; tools for PVM and MPI; algorithms using message passing; and applications in science and engineering.

Parallel Computational Fluid Dynamics(CFD) is an internationally recognised fast-growing field. Since 1989, the number of participants attending Parallel CFD Conferences has doubled. In order to keep track of current global developments, the Parallel CFD Conference annually brings scientists together to discuss and report results on the utilization of parallel computing as a practical computational tool for solving complex fluid dynamic problems. This volume contains the results of research conducted during the past year. Subject areas covered include: novel parallel algorithms, parallel Euler and Navier-Stokes solvers, parallel Direct Simulation Monte Carlo method and parallel multigrid techniques. The content of the book also demonstrates that considerable effort is being made to utilize parallel computing to solve a variety of fluid dynamics problems in topics such as climate modeling, consultation, aerodynamics and in many other areas. Readers of this book will gain a valid insight into the exciting recent developments in Parallel CFD research.

A comprehensive overview of the current evolution of research in algorithms, architectures and compilation for parallel systems is provided by this publication. The contributions focus specifically on domains where embedded systems are required, either oriented to application-specific or to programmable realisations. These are crucial in domains such as audio, telecom, instrumentation, speech, robotics, medical and automotive processing, image and video processing, TV, multimedia, radar and sonar. The book will be of particular interest to the academic community because of the detailed descriptions of research results presented. In addition, many contributions feature the "real-life" applications that are responsible for driving research and the impact of their specific characteristics on the methodologies is assessed. The publication will also be of considerable value to senior design engineers and CAD managers in the industrial arena, who wish either to anticipate the evolution of commercially available design tools or to utilize the presented concepts in their own R&D programmes.

France-Japan Workshop, OBPDC'95, Tokyo, Japan, June 21 - 23, 1995, Selected Papers

Parallel Computational Fluid Dynamics 2000

Applied Parallel Computing: Advanced Scientific Computing

A New Class of Algorithms

Algorithms and Parallel VLSI Architectures III

Implementations and Results Using Parallel Computers

Proceedings of the 29th International Symposium on Computer and Information Sciences

Solving complex optimization problems with parallelmetaheuristics
Parallel Metaheuristics brings together an international group ofexperts in parallelism and metaheuristics to provide a much-neededsynthesis of these two fields. Readers discover how metaheuristicctechniques can provide useful and practical solutions for a widerange of problems and application domains, with an emphasis on thefields of telecommunications and bioinformatics. This volume fillsa long-existing gap, allowing researchers and practitioners todevelop efficient metaheuristic algorithms to find solutions. The book is divided into three parts: * Part One: Introduction to Metaheuristics and Parallelism,including an Introduction to Metaheuristic Techniques, Measuringthe Performance of Parallel Metaheuristics, New Technologies inParallelism, and a head-to-head discussion on Metaheuristics andParallelism * Part Two: Parallel Metaheuristic Models, including ParallelGenetic Algorithms, Parallel Genetic Programming, ParallelEvolution Strategies, Parallel Ant Colony Algorithms,

*Parallel Estimation of Distribution Algorithms, Parallel Scatter Search, Parallel Variable Neighborhood Search, Parallel Simulated Annealing, Parallel Tabu Search, Parallel GRASP, Parallel Hybrid Metaheuristics, Parallel Multi-Objective Optimization, and Parallel Heterogeneous Metaheuristics * Part Three: Theory and Applications, including Theory of Parallel Genetic Algorithms, Parallel Metaheuristics Applications, Parallel Metaheuristics in Telecommunications, and a final chapter on Bioinformatics and Parallel Metaheuristics* Each self-contained chapter begins with clear overviews and introductions that bring the reader up to speed, describes basic techniques, and ends with a reference list for further study. Packed with numerous tables and figures to illustrate the complex theory and processes, this comprehensive volume also includes numerous practical real-world optimization problems and their solutions. This is essential reading for students and researchers in computer science, mathematics, and engineering who deal with parallelism, metaheuristics, and optimization in general.

This book constitutes the refereed proceedings of the Third International Euro-Par Conference, held in Passau, Germany, in August 1997. The 178 revised papers presented were selected from more than 300 submissions on the basis of 1101 reviews. The papers are organized in accordance with the conference workshop structure in tracks on support tools and environments, routing and communication, automatic parallelization, parallel and distributed algorithms, programming languages, programming models and methods, numerical algorithms, parallel architectures, HPC applications, scheduling and load balancing, performance evaluation, instruction-level parallelism, database systems, symbolic computation, real-time systems, and an ESPRIT workshop.

