Advantages Of Parallel Processing And The Effects Of

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Vector and Parallel Processing - VECPAR'98 Jack Dongarra 1999-06-29 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.

Euro-Par 2016: Parallel Processing Workshops Frédéric Desprez 2017-05-26 This book constitutes the proceedings of the workshops of the 23rd International Conference on Parallel and Distributed Computing, Euro-Par 2016, held in Grenoble, France in August 2016. The 65 full papers presented were carefully reviewed and selected from 95 submissions. The volume includes the papers from the following workshops: Euro-EDUPAR (Second European Workshop on Parallel and Distributed Computing Education for Undergraduate Students) – HeteroPar 2016 (the 14th International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms) – IWMSE (5th International Workshop on Multicore Software Engineering) – LSDVE (Fourth Workshop on Large-Scale Distributed Virtual Environments) – PADABS (Fourth Workshop on Parallel and Distributed Agent-Based Simulations) – PBio (Fourth International Workshop on Parallelism in Bioinformatics) – PELGA (Second Workshop on Performance Engineering for Large-Scale Graph Analytics) – REPPAR (Third International Workshop on Reproducibility in Parallel Computing) – Resilience (9th Workshop in Resilience in High Performance Computing in Clusters, Clouds, and Grids) – ROME (Fourth Workshop on Runtime and Operating Systems for the Many-Core Era) – UCHPC (9th Workshop on UnConventional High-Performance Computing).

Optical Signal Processing M.A. Fiddy 1991-12-31

Job Scheduling Strategies for Parallel Processing Dror G. Feitelson 1995-07-19 This volume contains the papers selected after a very careful refereeing process for presentation during the Workshop on Job Scheduling Stategies for Parallel Processing, held in Santa Barbara, California, as a prelude to the IPPS '95 conference in April 1995. The 19 full papers presented demonstrate that parallel job scheduling takes on a crucial role as multi-user parallel supercomputers become more widespread. All aspects of job scheduling for parallel systems are covered, from the perspectives of academic research, industrial design of parallel systems, as well as user needs. Of particular interest, also for nonexpert readers, is the introductory paper "Parallel Job Scheduling: Issues and Approaches" by the volume editors.

Individual Variation and the Bilingual Advantage - Factors that Modulate the Effect of Bilingualism on Cognitive Control and Cognitive Reserve Maurits Van den Noort 2020-02-11 The number of bilingual and multilingual speakers around the world is steadily growing, leading to the questions: How do bilinguals manage two or more language systems in their daily interactions, and how does being bilingual/multilingual affect brain functioning and vice versa? Previous research has shown that cognitive control plays a key role in bilingual language management. This hypothesis is further supported by the fact that foreign languages have been found to affect not only the expected linguistic domains, but surprisingly, other non-linguistic domains such as cognitive control, attention, inhibition, and working memory. Somehow, learning languages seems to affect executive/brain functioning. In the literature, this is referred to as the bilingual advantage, meaning that people who learn two or more languages seem to outperform monolinguals in executive functioning skills. In this Special Issue, we first present studies that investigate the bilingual advantage. We also go one step further, by focusing on factors that modulate the effect of bilingualism on cognitive control. In the second, smaller part of our Special Issue, we focus on the cognitive reserve hypothesis with the aim of addressing the following questions: Does the daily use of two or more languages protect the aging individual against cognitive decline? Does lifelong bilingualism protect against brain diseases, such as dementia, later in life?

Parallel Computing D.J Evans 1989-05-01 Parallel Computing: Methods, Algorithms and Applications presents a collection of original papers presented at the international meeting on parallel processing, methods, algorithms, and applications at Verona, Italy in September 1989.

The Parallel Brain Eran Zaidel 2003 An overview of the central role in cognitive neuroscience of the corpus callosum, thebands of tissue connecting the brain's two hemispheres.

Proceedings 20th International Conference Parallel Processing 1991 Tse-yun Feng 1991-08-06

Euro-Par 2010 - Parallel Processing Pasqua D'Ambra 2010-09-02 This book constitutes the refereed proceedings of the 16th International Euro-Par Conference held in Ischia, Italy, in August/September 2010. The 90 revised full papers presented were carefully reviewed and selected from 256 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 and ubiquitous computing.

