

Parallel String Matching With Multi Core Processors A

"This book presents, discusses, shares ideas, results and experiences on the recent important advances and future challenges on enabling technologies for achieving higher performance"--Provided by publisher.

This book constitutes the proceedings of the 12th International Conference on Advanced Data Mining and Applications, ADMA 2016, held in Gold Coast, Australia, in December 2016. The 70 papers presented in this volume were carefully reviewed and selected from 105 submissions. The selected papers covered a wide variety of important topics in the area of data mining, including parallel and distributed data mining algorithms, mining on data streams, graph mining, spatial data mining, multimedia data mining, Web mining, the Internet of Things, health informatics, and biomedical data mining. This book constitutes the refereed proceedings of the First International Conference on Intelligent Technologies and Applications, INTAP 2018, held in Bahawalpur, Pakistan, in October 2018. The 68 revised full papers and 6 revised short papers presented were carefully reviewed and selected from 251 submissions. The papers of this volume are organized in topical sections on AI and health; sentiment analysis; intelligent applications; social media analytics; business intelligence; Natural Language Processing; information extraction; machine learning; smart systems; semantic web; decision support systems; image analysis; automated software engineering.

This three-volume set LNCS 12452, 12453, and 12454 constitutes the proceedings of the 20th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2020, in New York City, NY, USA, in October 2020. The total of 142 full papers and 5 short papers included in this proceedings volumes was carefully reviewed and selected from 495 submissions. ICA3PP is covering the many dimensions of parallel algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental projects, and commercial components and systems. As applications of computing systems have permeated in every aspects of daily life, the power of computing system has become increasingly critical. This conference provides a forum for academics and practitioners from countries around the world to exchange ideas for improving the efficiency, performance, reliability, security and interoperability of computing systems and applications. ICA3PP 2020 focus on two broad areas of parallel and distributed computing, i.e. architectures, algorithms and networks, and systems and applications.

"This book provides a media for advancing research and the development of theory and practice of digital crime prevention and forensics, embracing a broad range of digital crime and forensics disciplines"--Provided by publisher.

This book constitutes the proceedings of the 5th International Conference, FUN 2010, held in June 2010 in Ischia, Italy. FUN with algorithms is a three-yearly conference that aims at attracting works which, besides a deep and interesting

algorithmic content, also present amusing and fun aspects. The 32 full papers and 3 invited talks are carefully selected from 54 submissions and focus on topics such as distributed algorithms, graph computations, parallelism, zero-knowledge proof, iphone, pattern matching and strategy games.

Held in Guilin of China from August 13-14, 2016, the 2016 International Conference on Computer Science and Artificial Intelligence (CSAI2016) provides an excellent international platform for all invited speakers, authors and participants to share their results and establish research collaborations for future research. The conference enjoys a wide spread participation. It would not only serve as an academic forum, but also a good opportunity to establish business cooperation. CSAI2016 proceedings collects the most up-to-date, comprehensive, and worldwide state-of-art knowledge on computer science and artificial intelligence. After strict peer-review, the proceedings put together 117 articles based on originality, significance and clarity for the purpose of the conference.

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.

The State of the Art in Intrusion Prevention and Detection analyzes the latest trends and issues surrounding intrusion detection systems in computer networks, especially in communications networks. Its broad scope of coverage includes wired, wireless, and mobile networks; next-generation converged networks; and intrusion in social networks. Presenting cutting-edge research, the book presents novel schemes for intrusion detection and prevention. It discusses tracing back mobile attackers, secure routing with intrusion prevention, anomaly detection, and AI-based techniques. It also includes information on physical intrusion in wired and wireless networks and agent-based intrusion surveillance, detection, and prevention. The book contains 19 chapters written by experts from 12 different countries that provide a truly global perspective. The text begins by examining traffic analysis and management for intrusion detection systems. It explores honeypots, honeynets, network traffic analysis, and the basics of outlier detection. It talks about different kinds of IDSs for different infrastructures and considers new and emerging technologies such as smart grids, cyber physical systems,

cloud computing, and hardware techniques for high performance intrusion detection. The book covers artificial intelligence-related intrusion detection techniques and explores intrusion tackling mechanisms for various wireless systems and networks, including wireless sensor networks, WiFi, and wireless automation systems. Containing some chapters written in a tutorial style, this book is an ideal reference for graduate students, professionals, and researchers working in the field of computer and network security.