Foreword by Bjarne Stroustrup Software is generally acknowledged to be the single greatest obstacle preventing mainstream adoption of massively-parallel computing. While sequential applications are routinely ported to platforms ranging from PCs to mainframes, most parallel programs only ever run on one type of machine. One reason for this is that most parallel programming systems have failed to insulate their users from the architectures of the machines on which they have run. Those that have been platform-independent have usually also had poor performance. Many researchers now believe that object-oriented languages may offer a solution. By hiding the architecture-specific constructs required for high performance inside platform-independent abstractions, parallel object-oriented programming systems may be able to combine the speed of massively-parallel computing with the comfort of sequential programming. *Parallel Programming Using C++* describes fifteen parallel programming systems based on C++, the most popular object-oriented language of today. These systems cover the whole spectrum of parallel programming paradigms, from data parallelism through dataflow and distributed shared memory to message-passing control parallelism. For the parallel programming community, a common parallel application is discussed in each chapter, as part of the description of the system itself. By comparing the implementations of the polygon overlay problem in each system, the reader can get a better sense of their expressiveness and functionality for a common problem. For the systems community, the chapters contain a discussion of the implementation of the various compilers and runtime systems. In addition to discussing the performance of polygon overlay, several of the contributors also discuss the performance of other, more substantial, applications. For the research community, the contributors discuss the motivations for and philosophy of their systems. As well, many of the chapters include critiques that complete the research arc by pointing out possible future research directions. Finally, for the object-oriented community, there are many examples of how encapsulation, inheritance, and polymorphism can be used to control the complexity of developing, debugging, and tuning parallel software.

Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database.

8th European PVM/MPI Users' Group Meeting, Santorini/Thera, Greece, September 23-26, 2001. Proceedings

Parallel Metaheuristics

Modeling and Verification of Parallel Processes

Proceedings of the International Conference on Parallel Computing '91, London, U.K., 3-6 September 1991

Trends and Applications

6th International Conference, PARA 2002, Espoo, Finland, June 15-18, 2002. Proceedings

Scientific and Technical Aerospace Reports

PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying decisions and get more from technology.

This tutorial contains written versions of seven lectures on Computational Combinatorial Optimization given by leading members of the optimization community. The lectures introduce modern combinatorial optimization techniques, with an emphasis on branch and cut algorithms and Lagrangian relaxation approaches. Polyhedral combinatorics as the mathematical background, perspectives, in particular, polyhedral projection and lifting techniques and the importance of modeling are extensively discussed. Applications to prominent combinatorial optimization problems, e.g., in production and transport planning, are treated in many places; in particular, the book contains a state-of-the-art account of the most successful techniques for solving these problems. The papers in this volume were presented at PARA 2000, the Fifth International Workshop on Applied Parallel Computing. PARA 2000 was held in Bergen, Norway, June 18-21, 2000. The workshop was organized by Parallax and the Department of Informatics at the University of Bergen. The general theme for PARA 2000 was New paradigms for HPC in industry and academia. The use of Java in high-performance computing, Grid and Meta computing, Directions in high-performance computing and networking, Education in Computational Science. The workshop included 9 invited presentations and 39 contributed presentations. The PARA 2000 meeting began with a one-day tutorial on OpenMP programming by a three-day workshop. The first three PARA workshops were held at the Technical University of Denmark (DTU), Lyngby (1994, 1995, and 1996). Following PARA '96, an international steering committee for the PARA meetings was appointed and the committee decided that a workshop should take place every second year in one of the Nordic countries. The 1998 workshop was held in Espoo, Finland. An important aim of these workshops is to strengthen the ties between HPC centers, academia, and industry in the Nordic countries as well as worldwide. The University of Bergen organized the 2000 workshop and the next workshop in the year 2002 will take place at the Helsinki University of Technology, Espoo, Finland.

Within the DFG -Schwerpunktprogramm "Stromungssimulation mit Hochleistungsrechnern" and within the activities of the French-German cooperation of CNRS and DFG a DFG symposium on "Computational Fluid Dynamics (CFD) on Parallel Systems" was organized at the Institut für Aerodynamik und Gasdynamik of the Stuttgart University, 9-10 December 1993. This scientific program consisted of 18 papers that considered finite element, finite volume and a two step Taylor Galerkin algorithm for the numerical solution of the Euler and Navier-Stokes equations on massively parallel computers with MIMD and SIMD architecture and on workstation clusters. Incompressible and compressible, steady and unsteady flows were considered. Structured and unstructured grids were used. High numerical efficiency was demonstrated by multiplicative, additive and multigrid methods. Shared memory, virtual shared memory and distributed memory systems were investigated, in some cases based on an automatic grid partitioning technique. Various methods for domain decomposition were investigated. Inter face problem because the matrix involved can be block dense. Multilevel decomposition can be very efficient using multifrontal algorithm. The numerical methods include explicit and implicit schemes. In the latter case the system of equations is often solved by a Gauss-Seidel line relaxation technique.

