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Applied Formal Verification : For Digital Circuit Design SVA: The Power of Assertions in SystemVerilog Writer Identification and Verification Experimental IR Meets Multilinguality, Multimodality, and Interaction SystemVerilog for Verification Creating Assertion-Based IP Authorship Attribution Multi-Agent-Based Simulation XIV Artificial Intelligence-based Internet of Things Systems Hardware Design Verification Boolean Circuit Rewiring Advanced Computing Selected Water Resources Abstracts Model-Based Safety and Assessment Formal Verification of Structurally Complex Multipliers SAT-Based Scalable Formal Verification Solutions AI 2003: Advances in Artificial Intelligence Creating Assertion-Based IP Verification of the FtCayuga Fault-tolerant Microprocessor System. Volume 1: A Case Study in Theorem Prover-based Verification Scientific and Technical Aerospace Reports Mathematical and Engineering Methods in Computer Science Intelligent Agents V: Agents Theories, Architectures, and Languages IoT and Cloud Computing Advancements in Vehicular Ad-Hoc Networks Formal Methods for Open Object-Based Distributed Systems Weighted Statistical Testing Based on Active Learning and Formal Verification Techniques for Software Reliability Assessment Design Verification with E Logical Foundations for Rule-Based Systems UML Modeling Languages and Applications Functional Verification of Dynamically Reconfigurable FPGA-based Systems Programming Languages and Systems Real-Time Systems Engineering Secure Software and Systems Software Verification and Analysis Enhanced Virtual Prototyping A Practical Introduction to PSL Transactions on Large-Scale Data- and Knowledge-Centered Systems XXXVI Authors of the Storm Intelligent Computer Mathematics Successful Case-based Reasoning Applications Modelling and Verification of Secure Exams

Model-Based Safety and Assessment Nov 18 2021 This book constitutes the proceedings of the 6th International Symposium on Model-Based Safety and Assessment, IMBSA 2019, held inThessaloniki, Greece, in October 2019. The 24 revised full papers presented were carefully reviewed and selected from 46 initial submissions. The papers are organized in topical sections on safety models and languages; dependability analysis process;

safety assessment; safety assessment in automotive industry; AI in safety assessment.

Successful Case-based Reasoning Applications Sep 24 2019 Case-based reasoning (CBR) is an Artificial Intelligence (AI) technique to support the capability of reasoning and learning in advanced decision support systems. CBR exploits the specific knowledge collected on previously encountered and solved situations, which are known as cases. In this book, we have collected a selection of papers on very recent CBR applications. These, after an in-depth analysis of their specific application domain needs, propose proper methodological solutions and give encouraging evaluation results, which have in some cases led to the commercialization step. The collected contributions demonstrate the capability of CBR to solve or handle issues which would be too difficult to manage with other classical AI methods and techniques, such as rules or models. The heterogeneity of the involved application domains indicates the flexibility of CBR, and its applicability in all those fields where experiential knowledge is (readily) available.

Intelligent Agents V: Agents Theories, Architectures, and Languages Mar 11 2021 The leading edge of computer science research is notoriously ?ckle. New trends come and go with alarming and unfailing regularity. In such a rapidly changing ?eld, the fact that research interest in a subject lasts more than a year is worthy of note. The fact that, after ?ve years, interest not only remains, but actually continues to grow is highly unusual. As 1998 marked the ?fth birthday of the International Workshop on Agent Theories, Architectures, and Languages (ATAL), it seemed appropriate for the organizers of the original workshop to comment on this remarkable growth, and re ect on how the ?eld has developed and matured. The ?rst ATAL workshop was co-located with the Eleventh European Conference on Arti?cial Intelligence (ECAI-94), which was held in Amsterdam. The fact that we chose an AI conference to co-locate with is telling: at that time, we expected most researchers with an interest in agents to come from the AI community. The workshop, whichwasplannedoverthesummerof1993,attracted32submissions,andwasattended by 55 people.ATAL was the largest workshop at ECAI-94, and the clear enthusiasm on behalfofthecommunitymadethedecisiontoholdanotherATALworkshopsimple.The ATAL-94proceedingswereformallypublishedinJanuary1995underthetitleIntelligent Agents, and included an extensive review article, a glossary, a list of key agent systems, and — unusually for the proceedings of an academic workshop — a full subject index. Thehighscienti?candproductionvaluesembodiedbytheATAL-