Parallel Computing for Real-time Signal Processing and Control Mohammad Osman Tokhi 2003-04-04 This book introduces the advantages of parallel processing and details how to use it to deal with common signal processing and control algorithms. The text includes examples and end-of-chapter exercises, and case studies to put theoretical concepts into a practical context.

Photonic Signal Processing, Second Edition Le Nguyen Binh 2019-01-15 This Second Edition of "Photonic Signal Processing" updates most recent R&D on processing techniques of signals in photonic domain from the fundamentals given in its first edition. Several modern techniques in Photonic Signal Processing (PSP) are described: Graphical signal flow technique to simplify the analysis of the photonic transfer functions, plus its insights into the physical phenomena of such processors. The resonance and interference of optical fields are presented by the poles and zeros of the optical circuits, respectively. Detailed design procedures for fixed and tunable optical filters. These filters, "brick-wall-like", now play a highly important role in ultra-broadband (100GBaud) to spectral shaping of sinc temporal response so as to generate truly Nyquist sampler of the received eye diagrams 3-D PSP allows multi-dimensional processing for highly complex optical signals Photonic differentiators and integrators for dark soliton generations. Optical dispersion compensating processors for ultra-long haul optical transmission systems. Some optical devices essentials for PSP. Many detailed PSP techniques are given in the chapters of this Second Edition.

Emerging Information Technologies for Competitive Advantage and Economic Development Information Resources Management Association. International Conference 1992-01-01 Keeping up with constant changes and innovations puts a lot of pressure on information providers and users to continuously upgrade their knowledge and skill. This change means being flexible enough to recognize that the knowledge you receive today must be constantly updated. This book will provide readers with the latest research findings and managerial experiences on a variety of technological innovations of IT.

Oracle Real Application Clusters Murali Vallath 2004 Practical guide to RAC architecture for data base managers to manage Oracle9i clusters.

Job Scheduling Strategies for Parallel Processing Dror Feitelson 2005-05-03 This volume contains the papers presented at the 10th Anniversary Workshop on Job Scheduling Strategies for Parallel Processing. The workshop was held in New York City, on June 13, 2004, at Columbia University, in conjunction with the SIGMETRICS 2004 conference. Although it is a workshop, the papers were conference-reviewed, with the full versions being read and evaluated by at least five and usually seven members of the Program Committee. We refer to it as a workshop because of the very fast turnaround time, the intimate nature of the actual presentations, and the ability of the authors to revise their papers after getting feedback from workshop attendees. On the other hand, it was actually a conference in that the papers were accepted solely on their merits as decided upon by the Program Committee. We would like to thank the Program Committee members, Su-Hui Chiang, Walfredo Cirne, Allen Downey, Eitan Frachtenberg, Wolfgang Gentzsch, Allan Gottlieb, Moe Jette, Richard Lagerstrom, Virginia Lo, Reagan Moore, Bill Nitzberg, Mark Squillante, and John Towns, for an excellent job. Thanks are also due to the authors for their submissions, presentations, and final revisions for this volume. Finally, we would like to thank the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL), The Hebrew University, and Columbia University for the use of their facilities in the preparation of the workshop and these proceedings.

Advantages of Parallel Processing and the Effects of Communications Time National Aeronautics and Space Administration (NASA) 2018-06-15 Many computing tasks involve heavy mathematical calculations, or analyzing large amounts of data. These operations can take a long time to complete using only one computer. Networks such as the Internet provide many computers with the ability to communicate with each other. Parallel or distributed computing takes advantage of these networked computers by arranging them to work together on a problem, thereby reducing the time needed to obtain the solution. The drawback to using a network of computers to solve a problem is the time wasted in communicating between the various hosts. The application of distributed computing techniques to a space environment or to use over a satellite network would therefore be limited by the amount of time needed to send data across the network, which would typically take much longer than on a terrestrial network. This experiment shows how much faster a large job can be performed by adding more computers to the task, what role communications time plays in the total execution time, and the impact a long-delay network has on a distributed computing system. Eddy, Wesley M. and Allman, Mark Glenn Research Center NASA/CR-2000-209455, E-11953, NAS 1.26:209455

