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Analyses Concerning Passive and Active Synthesis Synthesis Lectures on Computer Architecture : Quantum Computing for Computer Architects (2nd Edition) Synthesis lectures on information security, privacy and trust Stereoselective Synthesis Synthesis Lectures on Communication Networks Resilient System Design Action Programming Languages Mellin-transform Method for Integral Evaluation (Synthesis Lectures on Computational Electromagnetics). Ontology Engineering Satisfiability Testing Anonymity Replicated Data Management for Mobile Computing High Dynamic Range Video Computer Architecture Techniques for Power-efficiency Learning Programming Using MATLAB Phase Change Memory Engineering Dynamics Interacting with Information Spoken Dialogue Systems Needs and Feasibility Artificial Life for Computer Animatio The Landscape of Pervasive Computing Standards Digital Forensics Data-Based Methods for Materials Design and Discovery Reading and Writing the Electronic Book Poisson Line Cox Process Understanding Circuits Ontology Engineering Signal Processing of Random Physiological Signals Participatory Design Arduino Microcontroller Processing for Everyone Provenance Introduction to Logic Impossibility Results for Distributed Computing Advanced Concepts and Architectures for Plasma-Enabled Material Processing Foundations of Data Quality Management Shared-memory Synchronization Active Learning On-Chip Networks Location Systems

Analyses Concerning Passive and Active Synthesis

2012-12-06

coming from what is arguably the most productive period of husserl s life this volume offers the reader a first translation into english of husserl s renowned lectures on passive synthesis given between 1920 and 1926 these lectures are the first extensive application of husserl s newly developed genetic phenomenology to perceptual experience and to the way in which it is connected to judgments and cognition they include an historical reflection on the crisis of contemporary thought and human spirit provide an archaeology of experience by questioning back into sedimented layers of meaning and sketch the genealogy of judgment in active synthesis drawing upon everyday events and personal experiences the analyses are marked by a patient attention to the subtle emergence of sense in our lives by advancing a phenomenology of association that treats such phenomena as bodily kinaesthesia temporal genesis habit affection attention motivation and the unconscious husserl explores the cognitive dimensions of the body in its affectively significant surroundings an elaboration of these diverse modes of evidence and their modalizations transcendental aesthetic allows husserl to trace the origin of truth up to judicative achievements transcendental logic joined by several of husserl s essays on static and genetic method the analyses afford a richness of description unequalled by the majority of husserl s works available to english readers students of phenomenology and of husserl s thought will find this an indispensable work

Synthesis Lectures on Computer Architecture : Quantum Computing for Computer Architects (2nd Edition)

2008

devising methods and reagents for stereoselective synthesis is an intellectually demanding venture six experts on diastereo and enantioselective synthesis contributed their papers to this volume they were presented at a symposium on stereoselective synthesis to honour professor dr dr h c rudolf wiechert s achievements in medicinal chemistry research the symposium was organized by the schering ag on the occasion of professor wiechert s 65th birthday

Synthesis lectures on information security, privacy and trust

2012-12-06

artificial systems that think and behave intelligently are one of the most exciting and challenging goals of artificial intelligence action programming is the art and science of devising high level control strategies for autonomous systems which employ a mental model of their environment and which reason about their actions as a means to achieve their goals applications of this programming paradigm include autonomous software agents mobile robots with high level reasoning capabilities and general game playing these lecture notes give an in depth introduction to the current state of the art in action programming the main topics are knowledge representation for actions procedural action programming planning agent logic programs and reactive behavior based agents the only prerequisite for understanding the material in these lecture notes is some general programming experience and basic knowledge of classical first order logic

Stereoselective Synthesis

2007-07-01

ontologies have become increasingly important as the use of knowledge graphs machine learning natural language processing nlp and the amount of data generated on a daily basis has exploded as of 2014 90 of the data in the digital universe was generated in the two years prior and the volume of data was projected to grow from 3.2 zettabytes to 40 zettabytes in the next six years the very real issues that government research and commercial organizations are facing in order to sift through this amount of information to support decision making alone mandate increasing automation yet the data profiling nlp and learning algorithms that are ground zero for data integration manipulation and search provide less than satisfactory results unless they utilize terms with unambiguous semantics such as those found in ontologies and well formed rule sets ontologies can provide a rich schema for the knowledge graphs underlying these technologies as well as the terminological and semantic basis for dramatic improvements in results many ontology projects fail however due at least in part to a lack of discipline in the development process this book motivated by the ontology 101 tutorial given for many years at what was originally the semantic technology conference semtech and then later from a semester long university class is designed to provide the foundations for ontology engineering the book can serve as a course textbook or a primer for all those interested in ontologies