This book (CCIS 899) constitutes the refereed proceedings of the First International Conference on Applications of Computing and Communication Technologies, ICACCT 2018, held in Delhi, India, in March 2018. The 30 full papers were carefully reviewed and selected from 109 submissions. The papers are organized in topical sections on communication and system technologies, computing and network technologies, application and services.

This edited book aims to present the state of the art in research and development of the convergence of high-performance computing and parallel programming for various engineering and scientific applications. The book has consolidated algorithms, techniques, and methodologies to bridge the gap between the theoretical foundations of academia and implementation for research, which might be used in business and other real-time applications in the future. The book outlines techniques and tools used for emergent areas and domains, which include acceleration of large-scale electronic structure simulations with heterogeneous parallel computing, characterizing power and energy efficiency of a data-centric high-performance computing runtime and applications, security applications of GPUs, parallel implementation of multiprocessors on MPI using FDTD, particle-based fused rendering, design and implementation of particle systems for mesh-free methods with high performance, and evolving topics on heterogeneous computing. In the coming days the need to converge HPC, IoT, cloud-based applications will be felt and this volume tries to bridge that gap.

MUSIC 2013 will be the most comprehensive text focused on the various aspects of Mobile, Ubiquitous and Intelligent computing. MUSIC 2013 provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of intelligent technologies in mobile and ubiquitous computing environment. MUSIC 2013 is the next edition of the 3rd International Conference on Mobile, Ubiquitous, and Intelligent Computing (MUSIC-12, Vancouver, Canada, 2012) which was the next event in a series of highly successful International Workshop on Multimedia, Communication and Convergence technologies MCC-11 (Crete, Greece, June 2011), MCC-10 (Cebu, Philippines, August 2010).

This two-volume set (CCIS 267 and CCIS 268) constitutes the refereed proceedings of the International Conference on Information and Business Intelligence, IBI 2011, held in Chongqing, China, in December 2011. The 229 full papers

presented were carefully reviewed and selected from 745 submissions. The papers address topics such as communication systems; accounting and agribusiness; information education and educational technology; manufacturing engineering; multimedia convergence; security and trust computing; business teaching and education; international business and marketing; economics and finance; and control systems and digital convergence.

A High Performance Parallel Algorithm for Approximate String Matching on Multi-core Processor
Multi-pattern and Parallel String Matching Algorithms for High-speed Intrusion Detection System
Advanced Data Mining and Applications
12th International Conference, ADMA 2016, Gold Coast, QLD, Australia, December 12-15, 2016, Proceedings
Springer
This book constitutes the refereed proceedings of the 23rd Annual Symposium on Combinatorial Pattern Matching, CPM 2012, held in Helsinki, Finland, in July 2012. The 33 revised full papers presented together with 2 invited talks were carefully reviewed and selected from 60 submissions. The papers address issues of searching and matching strings and more complicated patterns such as trees, regular expressions, graphs, point sets, and arrays. The goal is to derive non-trivial combinatorial properties of such structures and to exploit these properties in order to either achieve superior performance for the corresponding computational problems or pinpoint conditions under which searches cannot be performed efficiently. The meeting also deals with problems in computational biology, data compression and data mining, coding, information retrieval, natural language processing, and pattern recognition.

This book includes high-quality research papers presented at the Third International Conference on Innovative Computing and Communication (ICICC 2020), which is held at the Shaheed Sukhdev College of Business Studies, University of Delhi, Delhi, India, on 21–23 February, 2020. Introducing the innovative works of scientists, professors, research scholars, students and industrial experts in the field of computing and communication, the book promotes the transformation of fundamental research into institutional and industrialized research and the conversion of applied exploration into real-time applications.

