

Flexible Pattern Matching In Strings Practical On Line Search Algorithms For Texts And Biological Sequences

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Experimental Algorithms - Paola Festa 2010-04-28

Annotation. This volume constitutes the refereed proceedings of the 9th International Symposium on Experimental Algorithms, SEA 2010, held on Ischia Island, Naples, Italy, in May 2010. The 40 revised full papers presented together with two invited papers were carefully reviewed and selected from 73 submissions. The topics covered include algorithm engineering, algorithmic libraries, algorithmic mechanism design, analysis of algorithms, algorithms for memory hierarchies, approximation techniques, bioinformatics, branch and bound algorithms, combinatorial and irregular problems, combinatorial structures and graphs, communication networks, complex networks, computational geometry, computational learning theory, computational optimization, computer systems, cryptography and security, data streams, data structures, distributed and parallel algorithms, evaluation of algorithms for realistic environments, experimental techniques and statistics, graph drawing, heuristics for combinatorial optimization.

String Processing and Information Retrieval - Mariano Consens 2005-10-31

This book constitutes the refereed proceedings of the 12th International Conference on String Processing and Information Retrieval, SPIRE 2005, held in Buenos Aires, Argentina in November 2005. The 27 revised full papers and 17 revised short papers presented were carefully reviewed and selected from 102 submissions. The papers address current issues in all aspects of string processing, information retrieval, pattern matching, computational biology, semi-structured data, and related applications.

String Processing and Information Retrieval - Edgar Chavez 2010-09-27

This volume contains the papers presented at the 17th International Symposium on String Processing and Information Retrieval (SPIRE 2010), held October 11-13, 2010 in Los Cabos, Mexico. The annual SPIRE conference provides researchers within fields related to string processing and/or information retrieval a possibility to present their original contributions and to meet and talk with other researchers with similar interests. The call for papers invited submissions related to string processing (dictionary algorithms; text searching; pattern matching; text and sequence compression; automata-based string processing), information retrieval (information retrieval models; indexing; ranking and filtering; querying and interface design), natural language processing (text analysis; text mining; machine learning; information extraction; language models; knowledge representation), search applications and usage (cross-lingual information access systems; multimedia information access; digital libraries; collaborative retrieval and Web-related applications; semi-structured data retrieval; evaluation), and interaction of biology and computation (DNA sequencing and applications in molecular biology; evolution and phylogenetics; recognition of genes and regulatory elements; sequenced driven protein structure prediction). The papers presented at the symposium were selected from 109 submissions written by authors from 30 different countries. Each submission was reviewed by at least three reviewers, with a maximum of five reviews for particularly challenging papers. The Program Committee accepted 39 papers (corresponding to 35% acceptance rate): 26 long papers and 13 short papers. In addition to these presentations, SPIRE 2010 also featured invited talks by Gonzalo Navarro (Universidad de Chile) and Mark Najork (Microsoft Research, USA).

String Processing and Information Retrieval - Alberto Apostolico 2004-12-07

The papers contained in this volume were presented at the 11th Conference on String Processing and Information Retrieval (SPIRE), held Oct. 5-8, 2004 at the Department of Information Engineering of the University of Padova, Italy. They were selected from 123 papers submitted in response to the call for papers. In addition, there were invited lectures by C.J. van Rijsbergen (University of Glasgow, UK) and Setsuo Arikawa (Kyushu University, Japan). In view of the large number of good-quality submissions, some were accepted this year also as short abstracts. These also appear in the proceedings. Papers solicited for SPIRE 2004 were meant to constitute original contributions to areas such as string pattern searching, matching and discovery; data compression; text and data mining; machine learning; tasks, methods, algorithms, media, and evaluation in information retrieval; digital libraries; and applications to and interactions with domains such as genome analysis, speech and natural language processing, Web links and communities, and multilingual data. SPIRE has its origins in the South American Workshop on String Processing which was first held in 1993. Starting in 1998, the focus of the symposium was broadened to include the area of information retrieval due to the common

emphasis on information processing. The first 10 meetings were held in Belo Horizonte (Brazil, 1993), Valparaiso (Chile, 1995), Recife (Brazil, 1996), Valparaiso (Chile, 1997), Santa Cruz (Bolivia, 1998), Cancun (Mexico, 1999), A Coruña (Spain, 2000), Laguna San Rafael (Chile, 2001), Lisbon (Portugal, 2002), and Manaus (Brazil, 2003).

