Chapter 1 : dblp: Handbook of Theoretical Computer Science, Volume A

The Handbook of Theoretical Computer Science provides professionals and students with a comprehensive overview of the main results and developments in this rapidly evolving field. Volume A covers models of computation, complexity theory, data structures, and efficient computation in many recognized subdisciplines of theoretical computer science.

Show Context Citation Context All the vertices of the tree are partitioned into O log n different classes, on the basis of a recursive application of a balanced tree separator. Removing the seperator from the tree leav This booklet develops in nearly pages the basics of combinatorial enumeration through an approach that revolves around generating functions. The major objects of interest here are words, trees, graphs, and permutations, which surface recurrently in all areas of discrete mathematics. The text presents the core of the theory with chapters on unlabelled enumeration and ordinary generating functions, labelled enumeration and exponential generating functions, and finally multivariate enumeration and generating functions. It is largely oriented towards applications of combinatorial enumeration to random discrete structures and discrete mathematics models, as they appear in various branches of science, like statistical physics, computational biology, probability theory, and, last not least, computer science and the analysis of algorithms. The aim of this paper is to elaborate the power of cooperation in generating and analysing handwritten characters by array grammars. We present various non-context-free sets of arrays that can be generated in a simple way by cooperating distributed array grammar systems with prescribed teams wor We present various non-context-free sets of arrays that can be generated in a simple way by cooperating distributed array grammar systems with prescribed teams working in different modes and show the power of the mechanism of cooperation for picture description and analysis as well as the efficiency of these models where several sets of productions work in parallel on the given sentential form. This strategy is supposed to increase the total competence of the individual agents working together for solving a common task. The recognition of specific patterns like handwritten characters can be seen as such a complex task that might be attacked by several agents working in parallel on the underlying pattern. Moreover, the forming of different teams of specialized Because of condition 1, we only have a bounded parallelism in the recognition process, which is indeed a very realistic assumption. The recognition process proceeds with applying Q 2 until one of th The problem of finding a spanning tree with few leaves is motivated by the design of communication networks, where the cost of the devices depends on their routing functionality ending, forwarding, or routing a connection. Besides this application, the problem has its own theoretical importance a Besides this application, the problem has its own theoretical importance as a generalization of the Hamiltonian path problem. Thus instead of minimizing the number of leaves, we are going to deal with maximizing the number of non-leaves: In this work we develop a temporal logic with fixpoints for distributed processes or distributed systems. Standard temporal logics refer to sequential processes execution sequences of distributed systems. Expressive temporal operators such as "Until" can be expressed as fixpoints of for Fixpoint logics for sequential processes are known to be expressively equivalent to Buchi automata over infinite sequences. Here, we extend this approach to distributed processes, which represent the causal relation of events occurring in a run of a system as partial order. Within a general framework we identify several syntactic subclasses of the logic. Both theoretical and pragmatic aspects of the resulting logics are investigated. The major theoretical result is the expressive equivalence of This paper studies the multicast routing and admission control problem on unit-capacity tree and mesh topologies in the throughput-model. The problem is a generalization of the edge-disjoint paths problem and is NP-hard both on trees and meshes. We study both the offline and the online version of We study both the offline and the online version of the problem: In the online setting, we give the first polylogarithmic competitive online algorithm for tree and mesh topologies. No polylogarithmic-competitive algorithm is possible on general network topologies [8] and there exists a polylogarithmic lower bound on the competitive ratio of any online algorithm on tree topologies [3]. We prove the same lower bound for meshes.