This proceedings volume provides a snapshot of the latest issues encountered in technical convergence and convergences of security technology. It explores how information science is core to most current research, industrial and commercial activities and consists of contributions covering topics including Ubiquitous Computing, Networks and Information Systems, Multimedia and Visualization, Middleware and Operating Systems, Security and Privacy, Data Mining and Artificial Intelligence, Software Engineering, and Web Technology. The proceedings introduce the most recent information technology and ideas, applications and problems related to technology convergence, illustrated through case studies, and reviews converging existing security techniques. Through this volume, readers will gain an understanding of the current state-of-the-art in information strategies and technologies of convergence security. The

intended readership are researchers in academia, industry, and other research institutes focusing on information science and technology.

This book constitutes the refereed proceedings of the 6th International Workshop on Advanced Parallel Processing Technologies, APPT 2005, held in Hong Kong, China in September 2005. The 55 revised full papers presented were carefully reviewed and selected from over 220 submissions. All current aspects in parallel and distributed computing are addressed ranging from hardware and software issues to algorithmic aspects and advanced applications. The papers are organized in topical sections on architecture, algorithm and theory, system and software, grid computing, networking, and applied technologies.

This volume contains the papers selected for presentation at the Second International Conference on Parallel Image Analysis (ICPIA '92), held in Ube, Japan, December 21-23, 1992. The conference topics are data structures, parallel algorithms and architectures, neural networks, computational vision, syntactic generation and recognition, and multidimensional models. The first meeting with these topics was the International Colloquium on Parallel Image Processing, which took place in Paris in June 1991. The aim of the meetings is to bring together specialists from various countries who are interested in the topics and to stimulate theoretical and practical research in the field of parallel image processing and analysis. The volume contains three invited papers, a summary of a tutorial lecture, and twenty selected and refereed communications.

Covers the fundamentals and techniques of multiple biological sequence alignment and analysis, and shows readers how to choose the appropriate sequence analysis tools for their tasks This book describes the traditional and modern approaches in biological sequence alignment and homology search. This book contains 11 chapters, with Chapter 1 providing basic information on biological sequences. Next, Chapter 2 contains fundamentals in pair-wise sequence alignment, while Chapters 3 and 4 examine popular existing quantitative models and practical clustering techniques that have been used in multiple sequence alignment. Chapter 5 describes, characterizes and relates many multiple sequence alignment models. Chapter 6 describes how traditionally phylogenetic trees have been constructed, and available sequence knowledge bases can be used to improve the accuracy of reconstructing phylogeny trees. Chapter 7 covers the latest methods developed to improve the run-time efficiency of multiple sequence alignment. Next, Chapter 8 covers several popular existing multiple sequence alignment server and services, and Chapter 9 examines several multiple sequence alignment techniques that have been developed to handle short sequences (reads) produced by the Next Generation Sequencing technique (NSG). Chapter 10 describes a Bioinformatics application using multiple sequence alignment of short reads or whole genomes as input. Lastly, Chapter 11 provides a review of RNA and protein secondary

structure prediction using the evolution information inferred from multiple sequence alignments. • Covers the full spectrum of the field, from alignment algorithms to scoring methods, practical techniques, and alignment tools and their evaluations • Describes theories and developments of scoring functions and scoring matrices • Examines phylogeny estimation and large-scale homology search