Encyclopedia of Parallel Computing David Padua 2011-09-08 Containing over 300 entries in an A-Z format, the Encyclopedia of Parallel Computing provides easy, intuitive access to relevant information for professionals and researchers seeking access to any aspect within the broad field of parallel computing. Topics for this comprehensive reference were selected, written, and peer-reviewed by an international pool of distinguished researchers in the field. The Encyclopedia is broad in scope, covering machine organization, programming languages, algorithms, and applications. Within each area, concepts, designs, and specific implementations are presented. The highly-structured essays in this work comprise synonyms, a definition and discussion of the topic, bibliographies, and links to related literature. Extensive cross-references to other entries within the Encyclopedia support efficient, user-friendly searchers for immediate access to useful information. Key concepts presented in the Encyclopedia of Parallel Computing include; laws and metrics; specific numerical and non-numerical algorithms; asynchronous algorithms; libraries of subroutines; benchmark suites; applications; sequential consistency and cache coherency; machine classes such as clusters, shared-memory multiprocessors, special-purpose machines and dataflow machines; specific machines such as Cray supercomputers, IBM's cell processor and Intel's multicore machines; race detection and auto parallelization; parallel programming languages, synchronization primitives, collective operations, message passing libraries, checkpointing, and operating systems. Topics covered: Speedup, Efficiency, Isoefficiency, Redundancy, Amdahls law, Computer Architecture Concepts, Parallel Machine Designs, Benmarks, Parallel Programming concepts & design, Algorithms, Parallel applications. This authoritative reference will be published in two formats: print and online. The online edition features hyperlinks to cross-references and to additional significant research. Related Subjects: supercomputing, high-performance computing, distributed computing

Parallel Processing for Scientific Computing G. Rodrigue 1989-01-01 Mathematics of Computing -- Parallelism.

Quantitative Quality of Service for Grid Computing: Applications for Heterogeneity, Large-Scale Distribution, and Dynamic Environments Wang, Lizhe 2009-05-31 "This book provides research into parallel & distributed computing, high performance computing, and Grid computing"--Provided by publisher.

Mental Models Philip Nicholas Johnson-Laird 1983 This book offers a unified theory of the major propertries of mind, including comprehension, inference, and consciousness. The author argues that we apprehend the world by building inner mental replicas of the relationships among objects and events that concern us. The mind is essentially a model-building device that can itself be modeled on a computer. The book provides a blueprint for building such a model and numerous important illustrations of how to do it.

The Female Brain Cynthia L. Darlington 2009-05-15 Ironically, the organ with the greatest reason to differ between the sexes, the brain, is often viewed as the most androgynous of all. Are there differences? Almost by convention, male animals are used in laboratory experiments in neuroscience. Even in clinical drug trials in humans, females are often excluded from the early phases of testing because of the risk of pregnancy and because females tend to be inconsistent in their responses due to the influence of their hormones and the menstrual cycle. The flaw in this reasoning is enormous: These very results are often applied to females. In The Female Brain, Cynthia Darlington examines the evidence for structural and functional differences between the male and female brain in an accessible, straightforward manner, while providing substantial scientific material for the academic reader.

Proceedings of the 1995 International Conference on Parallel Processing Prithviraj Banerjee 1995-08-08 This set of technical books contains all the information presented at the 1995 International Conference on Parallel Processing. This conference, held August 14 - 18, featured over 100 lectures from more than 300 contributors, and included three panel sessions and three keynote addresses. The international authorship includes experts from around the globe, from Texas to Tokyo, from Leiden to London. Compiled by faculty at the University of Illinois and sponsored by Penn State University, these Proceedings are a comprehensive look at all that's new in the field of parallel processing.

Algorithms and Architectures for Parallel Processing Guojun Wang 2015-11-16 This four volume set LNCS 9528, 9529, 9530 and 9531 constitutes the refereed proceedings of the 15th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2015, held in Zhangjiajie, China, in November 2015. The 219 revised full papers presented together with 77 workshop papers in these four volumes were carefully reviewed and selected from 807 submissions (602 full papers and 205 workshop papers). The first volume comprises the following topics: parallel and distributed architectures; distributed and network-based computing and internet of things and cyber-physical-social computing. The second volume comprises topics such as big data and its applications and parallel and distributed algorithms. The topics of the third volume are: applications of parallel and distributed computing and service dependability and security in distributed and parallel systems. The covered topics of the fourth volume are: software systems and programming models and performance modeling and evaluation.