94proceedingsappear to have been recognized by the community, and resulted inATAL proceedings being the most successful sequence of books published in Springer-Verlag s Lecture Notes in Arti?cial Intelligence series.

AI 2003: Advances in Artificial Intelligence Aug 16 2021 Consider the problem of a robot (algorithm, learning mechanism) moving along the real line attempting to locate a particular point ? . To assist the me- anism, we assume that it can communicate with an Environment ("Oracle") which guides it with information regarding the direction in which it should go. If the Environment is deterministic the problem is the "Deterministic Point - cation Problem" which has been studied rather thoroughly [1]. In its pioneering version [1] the problem was presented in the setting that the Environment could charge the robot a cost which was proportional to the distance it was from the point sought for. The question of having multiple communicating robots locate a point on the line has also been studied [1, 2]. In the stochastic version of this problem, we consider the scenario when the learning mechanism attempts to locate a point in an interval with stochastic (i. e. , possibly erroneous) instead of deterministic responses from the environment. Thus when it should really be moving to the "right" it may be advised to move to the "left" and vice versa. Apart from the problem being of importance in its own right, the stoch- tic pointlocationproblemalsohas potentialapplications insolvingoptimization problems. Inmanyoptimizationsolutions–forexampleinimageprocessing,p- tern recognition and neural computing [5, 9, 11, 12, 14, 16, 19], the algorithm worksits wayfromits currentsolutionto the optimalsolutionbasedoninfor- tion that it currentlyhas. A crucialquestionis oneof determining the parameter whichtheoptimizationalgorithmshoulduse.

Software Verification and Analysis Mar 30 2020 "The situation is good, but not hopeless" (Polish folk wisdom) The text is devoted to the Software Analysis and Testing (SAT) methods and s- porting tools for assessing and, if possible, improving software quality, specifically its correctness. The term quality assurance is avoided for it is this author's firm belief that in the current state of the art that goal is unattainable, a plethora of "gu- anteed" solutions to the problem notwithstanding. Therefore, the rather awkward phrase "improving correctness" is to be understood as an effort to minimize the number of residual programming faults ("bugs") and their impact on the software's behavior, that is, to make the faults tolerable. It is clear that such a minimalist approach is a result of frustration. Indeed, having spent years developing software and teaching (preaching?) "How to

do it right," I still do not know how to go about it with any degree of certainty! It appears then I probably should stop right now, for who with a modicum of common sense would reach for a text that does not offer salvation but (as will be seen) hard work and misery? If I intend to continue, it is only that I suspect there are many professionals out there who have similar doubts. And they are the intended audience of this project. The philosophical underpinning of the text is the importance of sound engineering practices in software development.

Authorship Attribution Jun 25 2022 Authorship Attribution surveys the history and present state of the discipline, presenting some comparative results where available. It also provides a theoretical and empirically-tested basis for further work. Many modern techniques are described and evaluated, along with some insights for application for novices and experts alike.