Synthesis Lectures on Communication Networks

2008

managing data in a mobile computing environment invariably involves caching or replication in many cases a mobile device has access only to data that is stored locally and much of that data arrives via replication from other devices pcs and services given portable devices with limited resources weak or intermittent connectivity and security vulnerabilities data replication serves to increase availability reduce communication costs foster sharing and enhance survivability of critical information mobile systems have employed a variety of distributed architectures from client server caching to peer to peer replication such systems generally provide weak consistency models in which read and update operations can be performed at any replica without coordination with other devices the design of a replication protocol then centers on issues of how to record propagate order and filter updates some protocols utilize operation logs whereas others replicate state systems might provide best effort delivery using gossip protocols or multicast or guarantee eventual consistency for arbitrary communication patterns using recently developed pairwise knowledge driven protocols additionally systems must detect and resolve the conflicts that arise from concurrent updates using techniques ranging from version vectors to read write dependency checks this lecture explores the choices faced in designing a replication protocol with particular emphasis on meeting the needs of mobile applications it presents the inherent trade offs and implicit assumptions in alternative designs the discussion is grounded by including case studies of research and commercial systems including coda ficus bayou sybase s ianywhere and microsoft s sync framework table of contents introduction system models data consistency replicated data protocols partial replication conflict management case studies conclusions bibliography

Resilient System Design

2022-05-31

as new displays and cameras offer enhanced color capabilities there is a need to extend the precision of digital content high dynamic range hdr imaging encodes images and video with higher than normal 8 bit per color channel precision enabling representation of the complete color gamut and the full visible range of luminance however to realize transition from the traditional to hdr imaging it is necessary to develop imaging algorithms that work with the high precision data to make such algorithms effective and feasible in practice it is necessary to take advantage of the limitations of the human visual system by aligning the data shortcomings to those of the human eye thus limiting storage and processing precision

therefore human visual perception is the key component of the solutions we discuss in this book

Action Programming Languages

2007-08-01

in the last few years power dissipation has become an important design constraint on par with performance in the design of new computer systems whereas in the past the primary job of the computer architect was to translate improvements in operating frequency and transistor count into performance now power efficiency must be taken into account at every step of the design process while for some time architects have been successful in delivering 40 to 50 annual improvement in processor performance costs that were previously brushed aside eventually caught up the most critical of these costs is the inexorable increase in power dissipation and power density in processors power dissipation issues have catalyzed new topic areas in computer architecture resulting in a substantial body of work on more power efficient architectures power dissipation coupled with diminishing performance gains was also the main cause for the switch from single core to multi core architectures and a slowdown in frequency increase this book aims to document some of the most important architectural techniques that were invented proposed and applied to reduce both dynamic power and static power dissipation in processors and memory hierarchies a significant number of techniques have been proposed for a wide range of situations and this book synthesizes those techniques by focusing on their common characteristics

Mellin-transform Method for Integral Evaluation (Synthesis Lectures on Computational Electromagnetics).

2012-06-15

this book is intended for anyone trying to learn the fundamentals of computer programming the chapters lead the reader through the various steps required for writing a program introducing the matlab r constructs in the process matlab r is used to teach programming because it has a simple programming environment it has a low initial overhead which allows the novice programmer to begin programming immediately and allows the users to easily debug their programs this is especially useful for people who have a mental block about computers although matlab r is a high level language and interactive environment that enables the user to perform computationally intensive tasks faster than with traditional programming languages such as c c and fortran the author shows that it can also be used as a programming learning tool for novices there are a number of exercises at the end of each chapter which should help users become comfortable with the language