Parallel Computing on Heterogeneous Networks

Network and Parallel Computing

Euro-Par'97 Parallel Processing

Equalizer Programming and User Guide

7th European PVM/MPI Users' Group Meeting Balatonfüred, Hungary, September 10-13, 2000 Proceedings

Parallel Computation

Proceedings of the Fourth SIAM Conference on Parallel Processing for Scientific Computing

This book constitutes the thoroughly refereed post-conference proceedings of the Third International Conference on Vector and Parallel Processing, VECPAR'98, held in Porto, Portugal, in June 1998. The 41 revised full papers presented were carefully selected during two rounds of reviewing and revision. Also included are six invited papers and introductory chapter surveys. The papers are organized in sections on eigenvalue problems and solutions of linear systems; computational fluid dynamics, structural analysis, and mesh partitioning; computing in education; computer organization, programming and benchmarking; image analysis and synthesis; parallel database servers; and nonlinear problems.

The official reference for developing and deploying parallel, scalable OpenGL applications based on the Equalizer parallel rendering framework.

This book constitutes the refereed proceedings of the 16th International Symposium on Practical Aspects of Declarative Languages, PADL 2014, held in San Diego, CA, USA, in January 2014, co-located with POPL 2014, the 41st Symposium on Principles of Programming Languages. The 15 revised papers presented were carefully reviewed and selected from 27 submissions. They cover a wide range of topics related to logic and functional programming, including language support for parallelism and GPUs, constructs and techniques for modularity and extensibility, and applications of declarative programming to document processing and DNA simulation.

This three-volume work presents a compendium of current and seminal papers on parallel/distributed processing offered at the 22nd International Conference on Parallel Processing, held August 16-20, 1993 in Chicago, Illinois. Topics include processor architectures; mapping algorithms to parallel systems, performance evaluations; fault diagnosis, recovery, and tolerance; cube networks; portable software; synchronization; compilers; hypercube computing; and image processing and graphics. Computer professionals in parallel processing, distributed systems, and software engineering will find this book essential to their complete computer reference library.

5th International Euro-Par Conference Toulouse, France, August 31–September 3, 1999 Proceedings

Proceedings of a CNRS-DFG Symposium in Stuttgart, December 9 and 10, 1993

International Workshop on OpenMP Applications and Tools, WOMPAT 2003, Toronto, Canada, June 26-27, 2003. Proceedings

Applied Parallel Computing. New Paradigms for HPC in Industry and Academia

Third International Conference Porto, Portugal, June 21-23, 1998 Selected Papers and Invited Talks

4th Summer School, MOVEP 2000, Nantes, France, June 19-23, 2000. Revised Tutorial Lectures

Parallel Programming Using C++

Focusing on algorithms for distributed-memory parallel architectures, *Parallel Algorithms* presents a rigorous yet accessible treatment of theoretical models of parallel computation, parallel algorithm design for homogeneous and heterogeneous platforms, complexity and performance analysis, and essential notions of scheduling. The book extract

This book constitutes the refereed proceedings of the 6th International Conference on Applied Parallel Computing, PARA 2002, held in Espoo, Finland, in June 2002. The 50 revised full papers presented together with nine keynote lectures were carefully reviewed and selected for inclusion in the proceedings. The papers are organized in topical sections on data mining and knowledge discovery, parallel program development, practical experience in parallel computing, computer science, numerical algorithms with hierarchical memory optimization, numerical methods and algorithms, cluster computing, grid and network technologies, and physics and applications.

Based on a rigorous selection of submissions to The 29th International Symposium on Computer and Information Sciences (ISCIS 2014), this book includes some of the most recent ideas and technical results in computer systems, computer science, and computer-communication networks. It offers the reader a timely access to innovative research and advances in computing and communications from many different areas of the world. The topics covered include (but are not limited to) computer architectures and digital systems, algorithms, theory, software engineering, data engineering, computational intelligence, system security, computer systems and networks, performance modeling and analysis, distributed and parallel systems, bioinformatics, computer vision and significant applications such as medical informatics and imaging. The 29th International Symposium on Computer and Information Sciences (ISCIS 2014) took place in Krakow Old City, Poland on October, 27–8, 2014.

This volume is the result of the Third DIMACS Implementation Challenge that was conducted as part of the 1993-94 Special year on Parallel Algorithms. The Implementation Challenge was formulated in order to provide a forum for a concerted effort to study effective algorithms for combinatorial problems and to investigate opportunities for massive speed-ups on parallel computers. The challenge included two problem areas for research study: tree searching, algorithms, used in game search and combinatorial optimization, for example, and algorithms for sparse graphs. Participants at sites in the US and Europe undertook projects from November 1993 through October 1994. The workshop was held at DIMACS in November 1994. Participants were encouraged to share test results, to rework their implementations considering feedback at the workshop, and to submit a final report for the proceedings. Nine papers were selected for this volume.

Parallel Algorithms

Quantitative Methods in Parallel Systems

OpenMP Shared Memory Parallel Programming

Third DIMACS Implementation Challenge, October 17-19, 1994

Parallel Computing '91

Object-Based Parallel and Distributed Computation

Third International Euro-Par Conference, Passau, Germany, August 26–29, 1997, Proceedings