Multiple Biological Sequence Alignment: Scoring Functions, Algorithms and Applications is a reference for researchers, engineers, graduate and post-graduate students in bioinformatics, and system biology and molecular biologists. Ken Nguyen, PhD, is an associate professor at Clayton State University, GA, USA. He received his PhD, MSc and BSc degrees in computer science all from Georgia State University. His research interests are in databases, parallel and distribute computing and bioinformatics. He was a Molecular Basis of Disease fellow at Georgia State and is the recipient of the highest graduate honor at Georgia State, the William M. Suttles Graduate Fellowship. Xuan Guo, PhD, is a postdoctoral associate at Oak Ridge National Lab, USA. He received his PhD degree in computer science from Georgia State University in 2015. His research interests are in bioinformatics, machine leaning, and cloud computing. He is an editorial assistant of International Journal of Bioinformatics Research and Applications. Yi Pan, PhD, is a Regents' Professor of Computer Science and an Interim Associate Dean and Chair of Biology at Georgia State University. He received his BE and ME in computer engineering from Tsinghua University in China and his PhD in computer science from the University of Pittsburgh. Dr. Pan's research interests include parallel and distributed computing, optical networks, wireless networks and bioinformatics. He has published more than 180 journal papers with about 60 papers published in various IEEE/ACM journals. He is co-editor along with Albert Y. Zomaya of the Wiley Series in Bioinformatics.

This book constitutes the refereed proceedings of the 19th International Symposium on String Processing and Information Retrieval, SPIRE 2012, held in Cartagena de Indias, Colombia, in October 2012. The 26 full papers, 13 short papers, and 3 keynote speeches were carefully reviewed and selected from 81 submissions. The following topics are covered: fundamentals algorithms in string processing and information retrieval; SP and IR techniques as applied to areas such as computational biology, DNA sequencing, and Web mining.

This book constitutes the refereed proceedings of the International Standard Conference on Trustworthy Distributed Computing and Services, ISCTCS 2012, held in Beijing, China, in May/June 2012. The 92 revised full papers presented were carefully reviewed and selected from 278 papers. The topics covered are architecture for trusted computing systems, trusted computing platform, trusted systems build, network and protocol security, mobile network security, network survivability and other critical theories and standard systems, credible assessment, credible measurement and metrics, trusted systems, trusted networks, trusted mobile network, trusted routing, trusted software, trusted operating

systems, trusted storage, fault-tolerant computing and other key technologies, trusted e-commerce and e-government, trusted logistics, trusted internet of things, trusted cloud and other trusted services and applications.

As future generation information technology (FGIT) becomes specialized and fragmented, it is easy to lose sight that many topics in FGIT have common threads and, because of this, advances in one discipline may be transmitted to others.

Presentation of recent results obtained in different disciplines encourages this interchange for the advancement of FGIT as a whole. Of particular interest are hybrid solutions that combine ideas taken from multiple disciplines in order to achieve something more significant than the sum of the individual parts. Through such hybrid philosophy, a new principle can be discovered, which has the propensity to propagate throughout multifaceted disciplines. FGIT 2009 was the first mega-conference that attempted to follow the above idea of hybridization in FGIT in a form of multiple events related to particular disciplines of IT, conducted by separate scientific committees, but coordinated in order to expose the most important contributions. It included the following international conferences: Advanced Software Engineering and Its Applications (ASEA), Bio-Science and Bio-Technology (BSBT), Control and Automation (CA), Database Theory and Application (DTA), Disaster Recovery and Business Continuity (DRBC; published independently), Future Generation Communication and Networking (FGCN) that was combined with Advanced Communication and Networking (ACN), Grid and Distributed Computing (GDC), Multimedia, Computer Graphics and Broadcasting (MulGraB), Security Technology (SecTech), Signal Processing, Image Processing and Pattern Recognition (SIP), and e-Service, Science and Technology (UNESST).

This book constitutes the refereed proceedings of 10 international workshops held in conjunction with the merged 1998 IPPS/SPDP symposia, held in Orlando, Florida, US in March/April 1998. The volume comprises 118 revised full papers presenting cutting-edge research or work in progress. In accordance with the workshops covered, the papers are organized in topical sections on reconfigurable architectures, run-time systems for parallel programming, biologically inspired solutions to parallel processing problems, randomized parallel computing, solving combinatorial optimization problems in parallel, PC based networks of workstations, fault-tolerant parallel and distributed systems, formal methods for parallel programming, embedded HPC systems and applications, and parallel and distributed real-time systems. This book covers diverse aspects of advanced computer and communication engineering, focusing specifically on industrial and manufacturing theory and applications of electronics, communications, computing and information technology. Experts in research, industry, and academia present the latest developments in technology, describe applications involving cutting-edge communication and computer systems, and explore likely future trends. In addition, a wealth of new algorithms that assist in solving computer and communication engineering problems are presented. The book is based on presentations given at ICOCOE

2015, the 2nd International Conference on Communication and Computer Engineering. It will appeal to a wide range of professionals in the field, including telecommunication engineers, computer engineers and scientists, researchers, academics and students.