Metaquerying is a datamining technology by which hidden dependencies among several database relations can be discovered. This tool has already been successfully applied to several real-world applications. Recent papers provide only preliminary results about the complexity of metaquerying. In this paper we define several variants of metaquerying that encompass, as far as we know, all variants defined in the literature. OGCFL, which will be used in the sequel. Let DB be a database instance. The problem of satisfying a Ons beskryf dan verskeie veralgemenings van die tradisionele neto beskr Ons beskryf dan verskeie veralgemenings van die tradisionele neto beskrywing, soos byvoorbeeld die? In elk van die gevalle ondersoek ons die effek van die veralgemening op die bondige voorstelling van regulere tale. Inducing association rules is one of the central tasks in data mining applications. Quantitative association rules induced from databases describe rich and hidden relationships holding within data that can prove useful for various application purposes e. Even though such association rules are quite widely used in practice, a thorough analysis of the computational complexity of inducing them is missing. This paper intends to provide a contribution in this setting. To this end, we first formally define quantitative association rule mining problems, which entail boolean association rules as a special case, and then analyze their computational complexities, by considering both the standard cases, and a some special interesting case, that is, association rule induction over databases with null values, fixed-size attribute set databases, sparse databases, fixed threshold problems.

DOWNLOAD PDF HANDBOOK OF THEORETICAL COMPUTER SCIENCE, VOL. A

Chapter 2 : Handbook of Theoretical Computer Science - Google Books

Searching for handbook of theoretical computer science vol a algorithms and complexity in the book store will be probably difficult. This is a very popular book and you may.

In a previous work, we proved that almost all of the Calculus of Inductive Constructions CIC , the basis of the proof assistant Coq, can be seen as a Calculus of Algebraic Constructions CAC , an extension of the Calculus of Constructions with functions and predicates defined by higher-order rewrit In this paper, we prove that CIC as a whole can be seen as a CAC, and that it can be extended with nonstrictly positive types and inductive-recursive types together with nonfree constructors and pattern-matching on defined symbols. Katoen - Acta Informatica , " BURS theory provides a powerful mechanism to efficiently generate pattern matches in a given expression tree. BURS, which stands for bottom-up rewrite system, is based on term rewrite systems, to which costs are added. We formalise the underlying theory, and derive an algorithm that computes all pat We formalise the underlying theory, and derive an algorithm that computes all pattern matches. This algorithm terminates if the term rewrite system is finite. The search algorithm is directed by a cost heuristic that estimates the minimum cost of code that has yet to be generated. The advantage of using a search algorithm is that we need to compute only those costs that may be part of an optimal rewrite sequence and not the costs of all possible rewrite sequences as in dynamic programming. A system that implements the algorithms presented in this work has been built. Interpreting rewriting steps as Interpreting rewriting steps as morphisms in hom-categories, these models provide rewriting systems with a concurrent semantics in a clean algebraic way. More precisely, we show why they are to a certain extent unsatisfactory in providing a concurrent semantics for rewriting systems. Show Context Citation Context A language for document queries and transformations by Dennis S. Arnon - Electronic Publishing , " In Section 2 we look at some simple document queries. In Section 3 we look at more complex query examples. Section 4 considers a document type conversion example. Section 5 has conclusions.

Chapter 3 : Handbook of Theoretical Computer Science - 2 Vol Set by Jean Van Leeuwen

Ahmed Bouajjani, Peter Habermehl, Richard Mayr, Automatic verification of recursive procedures with one integer parameter, Theoretical Computer Science, v n.1, p, February Damien Woods, J. Paul Gibson, Lower bounds on the computational power of an optical model of computation, Proceedings of the 4th international conference.

Chapter 4 : dblp: Handbook of Theoretical Computer Science, Volume B

The second part of this Handbook presents a choice of material on the theory of automata and rewriting systems, the foundations of modern programming languages, logics for program specification and verification, and some chapters on the theoretic modelling of advanced information processing.

Chapter 5 : Handbook of Theoretical Computer Science: Algorithms and Complexity by Jan Van Leeuwen

Handbook of Theoretical Computer Science - 2 Vol Set has 2 ratings and 0 reviews. Of all the books I have covered in the Forum to date, this set is the.

Chapter 6 : Download PDF EPUB Handbook Of Game Theory 4 Handbooks In Economics - PDF and ePuk

Bibliographic content of Handbook of Theoretical Computer Science, Volume B.

DOWNLOAD PDF HANDBOOK OF THEORETICAL COMPUTER SCIENCE, VOL. A

Chapter 7 : [PDF/ePub Download] handbook of theoretical computer science eBook

V Graph Theory 14 Graph Representations The Computer Science handbook is a handbook designed to ex-plain algorithms and data structures in a way that.