Color Doppler Sonography in Gynecology and Obstetrics Werner O. Schmidt 2004-10-20 Both beginning and experienced users will find helpful guidelines for the application of color Doppler sonography. The text includes technical and methodological basics as well as advanced tips. You will also find reference curves and documentation guidelines integrated into various chapters.

Parallel Processing Systems David J. Evans 1982-06-03 "A coherent and comprehensive account of all major aspects of parallel processing." -- Back cover.

Proceedings of the 1993 International Conference on Parallel Processing C.Y. Roger Chen 1993-08-16 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.

The Dawn of Massively Parallel Processing in Meteorology Geerd-R. Hoffmann 2012-12-06 The Dawn of Massively Parallel Processing in Meteorology presents collected papers of the third workshop on this topic held at the European Centre of Medium-Range Weather Forecasts (ECMWF). It provides an insight into the state of the art in using parallel processors operationally, and allows extrapolation to other time-critical applications. It also documents the advent of massively parallel systems to cope with these applications.

Parallel Processing and Applied Mathematics Roman Wyrzykowski 2003-08-01 This book constitutes the thoroughly refereed post-proceedings of the 4th International Conference on Parallel Processing and Applied Mathematics, PPAM 2002, held in Naleczow, Poland, in September 2001. The 101 papers presented were carefully reviewed and improved during two rounds of reviewing and revision. The book offers topical sections on distributed and grid architectures, scheduling and load balancing, performance analysis and prediction, parallel non-numerical algorithms, parallel programming, tools and environments, parallel numerical algorithms, applications, and evolutionary computing and neural networks.

Vector and Parallel Processing - VECPAR 2000 Jose M.L.M. Palma 2003-06-29 This book is the ?nal outcome of VECPAR 2000 – 4th International Meeting on Vector and Parallel Processing. VECPAR constitutes a series of conferences, which have been organized by the Faculty of Engineering of the University of Porto since 1993, with the main objective of disseminating new knowledge on parallel computing. Readership of This Book The book is aimed at an audience of researchers and graduate students in a broad range of scienti?c areas, including not only computer science, but also applied mathematics and numerical analysis, physics, and engineering. Book Plan From a total of 66 papers selected on the basis of extended abstracts for p- sentation at the conference, a subset of 34 papers were chosen during a second review process leading to their inclusion in the book, together with the invited talks. The book contains a total of 40 papers organized into 6 chapters, where each may appeal to people in di?erent but still related scienti?c areas. All ch- ters, with the exception of Chapter 6, are initiated by a short text, providing a quick overview of the organization and papers in the chapter. The 13 papers in Chapter 1 cover the aspects related to the use of multiple processors. Operating systems, languages and software tools for scheduling, and code transformation are the topics included in this chapter, initiated by the talk on computing over the Internet, entitled Grid Computing,byIan Foster.

Parallel Processing for Scientific Computing Michael A. Heroux 2006-01-01 Parallel processing has been an enabling technology in scientific computing for more than 20 years. This book is the first in-depth discussion of parallel computing in 10 years; it reflects the mix of topics that mathematicians, computer scientists, and computational scientists focus on to make parallel processing effective for scientific problems. Presently, the impact of parallel processing on scientific computing varies greatly across disciplines, but it plays a vital role in most problem domains and is absolutely essential in many of them. Parallel Processing for Scientific Computing is divided into four parts: The first concerns performance modeling, analysis, and optimization; the second focuses on parallel algorithms and software for an array of problems common to many modeling and simulation applications; the third emphasizes tools and environments that can ease and enhance the process of application development; and the fourth provides a sampling of applications that require parallel computing for scaling to solve larger and realistic models that can advance

science and engineering.

Handbook of Research on Strategic Innovation Management for Improved Competitive Advantage Jamil, George Leal 2018-04-13 Innovation is a vital process for any business to remain competitive in this age. This progress must be coherently and optimally managed, allowing for successful improvement and future growth. The Handbook of Research on Strategic Innovation Management for Improved Competitive Advantage provides emerging research on the use of information and knowledge to promote development in various business agencies. While covering topics such as design thinking, financial analysis, and policy planning, this publication explores the wide and complex relationships that constitute strategic innovation management principals and processes. This publication is an important resource for students, professors, researchers, managers, and entrepreneurs seeking current research on the methods and tools regarding information and knowledge management for business advancement.