It is our pleasure to welcome you to the proceedings of the 13th International Computer Society of Iran Computer Conference (CSICC-2008). The conference has been held annually since 1995, except for 1998, when it transitioned from a year-end to first-quarter schedule. It has been moving in the direction of greater selectivity (see Fig.1) and broader international participation. Holding it in Kish Island this year represents an effort to further facilitate and encourage international contributions. We feel privileged to participate in further advancing this strong technical tradition.

Dates	Year	Venue
60	50	40
30	20	10
0	Dec	23-26
	Dec	23-25
	Dec	23-25
Jan	26-28	Mar 8-10
Feb	21-23	Feb 28-30
Feb	23-26	Feb 16-19
Feb	15-18	Jan 24-26
Feb	20-22	Mar 9-11
1995	1996	1997
Iran	1999	2000
2001	U of	2002
Iran	2003	2004
2005	Iran	2006
IPM,	2007	2008
Sharif U	Amirkabir U	of Sharif U
Sharif U	Shahid Isfahan,	Telecom Ferdowsi
Sharif U	Telecom Tehran	Shahid Sharif U
of Tech,	U of Tech,	Sci/Tech,
of Tech,	Beheshti Isfahan	Res. U,
of Tech,	Res. Beheshti	of Tech,
Tehran	Tehran	Tehran
Tehran	U,	Tehran
Center	Mashhad	Tehran
Center	U,	Tehran
Kish Island		

This two-volume set, CCIS 0269-CCIS 0270, constitutes the refereed post-conference proceedings of the International Conference on Global Trends in Computing and Communication, ObCom 2011, held in Vellore, India, in December 2011. The 173 full papers presented together with a keynote paper and invited papers were carefully reviewed and selected from 842 submissions. The conference addresses all current issues associated with computing, communication and information. The proceedings consists of invited papers dealing with the review of performance models of computer and communication systems and contributed papers that feature topics such as networking, cloud computing, fuzzy logic, mobile communication, image processing, navigation systems, biometrics and Web services covering literally all the vital areas of the computing domains.

This book constitutes the proceedings of the 17th International Symposium on String Processing and Information Retrieval, SPIRE 2010, held in Los Cabos, Mexico, in October 2010. The 26 long and 13 short papers presented were carefully reviewed and selected from 109 submissions. The volume also contains 2 invited talks. The papers are structured in topical sections on crowdsourcing and recommendation; indexes and compressed indexes; theory; string algorithms; compressions; querying and search user experience; document analysis and comparison; compressed indexes; and string matching.

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).

The 4-volume set LNCS 11632 until LNCS 11635 constitutes the refereed proceedings of the 5th International Conference on Artificial Intelligence and Security, ICAIS 2019, which was held in New York, USA, in July 2019. The conference was formerly called “International Conference on Cloud Computing and Security” with the acronym ICCCS. The total of 230 full papers presented in this 4-volume proceedings was carefully reviewed and selected from 1529 submissions. The papers were organized in topical sections as follows: Part I: cloud computing; Part II: artificial intelligence; big data; and cloud computing and security; Part III: cloud computing and security; information hiding; IoT security; multimedia forensics; and encryption and cybersecurity; Part IV: encryption and cybersecurity.

The book is a collection of high-quality peer-reviewed research papers presented at International Conference on Frontiers of Intelligent Computing: Theory and applications (FICTA 2016) held at School of Computer Engineering, KIIT University, Bhubaneswar, India during 16 - 17 September 2016. The book aims to present theories, methodologies, new ideas, experiences, applications in all areas of intelligent computing and its applications to various engineering disciplines like computer science, electronics, electrical, mechanical engineering, etc.