Perspectives of Systems Informatics - Andrei Voronkov 2007-08-04

This book constitutes the thoroughly refereed post-conference proceedings of the 6th International Andrei Ershov Memorial Conference, PSI 2006, held in Akademgorodok, Novosibirsk, Russia in June 2006. The 30 revised full papers and 10 revised short papers presented together with 5 invited papers address all current aspects of theoretical computer science, programming methodology, and new information technologies.

String Processing and Information Retrieval - Edleno Moura 2014-10-10

This book constitutes the proceedings of the 21st International Symposium on String Processing and Information Retrieval, SPIRE 2014, held in Ouro Preto, Brazil, in October 2014. The 20 full and 6 short papers included in this volume were carefully reviewed and selected from 45 submissions. The papers focus not only on fundamental algorithms in string processing and information retrieval, but address also application areas such as computational biology, Web mining and recommender systems. They are organized in topical sections on compression, indexing, genome and related topics, sequences and strings, search, as well as on mining and recommending.

Algorithms and Applications - Tapio Elomaa 2010-04-20

This Festschrift volume, published to honor Esko Ukkonen on his 60th birthday, includes papers that present research on computational pattern matching and string algorithms, two areas that have benefited significantly from the work of Ukkonen.

String Processing and Information Retrieval - Amihoud Amir 2008-11-14

This book constitutes the refereed proceedings of the 15th International Symposium on String Processing and Information Retrieval, SPIRE 2008, held in Melbourne, Australia, in November 2008. The 25 revised full papers presented together with 2 invited talks were carefully reviewed and selected from 54 submissions. The papers are organized in topical

sections on compression and performance, information retrieval scoring and ranking, string matching techniques, self-indexing, string matching: space and practicality, information retrieval, non-standard matching, and bioinformatics.

Communication and Networking - Dominik Slezak 2009-12-01

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).

Implementation and Application of Automata - Frank Drewes 2015-07-27

This book constitutes the refereed proceedings of the 20th International Conference on Implementation and Application of Automata, CIAA 2015, held in Umeå, Sweden, in August 2015. The 22 revised full papers presented together with 4 invited papers and 2 tool demonstration papers were carefully reviewed and selected from 49 submissions. The papers cover all aspects of cover automata, counter automata, decision algorithms on automata, descriptional complexity, expressive power of automata, homing sequences, jumping finite automata, multi-dimensional languages, parsing and pattern matching, quantum automata, realtime pushdown automata, random generation of automata, regular expressions, security issues, sensors in automata, transducers, transformation of automata, and weighted automata.

Algorithms on Strings - Maxime Crochemore 2007-04-09

Detailed algorithms for string processes and pattern matching have examples from natural language processing, molecular sequencing, and databases.

Combinatorial Pattern Matching - Alberto Apostolico 2003-08-02

The papers contained in this volume were presented at the 13th Annual Symposium on Combinatorial Pattern Matching, held July 3-5, 2002 at the Hotel Uminonakamichi, in Fukuoka, Japan. They were selected from 37 abstracts submitted in response to the call for papers. In addition, there were invited lectures by Shinichi Morishita (University of Tokyo) and Hiroki Arimura (Kyushu University). Combinatorial Pattern Matching (CPM) addresses issues of searching and matching strings and more complicated patterns such as trees, regular expressions, graphs, point sets, and arrays, in various formats. The goal is to derive non-trivial combinatorial properties of such structures and to exploit these properties in order to achieve superior performance for the corresponding computational problems. On the other hand, an important goal is to analyze and pinpoint the properties and conditions under which searches cannot be performed efficiently. Over the past decade a steady flow of high-quality research on this subject has changed a sparse set of isolated results into a full-fledged area of algorithmics. This area is continuing to grow even further due to the increasing demand for speed and efficiency that stems from important applications such as the World Wide Web, computational biology, computer vision, and multimedia systems. These involve requirements for information retrieval in heterogeneous databases, data compression, and pattern recognition. The objective of the annual CPM gathering is to provide an international forum for research in combinatorial pattern matching and related applications.

String Processing and Information Retrieval - Liliana Calderon-Benavides 2012-09-13

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.