Ontology Engineering

2008

as conventional memory technologies such as dram and flash run into scaling challenges architects and system designers are forced to look at alternative technologies for building future computer systems this synthesis lecture begins by listing the requirements for a next generation memory technology and briefly surveys the landscape of novel non volatile memories among these phase change memory pcm is emerging as a leading contender and the authors discuss the material device and circuit advances underlying this exciting technology the lecture then describes architectural solutions to enable pcm for main memories finally the authors explore the impact of such byte addressable non volatile memories on future storage and system designs table of contents next generation memory technologies architecting pcm for main

memories tolerating slow writes in pcm wear leveling for durability wear leveling under adversarial settings error resilience in phase change memories storage and system design with emerging non volatile memories

Satisfiability Testing

2008

engineering dynamics is an introductory textbook covering the kinematics and dynamics of particles systems of particles and kinematics and dynamics of rigid bodies it has been developed from lecture notes given by the author since 1982 it includes sufficient topics normally covered in a single semester three credit hour course taken by sophomores in an undergraduate degree program majoring in various engineering disciplines the primary focus of the book is on kinematics and dynamics of particles kinematics and dynamics of systems of particles and kinematics and dynamics of rigid bodies in two and three dimensional spaces it aims at providing a short book relative to many available in literature but with detailed solutions to representative examples exercise questions are included

Anonymity

2008

we live in an information age but information is only useful when it is interpreted by people and applied in the context of their goals and activities the volume of information to which people have access is growing at an incredible rate vastly outstripping people s ability to assimilate and manage it in order to design technologies that better support information work it is necessary to better understand the details of that work in this lecture we review the situations physical social and temporal in which people interact with information we also discuss how people interact with information in terms of an information journey in which people iteratively do the following recognise a need for information find information interpret and evaluate that information in the context of their goals and use the interpretation to support their broader activities people s information needs may be explicit and clearly articulated but conversely may be tacit exploratory and evolving widely used tools supporting information access such as searching on the and in digital libraries support clearly defined information requirements well but they provide limited support for other information needs most other stages of the information journey are poorly supported at present novel design solutions are unlikely to be purely digital but to exploit the rich variety of information resources digital physical and social that are available theories of information interaction and sensemaking can highlight new design possibilities that augment human capabilities we review relevant theories and findings for understanding information behaviours and we review methods for evaluating information working tools to both assess existing tools and identify requirements for the future table of contents introduction pervasive information interactions background information interaction at the crossroads of research traditions the situations physical social and temporal the behaviors understanding the information journey the technologies supporting the information journey studying user behaviors and needs for information interaction looking to the future further reading

Replicated Data Management for Mobile Computing

2007

considerable progress has been made in recent years in the development of dialogue systems that support robust and efficient human machine interaction using spoken language spoken dialogue technology allows various interactive applications to be built and used for practical purposes and research focuses on issues that aim to increase the system s

communicative competence by including aspects of error correction cooperation multimodality and adaptation in context this book gives a comprehensive view of state of the art techniques that are used to build spoken dialogue systems it provides an overview of the basic issues such as system architectures various dialogue management methods system evaluation and also surveys advanced topics concerning extensions of the basic model to more conversational setups the goal of the book is to provide an introduction to the methods problems and solutions that are used in dialogue system development and evaluation it presents dialogue modelling and system development issues relevant in both academic and industrial environments and also discusses requirements and challenges for advanced interaction management and future research table of contents preface introduction to spoken dialogue systems dialogue management error handling case studies advanced approaches to dialogue management advanced issues methodologies and practices of evaluation future directions references author biographies