This book covers parallel algorithms and architectures and VLSI chips for a range of problems in image processing, computer vision, pattern recognition and artificial intelligence. The specific problems addressed include vision and image processing tasks, Fast Fourier Transforms, Hough Transforms, Discrete Cosine Transforms, image compression, polygon matching, template matching, pattern matching, fuzzy expert systems and image rotation. The collection of papers gives the reader a good introduction to the state-of-the-art, while for an expert this serves as a good reference and a source of some new contributions in this field. Contents: ENPASSANT: An Environment for Evaluating Massively Parallel Array Architectures for Spatially Mapped Applications (M C Herbordt & C C Weems) A Reconfigurable Architecture for Image Processing and Computer Vision (S M Bhandarkar et al.) A Design Methodology for Very Large Array Processors — Part 1: GIPOP Processor Array (N Venkateswaran et al.) A Design Methodology for Very Large Array Processors — Part 2: PACUBE VLSI Arrays (N Venkateswaran et al.) A VLSI Implementation of Inverse Discrete Cosine Transform (A K Bhattacharya & S S Haider) Systolic Merging and Ranking of Votes for the Generalized Hough Transform (M Albanesi & M Ferretti) High Speed Parallel VLSI Architectures for Image Decorrelation (T Acharya & A Mukherjee) PMAC: A Polygon Matching Chip (R Sastry & N Ranganathan) Quadtree Algorithms for Template Matching on Mesh Connected Computer (H Senoussi & A Saoudi) Fast Pattern-Matching Algorithm on Modular Mesh-Connected Computers with Multiple Buses (K L Chung) A VLSI Parallel Architecture for Fuzzy Expert Systems (V Catania & G Ascia) VLSI

Implementation of an Efficient ASIC Architecture for Real-Time Rotation of Digital Images (I Ghosh & B Majumdar) Readership: Computer scientists and electrical engineers. keywords:

This book constitutes the refereed proceedings of the 7th Annual Symposium on Combinatorial Pattern Matching, CPM '96, held in Laguna Beach, California, USA, in June 1996. The 26 revised full papers included were selected from a total of 48 submissions; also included are two invited papers. Combinatorial pattern matching has become a full-fledged area of algorithmics with important applications in recent years. The book addresses all relevant aspects of combinatorial pattern matching and its importance in information retrieval, pattern recognition, compiling, data compression, program analysis, and molecular biology and thus describes the state of the art in the area.

The five-volume set LNCS 6782 - 6786 constitutes the refereed proceedings of the International Conference on Computational Science and Its Applications, ICCSA 2011, held in Santander, Spain, in June 2011. The five volumes contain papers presenting a wealth of original research results in the field of computational science, from foundational issues in computer science and mathematics to advanced applications in virtually all sciences making use of computational techniques. The topics of the fully refereed papers are structured according to the five major conference themes: geographical analysis, urban modeling, spatial statistics; cities, technologies and planning; computational geometry and applications; computer aided modeling, simulation, and analysis; and mobile communications.

This book constitutes the refereed proceedings of the 19th International Symposium on Algorithms and Computation, ISAAC 2008, held in Gold Coast, Australia in December 2008. The 78 revised full papers together with 3 invited talks presented were carefully reviewed and selected from 229 submissions for inclusion in the book. The papers are organized in topical sections on approximation algorithms, online algorithms, data structure and algorithms, game theory, graph algorithms, fixed parameter tractability, distributed algorithms, database, approximation algorithms, computational biology, computational geometry, complexity, networks, optimization as well as routing.

This book constitutes the refereed proceedings of the 7th International Workshop on Advanced Parallel Processing Technologies, APPT 2007, held in Guangzhou, China, in November 2007. The 78 revised full papers presented were carefully reviewed and selected from 346 submissions. All current aspects in parallel and distributed computing are addressed ranging from hardware and software issues to algorithmic aspects and advanced applications. The papers are organized in topical sections.

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