Computer Science Handbook - Allen B. Tucker 2004-06-28

When you think about how far and fast computer science has progressed in recent years, it's not hard to conclude that a seven-year old handbook may fall a little short of the kind of reference today's computer scientists, software engineers, and IT professionals need. With a broadened scope, more emphasis on applied computing, and more than 70 chapters

Information Retrieval Technology - Asia Information Retrieval Symposium 2005-02-23

This book constitutes the thoroughly refereed post-proceedings of the Asia Information Retrieval Symposium, AIRS 2004, held in Beijing, China, in October 2004. The 28 revised full papers presented have passed through two rounds of reviewing and improvement and were selected from 106 papers submitted. All current issues in information retrieval are addressed, ranging from algorithmic and methodological issues to application in various fields. Particular emphasis is given to aspects of Asian languages; text retrieval and Web information retrieval are addressed in several papers.

Combinatorial Pattern Matching - Gregory Kucherov 2009-06-18

This book constitutes the refereed proceedings of the 20th Annual Symposium on Combinatorial Pattern Matching, CPM 2009, held in Lille, France in June 2009. The 27 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 63 submissions. The papers address all areas related to combinatorial pattern matching and its applications, such as coding and data compression, computational biology, data mining, information retrieval, natural language processing, pattern recognition, string algorithms, string processing in databases, symbolic computing and text searching.

Advances in Digital Forensics VII - Gilbert Peterson 2011-09-15

Digital forensics deals with the acquisition, preservation, examination, analysis and presentation of electronic evidence. Networked computing, wireless communications and portable electronic devices have expanded the role of digital forensics beyond traditional computer crime investigations. Practically every crime now involves some aspect of digital evidence; digital forensics provides the techniques and tools to articulate this evidence. Digital forensics also has myriad intelligence applications. Furthermore, it has a vital role in information assurance -- investigations of security breaches yield valuable information that can be used to design more secure systems. Advances in Digital Forensics VII describes original research results and innovative applications in the discipline of digital forensics. In addition, it highlights some of the major technical and legal issues related to digital evidence and electronic crime investigations. The areas of coverage include: Themes and Issues, Forensic Techniques, Fraud and Malware Investigations, Network Forensics, and Advanced Forensic Techniques. This book is the 7th volume in the annual series produced by the International Federation for Information Processing (IFIP) Working Group 11.9 on Digital Forensics, an international community of scientists, engineers and practitioners dedicated to advancing the state of the art of research and practice in digital forensics. The book contains a selection of 21 edited papers from the 7th Annual IFIP WG 11.9 International Conference on Digital Forensics, held at the National Center for Forensic Science, Orlando, Florida, USA in the spring of 2011. Advances in Digital Forensics VII is an important resource for researchers, faculty members and graduate students, as well as for practitioners and individuals engaged in research and development efforts for the law enforcement and intelligence communities. Gilbert Peterson is an Associate Professor of Computer Engineering at the Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA. Sujeet Shenoj is the F.P. Walter Professor of Computer Science at the University of Tulsa, Tulsa, Oklahoma, USA.

Sublinear Computation Paradigm - Naoki Kato 2021-11-20

This open access book gives an overview of cutting-edge work on a new paradigm called the "sublinear computation paradigm," which was proposed in the large multiyear academic research project "Foundations of Innovative Algorithms for Big Data." That project ran from October 2014 to March 2020, in Japan. To handle the unprecedented explosion of big data sets in research, industry, and other areas of society, there is an urgent need to develop novel methods and approaches for big data analysis. To meet this need, innovative changes in algorithm theory for big data are being pursued. For example, polynomial-time algorithms

have thus far been regarded as “fast,” but if a quadratic-time algorithm is applied to a petabyte-scale or larger big data set, problems are encountered in terms of computational resources or running time. To deal with this critical computational and algorithmic bottleneck, linear, sublinear, and constant time algorithms are required. The sublinear computation paradigm is proposed here in order to support innovation in the big data era. A foundation of innovative algorithms has been created by developing computational procedures, data structures, and modelling techniques for big data. The project is organized into three teams that focus on sublinear algorithms, sublinear data structures, and sublinear modelling. The work has provided high-level academic research results of strong computational and algorithmic interest, which are presented in this book. The book consists of five parts: Part I, which consists of a single chapter on the concept of the sublinear computation paradigm; Parts II, III, and IV review results on sublinear algorithms, sublinear data structures, and sublinear modelling, respectively; Part V presents application results. The information presented here will inspire the researchers who work in the field of modern algorithms.

Formal Languages and Applications - Carlos Martin-Vide 2013-03-09
Formal Languages and Applications provides a comprehensive study-aid and self-tutorial for graduates students and researchers. The main results and techniques are presented in an readily accessible manner and accompanied by many references and directions for further research. This carefully edited monograph is intended to be the gateway to formal language theory and its applications, so it is very useful as a review and reference source of information in formal language theory.