High Dynamic Range Video

2022-05-31

needs and feasibility a guide for engineers in community projects the case of waste for life is the story of waste for life wfl wfl is a not for profit organization that works to promote poverty reducing solutions to environmental problems and its educational branch is an international consortium of universities in six countries involving students in support of community development projects wfl currently works in lesotho and argentina we present the story of the development of wfl in each country as a case based guide to engineers professors and students interested in community development work particularly in contexts very different from their own we focus mainly on the set up stages framing the projects to ensure that community needs are adequately articulated and acted upon we begin with needs assessment what is it that needs to be done for whom and why how feasible is this technically economically and can we guarantee sustainability before we can decide any of this we need to understand and map the territory who are the key players who have the most influence and who will be most impacted by what we are doing what is the role of the local government if the groups are working as cooperatives what does this mean and what are these groups looking for what is the technical solution going to look like if it is a product how will it be marketed what other social environmental and economic impacts will it have and on whom once these have all been negotiated and it is clear that all parties are working towards a mutually acceptable goal how do we move forward so that any dependence on external partners is removed when do we bring students into the work what role can they play should they stay at home and support the project from there or is it better to do work in the field this guide will be useful for the student engineer or the experienced engineer or professor who is interested in moving towards socially just engineering development work but has no idea where to begin the real difficulties and on the ground issues encountered by the waste for life team are presented honestly and with the knowledge that we must learn from our mistakes only then can we hope to gain a better understanding of our potential role in supporting community development and move towards a better future table of contents an introduction assessing the need in lesotho feasibility of wfl lesotho mapping the territory in buenos aires stakeholder focus the local government stakeholder focus cooperatives sustainability economic environmental and social student involvement summary thoughts

Computer Architecture Techniques for Power-efficiency

2018-07-05

this lecture presents a first compendium of established and emerging standards in pervasive computing systems the lecture explains the role of each of the covered standards and explains the relationship and interplay among them hopefully the lecture will help piece together the various standards into a sensible and clear landscape the lecture is a

digest reorganization and a compilation of several short articles that have been published in the standards and emerging technologies department of the IEEE Pervasive Computing Magazine. The articles have been edited and shortened or expanded to provide the necessary focus and uniform coverage. Depth: There are more standards and common practices in pervasive systems than the lecture could cover. However, systems perspective and programmability of pervasive spaces which are the main foci of the lecture, set the scope and determined which standards should be included. The lecture explains what it means to program a pervasive space and introduces the new requirements brought about by pervasive computing. Among the standards the lecture covers are: sensors and device standards, service-oriented device standards, service discovery and delivery standards, service gateway standards, and standards for universal interactions with pervasive spaces. In addition, the emerging sensor platform and domestic robots technologies are covered and their essential new roles explained. The lecture also briefly covers a set of standards that represents an ecosystem for the emerging pervasive healthcare industry. Audiences who may benefit from this lecture include: 1. Academic and industrial researchers working on sensor-based pervasive or ubiquitous computing. 2. System integrator consultants and firms especially those concerned with integrating sensors, actuators, and devices to their enterprise and business systems. 3. Device, smart chips, and sensor manufacturers. 4. Government agencies. 5. The healthcare, IT, and pervasive health industries. 6. Other industries such as logistics, manufacturing, and the emerging smart grid and environment sustainability industries.

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Learning Programming Using MATLAB

2022-05-31

Machine learning methods are changing the way we design and discover new materials. This book provides an overview of approaches successfully used in addressing materials problems: alloys, ferroelectrics, dielectrics, with a focus on probabilistic methods such as Gaussian processes to accurately estimate density functions. The authors, who have extensive experience in this interdisciplinary field, discuss generalizations where more than one competing material property is involved or data with differing degrees of precision, costs, or fidelity. Expense needs to be considered.

Phase Change Memory

2010

Developments over the last twenty years have fueled considerable speculation about the future of the book and of reading itself. This book begins with a gloss over the history of electronic books, including the social and technical forces that have shaped their development. The focus then shifts to reading and how we interact with what we read. Basic issues such as legibility, annotation, and navigation are examined as aspects of reading that ebooks inherit from their print legacy. Because reading is fundamentally communicative, I also take a closer look at the sociality of reading: how we read in a group and how we share what we read. Studies of reading and ebook use are integrated throughout the book, but Chapter 5 goes meta to explore how a researcher might go about designing his or her own reading-related studies. No book about ebooks is complete without an explicit discussion of content preparation, i.e., how the electronic book is written. Hence, Chapter 6 delves into the underlying representation of ebooks and efforts to create and apply markup standards to them. This chapter also examines how print genres have made the journey to digital and how some emerging digital genres might be realized as ebooks. Finally, Chapter 7 discusses some beyond-the-book functionality: how can ebook platforms be transformed

into portable personal libraries in the end my hope is that by the time the reader reaches the end of this book he or she will feel equipped to perform the next set of studies write the next set of articles invent new ebook functionality or simply engage in a heated argument with the stranger in seat 17c about the future of reading table of contents preface figure credits introduction reading interaction reading as a social activity studying reading beyond the book references author biography