Parallel Computing: Technology Trends I. Foster 2020-03-25 The year 2019 marked four decades of cluster computing, a history that began in 1979 when the first cluster systems using Components Off The Shelf (COTS) became operational. This achievement resulted in a rapidly growing interest in affordable parallel computing for solving compute intensive and large scale problems. It also directly lead to the founding of the Parco conference series. Starting in 1983, the International Conference on Parallel Computing, ParCo, has long been a leading venue for discussions of important developments, applications, and future trends in cluster computing, parallel computing, and high-performance computing. ParCo2019, held in Prague, Czech Republic, from 10 – 13 September 2019, was no exception. Its papers, invited talks, and specialized mini-symposia addressed cutting-edge topics in computer architectures, programming methods for specialized devices such as field programmable gate arrays (FPGAs) and graphical processing units (GPUs), innovative applications of parallel computers, approaches to reproducibility in parallel computations, and other relevant areas. This book presents the proceedings of ParCo2019, with the goal of making the many fascinating topics discussed at the meeting accessible to a broader audience. The proceedings contains 57 contributions in total, all of which have been peer-reviewed after their presentation. These papers give a wide ranging overview of the current status of research, developments, and applications in parallel computing.

Advances in Enterprise Engineering X David Aveiro 2016-05-21 This book constitutes the proceedings of the 6th Enterprise Engineering Working Conference (EEWC), held in Funchal, Madeira Island, Portugal, on May 30 - June 3, 2016. EEWC aims at addressing the challenges that modern and complex enterprises are facing in a rapidly changing world. The participants of the working conference share a belief that dealing with these challenges requires rigorous and scientific solutions, focusing on the design and engineering of enterprises. The goal of EEWC is to stimulate interaction between the different stakeholders, scientists as well as practitioners, interested in making Enterprise Engineering a reality. The 12 full papers presented were carefully reviewed and selected out of 34 submissions. The topics of the presented papers allowed for active participation in interesting discussions and exchange of ideas and stimulated future cooperation among the participants. This made EEWC a real working conference contributing to the further development of Enterprise Engineering as a mature discipline. Topics covered include: Organization Implementation; Value and Co-Creation; Evolvability; Modelling, Patterns and Viability; and Foundations of Enterprise Engineering.

Algorithms and Architectures for Parallel Processing Jaideep Vaidya 2018-12-07 The four-volume set LNCS 11334-11337 constitutes the proceedings of the 18th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2018, held in Guangzhou, China, in November 2018. The 141 full and 50 short papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on Distributed and Parallel Computing; High Performance Computing; Big Data and Information Processing; Internet of Things and Cloud Computing; and Security and Privacy in Computing.

Computational Science - ICCS 2001 Vassil N. Alexandrov 2001-05-24 LNCS volumes 2073 and 2074 contain the proceedings of the International Conference on Computational Science, ICCS 2001, held in San Francisco, California, May 27-31, 2001. The two volumes consist of more than 230 contributed and invited papers that reflect the aims of the conference to bring together researchers and scientists from mathematics and computer science as basic computing disciplines, researchers from various application areas who are pioneering advanced application of computational methods to sciences such as physics, chemistry, life sciences, and engineering, arts and humanitarian fields, along with software developers and vendors, to discuss problems and solutions in the area, to identify new issues, and to shape future directions for research, as well as to help industrial users apply various advanced computational techniques.

Human Performance, Situation Awareness, and Automation Dennis A. Vincenzi 2005-01-06 In 2000, the Conference on Automation joined forces with a partner group on situation awareness (SA). The rising complexity of systems demands that one can be aware of a large range of environmental and task-based stimulation in order to match what is done with what has to be done. Thus, SA and automation-based interaction fall naturally together and this conference is the second embodiment of this union. Moving into the 21st century, further diversification of the applications of automation will continue--for example, the revolution in genetic technology. Given the broad nature of this form of human-machine interaction, it is vital to apply past lessons to map a future for the symbiotic relationship between the humans and the artifacts they create. It is as part of this ongoing endeavor that the present volume is offered.