Genome-Scale Algorithm Design - Veli Mäkinen 2015-05-07

Provides an integrated picture of the latest developments in algorithmic techniques, with numerous worked examples, algorithm visualisations and exercises.

Bioinformatics - Horacio Pérez-Sánchez 2012-11-28

This book is divided into different research areas relevant in Bioinformatics such as biological networks, next generation sequencing, high performance computing, molecular modeling, structural bioinformatics, molecular modeling and intelligent data analysis. Each book section introduces the basic concepts and then explains its application to problems of great relevance, so both novice and expert readers can benefit from the information and research works presented here.

Trustworthy Computing and Services - Yuyu Yuan 2013-01-05

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.

Combinatorial Pattern Matching - Suleyman C. Sahinalp 2004-06-22

This book constitutes the refereed proceedings of the 15th Annual Symposium on Combinatorial Pattern Matching, CPM 2004, held in Istanbul, Turkey in July 2004. The 36 revised full papers presented were carefully reviewed and selected from 79 submissions. The papers are devoted to current theoretical and computational aspects of searching and matching of strings and more complicate patterns, such as trees, regular expressions, graphs, point sets, and arrays. Among the application fields addressed are computational biology, bioinformatics, genomics, proteinomics, the web, data compression, coding, multimedia, information retrieval, data analysis, pattern recognition, and computer vision.

String Processing and Information Retrieval - Mario A. Nascimento 2003-12-12

This volume of the Lecture Notes in Computer Science series provides a comprehensive, state-of-the-art survey of recent advances in string processing and information retrieval. It includes invited and research papers presented at the 10th International Symposium on String Processing and Information Retrieval, SPIRE 2003, held in Manaus, Brazil. SPIRE 2003 received 54 full submissions from 17 countries, namely: - gentina(2), Australia(2), Brazil(9),Canada(1),Chile

(4),Colombia(2),Czech Republic (1), Finland (10), France (1), Japan (2), Korea (5), Malaysia (1), P- tugal (2), Spain (6), Turkey (1), UK (1), USA (4) - the numbers in parentheses indicate the number of submissions from that country. In the nontrivial task of selecting the papers to be published in these proceedings we were fortunate to count on a very international program committee with 43 members, represe- ing all continents but one. These people, in turn, used the help of 40 external referees. During the review process all but a few papers had four reviews instead of the usual three, and at the end 21 submissions were accepted to be p- lished as full papers, yielding an acceptance rate of about 38%. An additional set of six short papers was also accepted. The technical program spans over the two well-de?ned scopes of SPIRE (string processing and information retrieval) with a number of papers also focusing on important application domains such as bioinformatics. SPIRE 2003 also features two invited speakers: Krishna Bharat (Google, Inc.) and Joã o Meidanis (State Univ. of Campinas and Scylla Bioinformatics).

New Frontiers in Applied Data Mining - Sanjay Chawla 2009-02-07

This book constitutes the proceedings of the PAKDD Workshops 2008, namely ALSIP 2008, DMDRM 2008, and IDM 2008. The workshops were held in conjunction with the PAKDD conference in Osaka, Japan, during May 20-23, 2008. The 17 papers presented were carefully reviewed and selected from 38 submissions. The International Workshop on Algorithms for Large-Sale Information Processing in Knowledge Discovery (ALSIP) focused on exchanging fresh ideas on large-scale data processing in the problems of data mining, clustering, machine learning, statistical analysis, and other computational aspects of knowledge discovery problems. The Workshop on Data Mining for Decision Making and Risk Management (DMDRM) covered data mining and machine learning approaches, statistical approaches, chance discovery, active mining and application of these techniques to medicine, marketing, security, decision support in business, social activities, human relationships, chemistry and sensor data. The Workshop on Interactive Data Mining Overview (IDM) discussed various interactive data mining researches such as interactive information retrieval, information gathering sysetms, personalization systems, recommendation systems, user interfaces.

Flexible Pattern Matching in Strings - Gonzalo Navarro 2002-05-27

Presents recently developed algorithms for searching for simple, multiple and extended strings, regular expressions, exact and approximate matches.