Engineering Dynamics

2010-01-01

this book provides a comprehensive treatment of the poisson line cox process plcp and its applications to vehicular networks the plcp is constructed by placing points on each line of a poisson line process plp as per an independent poisson point process ppp for vehicular applications one can imagine the layout of the road network as a plp and the vehicles on the roads as the points of the plcp first a brief historical account of the evolution of the theory of plp is provided to familiarize readers with the seminal contributions in this area in order to provide a self contained treatment of this topic the construction and key fundamental properties of both plp and plcp are discussed in detail the rest of the book is devoted to the applications of these models to a variety of wireless networks including vehicular communication networks and localization networks specifically modeling the locations of vehicular nodes and roadside units rsus using plcp the signal to interference plus noise ratio sinr based coverage analysis is presented for both ad hoc and cellular network models for a similar setting the load on the cellular macro base stations mbss and rsus in a vehicular network is also characterized analytically for the localization networks plp is used to model blockages which is shown to facilitate the characterization of asymptotic blind spot probability in a localization application finally the path distance characteristics for a special case of plcp are analyzed which can be leveraged to answer critical questions in the areas of transportation networks and urban planning the book is concluded with concrete suggestions on future directions of research based largely on the original research of the authors this is the first book that specifically focuses on the self contained mathematical treatment of the plcp the ideal audience of this book is graduate students as well as researchers in academia and industry who are familiar with probability theory have some exposure to point processes and are interested in the field of stochastic geometry and vehicular networks given the diverse backgrounds of the potential readers the focus has been on providing an accessible and pedagogical treatment of this topic by consciously avoiding the measure theoretic details without compromising mathematical rigor

Interacting with Information

2007

this book lecture is intended for a college freshman level class in problem solving where the particular problems deal with electrical and electronic circuits it can also be used in a junior senior level class in high school to teach circuit analysis the basic problem solving paradigm used in this book is that of resolution of a problem into its component parts the reader learns how to take circuits of varying levels of complexity using this paradigm the problem solving exercises also familiarize the reader with a number of different circuit components including resistors capacitors diodes transistors and operational amplifiers and their use in practical circuits the reader should come away with both an understanding of how to approach complex problems and a feel for electrical and electronic circuits

Spoken Dialogue Systems

2010-01-01

foundations of biosignal processing presents the most widely used techniques in signal and system analysis specifically the book is concerned with methods of characterizing signals and systems author charles lessard provides students and researchers an understanding of the time and frequency domain processes which may be used to evaluate random physiological signals such as brainwave sleep respiratory sounds heart valve sounds electromyograms and electro oculograms another aim of the book is to have the students evaluate actual mammalian data without spending most or all of their time writing software programs lessard recommends the dadisp digital signal processing software which allows students to view process steps in a real time window with little training extensive programming ability is not necessary if an individual wishes to apply basic signal processing principles however individuals should have sufficient working knowledge of mathematics through calculus some physiology and be familiar with the elements of circuit theory both loop and node equations for passive and active circuits

Needs and Feasibility

2014-12-30

this book introduces participatory design to researchers and students in human computer interaction hci grounded in four strong commitments the book discusses why and how participatory design is important today the book aims to provide readers with a practical resource introducing them to the central practices of participatory design research as well as to key references this is done from the perspective of scandinavian participatory design the book is meant for students researchers and practitioners who are interested in participatory design for research studies assignments in hci classes or as part of an industry project it is structured around 11 questions arranged in 3 main parts that provide the knowledge needed to get started with practicing participatory design each chapter responds to a question about defining conducting or the results of carrying out participatory design the authors share their extensive experience of participatory design processes and thinking by combining historical accounts cases how to process descriptions and reading lists to guide further readings so as to grasp the many nuances of participatory design as it is practiced across sectors countries and industries