Advantages of Parallel Processing and the Effects of Communications Time 2000

Modelling, Simulation and Optimization Gregorio Romero 2010-02-01 Computer-Aided Design and system analysis aim to find mathematical models that allow emulating the behaviour of components and facilities. The high competitiveness in industry, the little time available for product development and the high cost in terms of time and money of producing the initial prototypes means that the computer-aided design and analysis of products are taking on major importance. On the other hand, in most areas of engineering the components of a system are interconnected and belong to different domains of physics (mechanics, electrics, hydraulics, thermal...). When developing a complete multidisciplinary system, it needs to integrate a design procedure to ensure that it will be successfully achieved. Engineering systems require an analysis of their dynamic behaviour (evolution over time or path of their different variables). The purpose of modelling and simulating dynamic systems is to generate a set of algebraic and differential equations or a mathematical model. In order to perform rapid product optimisation iterations, the models must be formulated and evaluated in the most efficient way. Automated environments contribute to this. One of the pioneers of simulation technology in medicine defines simulation as a technique, not a technology, that replaces real experiences with guided experiences reproducing important aspects of the real world in a fully interactive fashion [iii]. In the following chapters the reader will be introduced to the world of simulation in topics of current interest such as medicine, military purposes and their use in industry for diverse applications that range from the use of networks to combining thermal, chemical or electrical aspects, among others. We hope that after reading the different sections of this book we will have succeeded in bringing across what the scientific community is doing in the field of simulation and that it will be to your interest and liking. Lastly, we would like to thank all the authors for their excellent contributions in the different areas of simulation.

Job Scheduling Strategies for Parallel Processing Eitan Frachtenberg 2008-04-11 This book constitutes the thoroughly refereed post-workshop proceedings of the 13th International Workshop on Job Scheduling Strategies for Parallel Processing, JSSPP 2007, held in Seattle, WA, USA, in June 2007, in conjunction with the 21st ACM International Conference on Supercomputing, ICS 2007. The 10 revised full research papers presented went through the process of strict reviewing and subsequent improvement. The papers cover all current issues of job scheduling strategies for parallel processing from the supercomputer-centric viewpoint but also address many nontraditional high-performance computing and parallel environments that cannot or need not access a traditional supercomputer, such as grids, Web services, and commodity parallel computers. The papers are organized in topical sections on performance and tools, queueing systems, as well as grid and heterogeneous architectures.

Euro-Par 2019: Parallel Processing Workshops Ulrich Schwardmann 2020-05-29 This book constitutes revised selected papers from the workshops held at 25th International Conference on Parallel and Distributed Computing, Euro-Par 2019, which took place in Göttingen, Germany, in August 2019. The 53 full papers and 10 poster papers presented in this volume were carefully reviewed and selected from 77 submissions. Euro-Par is an annual, international conference in Europe, covering all aspects of parallel and distributed processing. These range from theory to practice, from small to the largest parallel and distributed systems and infrastructures, from fundamental computational problems to full-edged applications, from architecture, compiler, language and interface design and implementation to tools, support infrastructures, and application performance aspects. Chapter "In Situ Visualization of Performance-Related Data in Parallel CFD Applications" is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

Hemispheric Communication Frederick L. Kitterle 2020-02-10 The purpose of this book is to provide a comprehensive overview of the way in which the two hemispheres of the brain interact. Some chapters address the nature of this interaction, the anatomical substrates that may account for greater or lesser hemispheric interaction, and the role of sex and handedness in hemispheric interaction. Others address the use of different experimental methods and clinical populations to understand the nature of hemispheric interaction. In addition to current research, this book also provides an important historical overview of the early research questions about hemispheric function and interaction that have helped to shape current views of and approaches to the study of brain function. Special coverage includes: * a comprehensive history of early research on cerebral laterality and hemispheric communication, including work by Pavlov; * a critical analysis of techniques and methologies to study hemispheric communication; * research on anatomical substrates which may underly functional differences between hemispheres and hemispheric communication; * implications of handedness for hemispheric communication; * research on individual differences in hemispheric function; * comprehensive research on sex and handedness from physiological, anatomical, and functional perspectives; and * attentional differences in hemispheric function.