Parallel Processing and Applied Mathematics, Part II - Roman Wyrzykowski 2012-07-04

This two-volume-set (LNCS 7203 and 7204) constitutes the refereed proceedings of the 9th International Conference on Parallel Processing and Applied Mathematics, PPAM 2011, held in Torun, Poland, in September 2011. The 130 revised full papers presented in both volumes were carefully reviewed and selected from numerous submissions. The papers address issues such as parallel/distributed architectures and mobile computing; numerical algorithms and parallel numerics; parallel non-numerical algorithms; tools and environments for parallel/distributed/grid computing; applications of parallel/distributed computing; applied mathematics, neural networks and evolutionary computing; history of computing.

Database Systems for Advanced Applications - Chengfei Liu 2018-05-12

This book constitutes the workshop proceedings of the 23rd International Conference on Database Systems for Advanced Applications, DASFAA 2018, held in Gold Coast, QLD, Australia, in May 2018. The 23 full papers presented were carefully selected and reviewed from 44 submissions to the four following workshops: the 5th International Workshop on Big Data Management and Service, BDMS 2018; the Third International Workshop on Big Data Quality Management, BDQM 2018; the Second International Workshop on Graph Data Management and Analysis, GDMA 2018; and the 5th International Workshop on Semantic Computing and Personalization, SeCoP 2018.

Experimental and Efficient Algorithms - Celso C. Ribeiro 2004-05-11

This book constitutes the refereed proceedings of the Third International Workshop on Experimental and Efficient Algorithms, WEA 2004, held in Angra dos Reis, Brazil in May 2004. The 40 revised full papers presented together with abstracts of two invited talks were carefully reviewed and selected from numerous submissions. The book is devoted to the areas of design, analysis, and experimental evaluation of algorithms. Among the topics covered are scheduling, heuristics, combinatorial optimization, evolutionary optimization, graph computations, labeling, robot navigation, shortest path algorithms, flow problems, searching,

randomization and derandomization, string matching, graph coloring, networking, error detecting codes, timetabling, sorting, energy minimization, etc.

Computer and Network Security Essentials - Kevin Daimi 2017-08-12

This book introduces readers to the tools needed to protect IT resources and communicate with security specialists when there is a security problem. The book covers a wide range of security topics including Cryptographic Technologies, Network Security, Security Management, Information Assurance, Security Applications, Computer Security, Hardware Security, and Biometrics and Forensics. It introduces the concepts, techniques, methods, approaches, and trends needed by security specialists to improve their security skills and capabilities. Further, it provides a glimpse into future directions where security techniques, policies, applications, and theories are headed. The book represents a collection of carefully selected and reviewed chapters written by diverse security experts in the listed fields and edited by prominent security researchers. Complementary slides are available for download on the book's website at Springer.com.

MICAI 2006: Advances in Artificial Intelligence - Alexander Gelbukh 2006-11-07

This book constitutes the refereed proceedings of the 5th Mexican International Conference on Artificial Intelligence, MICAI 2006, held in Apizaco, Mexico in November 2006. It contains over 120 papers that address such topics as knowledge representation and reasoning, machine learning and feature selection, knowledge discovery, computer vision, image processing and image retrieval, robotics, as well as bioinformatics and medical applications.

Federation over the Web - Klaus P. Jantke 2006-01-19

The lives of people all around the world, especially in industrialized nations, continue to be changed by the presence and growth of the Internet. Its influence is felt at scales ranging from private lifestyles to national economies, boosting the pace at which modern information and communication technologies influence personal choices along with business processes and scientific endeavors. In addition to its billions of HTML pages, the Web can now be seen as an open repository of computing resources. These resources provide access to computational services as well as data repositories, through a rapidly growing variety of Web applications and Web services. However, people's usage of all these resources barely scratches the surface of the possibilities that such richness should offer. One simple reason is that, given the variety of information available and the rate at which it is being extended, it is difficult to keep up with the range of resources relevant to one's interests. Another reason is that resources are offered in a bewildering variety of formats and styles, so that many resources effectively stand in isolation. This is reminiscent of the challenge of enterprise application integration, familiar to every large organization be it in commerce, academia or government.

The challenge arises because of the accumulation of information and communication systems over decades, typically without the technical provision or political will to make them work together. Thus the exchange of data among those systems is difficult and expensive, and the potential synergistic effects of combining them are never realized.

Language and Automata Theory and Applications - Adrian Horia Dediu 2009-03-09

plus, in most cases, by additional external referees.

After a thorough and vivid discussion phase, the committee decided to accept 58 papers (which means an acceptance rate of 47.93%).