Artificial Life for Computer Animatio

2020-03-06

this book is about the arduino microcontroller and the arduino concept the visionary arduino team of massimo banzi david cuartielles tom igoe gianluca martino and david mellis launched a new innovation in microcontroller hardware in 2005 the concept of open source hardware their approach was to openly share details of microcontroller based hardware design platforms to stimulate the sharing of ideas and promote innovation this concept has been popular in the software world for many years this book is intended for a wide variety of audiences including students of the fine arts middle and senior high school students engineering design students and practicing scientists and engineers to meet this wide audience the book has been divided into sections to satisfy the need of each reader the book contains many software and hardware examples to assist the reader in developing a wide variety of systems for the examples the arduino duemilanove and the atmel atmega328 is employed as the target processor table of contents getting started programming embedded systems design serial communication subsystem analog to digital conversion adc interrupt subsystem timing subsystem atmel avr operating parameters and interfacing

The Landscape of Pervasive Computing Standards

2022-06-01

the world wide is now deeply intertwined with our lives and has become a catalyst for a data deluge making vast amounts of data available online at a click of a button with 2 0 users are no longer passive consumers but active publishers and curators of data hence from science to food manufacturing from data journalism to personal well being from social media to art there is a strong interest in provenance a description of what influenced an artifact a data set a document a blog or any resource on the and beyond provenance is a crucial piece of information that can help a consumer make a judgment as to whether something can be trusted provenance is no longer seen as a curiosity in art circles but it is regarded as pragmatically ethically and methodologically crucial for our day to day data manipulation and curation activities on the following the recent publication of the prov standard for provenance on the which the two authors actively help shape in the provenance working group at the world wide consortium this synthesis lecture is a hands on introduction to prov aimed at and linked data professionals by means of recipes illustrations a website at provbook org and tools it guides practitioners through a variety of issues related to provenance how to generate provenance publish it on the make it discoverable and how to utilize it equipped with this knowledge practitioners will be in a position to develop novel applications that can bring open ness trust and accountability table of contents preface acknowledgments introduction a data journalism scenario the prov ontology provenance recipes validation compliance quality replay provenance management conclusion bibliography authors biographies index

Digital Forensics

2020-06-24

this book is a gentle but rigorous introduction to formal logic it is intended primarily for use at the college level however it can also be used for advanced secondary school students and it can be used at the start of graduate school for those who have not yet seen the material the approach to teaching logic used here emerged from more than 20 years of teaching logic to students at stanford university and from teaching logic to tens of thousands of others via online courses on the world wide the approach differs from that taken by other books in logic in two essential ways one having to do with content the other with form like many other books on logic this one covers logical syntax and semantics and proof theory plus induction however unlike other books this book begins with herbrand semantics rather than the more traditional tarskian semantics this approach makes the material considerably easier for students to understand and leaves them with a deeper understanding of what logic is all about in addition to this text there are online exercises with automated grading online logic tools and applications online videos of lectures and an online forum for discussion they are available at logic stanford edu intrologic table of contents introduction propositional logic satisfiability propositional proofs propositional resolution relational logic relational logic proofs resolution induction equality

Data-Based Methods for Materials Design and Discovery

2005

to understand the power of distributed systems it is necessary to understand their inherent limitations what problems cannot be solved in particular systems or without sufficient resources such as time or space this book presents key techniques for proving such impossibility results and applies them to a variety of different problems in a variety of different system models insights gained from these results are highlighted aspects of a problem that make it difficult are

isolated features of an architecture that make it inadequate for solving certain problems efficiently are identified and different system models are compared

Reading and Writing the Electronic Book

1901

plasma based techniques are widely and successfully used across the field of materials processing advanced nanosynthesis and nanofabrication the diversity of currently available processing architectures based on or enhanced by the use of plasmas is vast and one can easily get lost in the opportunities presented by each of these configurations this mini book provides a concise outline of the most important concepts and architectures in plasma assisted processing of materials helping the reader navigate through the fundamentals of plasma system selection and optimization architectures discussed in this book range from the relatively simple user friendly types of plasmas produced using direct current radio frequency microwave and arc systems to more sophisticated advanced systems based on incorporating and external substrate architectures and complex control mechanisms of configured magnetic fields and distributed plasma sources

Poisson Line Cox Process

2006

data quality is one of the most important problems in data management a database system typically aims to support the creation maintenance and use of large amount of data focusing on the quantity of data however real life data are often dirty inconsistent duplicated inaccurate incomplete or stale dirty data in a database routinely generate misleading or biased analytical results and decisions and lead to loss of revenues credibility and customers with this comes the need for data quality management in contrast to traditional data management tasks data quality management enables the detection and correction of errors in the data syntactic or semantic in order to improve the quality of the data and hence add value to business processes while data quality has been a longstanding problem for decades the prevalent use of the has increased the risks on an unprecedented scale of creating and propagating dirty data this monograph gives an overview of fundamental issues underlying central aspects of data quality namely data consistency data deduplication data accuracy data currency and information completeness we promote a uniform logical framework for dealing with these issues based on data quality rules the text is organized into seven chapters focusing on relational data chapter one introduces data quality issues a conditional dependency theory is developed in chapter two for capturing data inconsistencies it is followed by practical techniques in chapter 2b for discovering conditional dependencies and for detecting inconsistencies and repairing data based on conditional dependencies matching dependencies are introduced in chapter three as matching rules for data deduplication a theory of relative information completeness is studied in chapter four revising the classical closed world assumption and the open world assumption to characterize incomplete information in the real world a data currency model is presented in chapter five to identify the current values of entities in a database and to answer queries with the current values in the absence of reliable timestamps finally interactions between these data quality issues are explored in chapter six important theoretical results and practical algorithms are covered but formal proofs are omitted the bibliographical notes contain pointers to papers in which the results were presented and proven as well as references to materials for further reading this text is intended for a seminar course at the graduate level it is also to serve as a useful resource for researchers and practitioners who are interested in the study of data quality the fundamental research on data quality draws on several areas including mathematical logic computational complexity and database theory it has raised as many questions as it has answered and is a rich source of questions and vitality table of contents data quality an overview conditional dependencies cleaning data with conditional dependencies data deduplication information completeness data

currency interactions between data quality issues

Understanding Circuits

2021-11-30

since the advent of time sharing in the 1960s designers of concurrent and parallel systems have needed to synchronize the activities of threads of control that share data structures in memory in recent years the study of synchronization has gained new urgency with the proliferation of multicore processors on which even relatively simple user level programs must frequently run in parallel this lecture offers a comprehensive survey of shared memory synchronization with an emphasis on systems level issues it includes sufficient coverage of architectural details to understand correctness and performance on modern multicore machines and sufficient coverage of higher level issues to understand how synchronization is embedded in modern programming languages the primary intended audience is systems programmers the authors of operating systems library packages language run time systems concurrent data structures and server and utility programs much of the discussion should also be of interest to application programmers who want to make good use of the synchronization mechanisms available to them and to computer architects who want to understand the ramifications of their design decisions on systems level code table of contents introduction architectural background essential theory practical spin locks busy wait synchronization with conditions read mostly atomicity synchronization and scheduling nonblocking algorithms transactional memory author s biography

Ontology Engineering

2010-04-04

provides a general introduction to active learning it outlines several scenarios in which queries might be formulated and details many query selection algorithms which have been organised into four broad categories or query selection frameworks the book also touches on some of the theoretical foundations of active learning and concludes with an overview of the strengths and weaknesses of these approaches

Signal Processing of Random Physiological Signals

2022-06-01

with the ability to integrate a large number of cores on a single chip research into on chip networks to facilitate communication becomes increasingly important on chip networks seek to provide a scalable and high bandwidth communication substrate for multi core and many core architectures high bandwidth and low latency within the on chip network must be achieved while fitting within tight area and power budgets in this lecture we examine various fundamental aspects of on chip network design and provide the reader with an overview of the current state of the art research in this field table of contents introduction interface with system architecture topology routing flow control router microarchitecture conclusions

Participatory Design

2013

introduces researchers and developers to the most popular technologies and systems for location estimation and the

challenges and opportunities that accompany their use for each technology the authors discuss the history of its development the various systems that are based on it and their trade offs and their effects on cost and performance

Arduino Microcontroller Processing for Everyone

2014-06-19

Provenance

2022-05-31

Introduction to Logic

2022-05-31

Impossibility Results for Distributed Computing

2013

Advanced Concepts and Architectures for Plasma-Enabled Material Processing

2012

Foundations of Data Quality Management

2009-07-16

Shared-memory Synchronization

2008

Active Learning

On-Chip Networks

Location Systems

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