Computing Handbook, Third Edition - Teofilo Gonzalez 2014-05-07

Computing Handbook, Third Edition: Computer Science and Software Engineering mirrors the modern taxonomy of computer science and software engineering as described by the Association for Computing Machinery (ACM) and the IEEE Computer Society (IEEE-CS). Written by established leading experts and influential young researchers, the first volume of this popular handbook examines the elements involved in designing and implementing software, new areas in which computers are being used, and ways to solve computing problems. The book also explores our current understanding of software engineering and its effect on the practice of software development and the education of software professionals. Like the second volume, this first volume describes what occurs in research laboratories, educational institutions, and public and private organizations to advance the effective development and use of computers and computing in today's world. Research-level survey articles provide deep insights into the computing

discipline, enabling readers to understand the principles and practices that drive computing education, research, and development in the twenty-first century.

String Processing and Information Retrieval - Jussi Karlgren 2009-08-21

This book constitutes the refereed proceedings of the 16th String Processing and Information Retrieval Symposium, SPIRE 2009 held in Saariselkä, Finland in August 2009. The 34 revised full papers were carefully reviewed and selected from 84 submissions. The papers are organized in topical sections on algorithms on trees, compressed indexes, compression, indexing, content analysis, string algorithms and bioinformatics, string algorithms and theory, and using and understanding usage.

Compact Data Structures - Gonzalo Navarro 2016-09-08

This practical, applications-oriented book describes essential tools for efficiently handling massive amounts of data.

Experimental Algorithms - Joachim Gudmundsson 2014-06-09

This book constitutes the refereed proceedings of the 13th International Symposium on Experimental Algorithms, SEA 2014, held in Copenhagen, Denmark, in June/July 2014. The 36 revised full papers presented together with 3 invited presentations were carefully reviewed and selected from 81 submissions. The papers are organized in topical sections on combinatorial optimization, data structures, graph drawing, shortest path, strings, graph algorithms and suffix structures.

Proceedings of the 2012 International Conference on Information Technology and Software Engineering - Wei Lu 2012-11-05

Proceedings of the 2012 International Conference on Information Technology and Software Engineering presents selected articles from this major event, which was held in Beijing, December 8-10, 2012. This book presents the latest research trends, methods and experimental results in the fields of information technology and software engineering, covering various state-of-the-art research theories and approaches. The subjects range from intelligent computing to information processing, software engineering, Web, unified modeling language (UML), multimedia, communication technologies, system identification, graphics and visualizing, etc. The proceedings provide a major interdisciplinary forum for researchers and engineers to present the most innovative studies and advances, which can serve as an excellent reference work for researchers and graduate students working on information technology and software engineering. Prof. Wei Lu, Dr. Guoqiang Cai, Prof. Weibin Liu and Dr. Weiwei Xing all work at Beijing Jiaotong University.

Frontiers in Algorithmics - Xiaotie Deng 2009-06-08

The Third International Frontiers of Algorithmics Workshop (FAW 2009), held during June 20-23, 2009 at Hefei University of Technology, Hefei, Anhui, China, continued to provide a focused forum on current trends in research on algorithmics, including discrete structures, and their applications. We

aim at stimulating the various fields for which algorithmics can become a crucial enabler, and to strengthen the ties between the Eastern and Western algorithmics research communities as well as theory and practice of algorithmics. We had three distinguished invited speakers: Guoliang Chen, Andrew Chi-Chih Yao and Frances Foong Yao, speaking on parallel computing, communication complexity and applications, and computer and network power management. The final program also included 33 peer-reviewed papers selected out of 87 contributed submissions, covering topics including approximation and online algorithms; computational geometry; graph theory and graph algorithms; games and applications; heuristics; large-scale data mining; machine learning; pattern recognition algorithms; and parameterized algorithms. April 2009 Xiaotie Deng John Hopcroft Jinyun Xue Organization FAW 2009 was organized by Hefei University of Technology, China.

Discovery Science - Gunter Grieser 2003-10-07

This book constitutes the refereed proceedings of the 6th International Conference on Discovery Science, DS 2003, held in Sapporo, Japan in October 2003. The 18 revised full papers and 29 revised short papers presented together with 3 invited papers and abstracts of 2 invited talks were carefully reviewed and selected from 80 submissions. The papers address all current issues in discovery science including substructure discovery, Web navigation patterns discovery, graph-based induction, time series data analysis, rough sets, genetic algorithms, clustering, genome analysis, chaining patterns, association rule mining, classification, content based filtering, bioinformatics, case-based reasoning, text mining, Web data analysis, and more.