Formal Verification of Structurally Complex Multipliers Oct 18 2021

Hardware Design Verification Mar 23 2022 The Practical, Start-to-Finish Guide to Modern Digital Design Verification As digital logic designs grow larger and more complex, functional verification has become the number one bottleneck in the design process. Reducing verification time is crucial to project success, yet many practicing engineers have had little formal training in verification, and little exposure to the newest solutions.Hardware Design Verificationsystematically presents today's most valuable simulation-based and formal verification techniques, helping test and design engineers choose the best approach for each project, quickly gain confidence in their designs, and move into fabrication far more rapidly. College students will find that coverage of verification principles and common industry practices will help them prepare for jobs as future verification engineers. Author William K. Lam, one of the world's leading experts in design verification, is a recent winner of the Chairman's Award for Innovation, Sun Microsystems' most prestigious technical achievement award. Drawing on his wide-ranging experience, he introduces the foundational principles of verification, presents traditional techniques that have survived the test of time, and introduces emerging techniques for today's most challenging designs. Throughout, Lam emphasizes practical examples rather than mathematical proofs; wherever advanced math is essential, he explains it clearly and accessibly. Coverage includes Simulation-based versus formal verification: advantages, disadvantages, and tradeoffs Coding for verification: functional and timing correctness, syntactical and structure checks, simulation performance, and more

Simulator architectures and operations, including event-driven, cycle-based, hybrid, and hardware-based simulators Testbench organization, design, and tools: creating a fast, efficient test environment Test scenarios and assertion: planning, test cases, test generators, commercial and Verilog assertions, and more Ensuring complete coverage, including code, parameters, functions, items, and cross-coverage The verification cycle: failure capture, scope reduction, bug tracking, simulation data dumping, isolation of underlying causes, revision control, regression, release mechanisms, and tape-out criteria An accessible introduction to the mathematics and algorithms of formal verification, from Boolean functions to state-machine equivalence and graph algorithms Decision diagrams, equivalence checking, and symbolic simulation Model checking and symbolic computation Simply put,Hardware Design Verificationwill help you improve and accelerate your entire verification process--from planning through tape-out--so you can get to market faster with higher quality designs.

Design Verification with E Nov 06 2020 As part of the Modern Semiconductor Design series, this book details a broad range of e-based topics including modelling, constraint-driven test generation, functional coverage and assertion checking.

Artificial Intelligence-based Internet of Things Systems Apr 23 2022 The book discusses the evolution of future generation technologies through Internet of Things (IoT) in the scope of Artificial Intelligence (AI). The main focus of this volume is to bring all the related technologies in a single platform, so that undergraduate and postgraduate students, researchers, academicians, and industry people can easily understand the AI algorithms, machine learning algorithms, and learning analytics in IoT-enabled technologies. This book uses data and network engineering and intelligent decision support system-by-design principles to design a reliable AI-enabled IoT ecosystem and to implement cyber-physical pervasive infrastructure solutions. This book brings together some of the top IoT-enabled AI experts throughout the world who contribute their knowledge regarding different IoT-based technology aspects.

Experimental IR Meets Multilinguality, Multimodality, and Interaction Sep 28 2022 This book constitutes the refereed proceedings of the 8th International Conference of the CLEF Initiative, CLEF 2017, held in Dublin, Ireland, in September 2017. The 7 full papers and 9 short papers presented together with 6 best of the labs papers were carefully reviewed and selected from 38 submissions. In addition, this volume contains the results

of 10 benchmarking labs reporting their year long activities in overview talks and lab sessions. The papers address all aspects of information access in any modality and language and cover a broad range of topics in the field of multilingual and multimodal information access evaluation.

Applied Formal Verification : For Digital Circuit Design Jan 01 2023 Formal verification is a powerful new digital design method In this cutting-edge tutorial, two of the field's best known authors team up to show designers how to efficiently apply Formal Verification, along with hardware description languages like Verilog and VHDL, to more efficiently solve real-world design problems.

Scientific and Technical Aerospace Reports May 13 2021

Authors of the Storm Nov 26 2019 Whether it is used as an icebreaker in conversation or as the subject of serious inquiry, "the weather" is one of the few subjects that everyone talks about. And though we recognize the faces that bring us the weather on television, how government meteorologists and forecasters go about their jobs is rarely scrutinized. Given recent weather-related disasters, it's time we find out more. In Authors of the Storm, Gary Alan Fine offers an inside look at how meteorologists and forecasters predict the weather. Based on field observation and interviews at the Storm Prediction Center in Oklahoma, the National Weather Service in Washington, D.C., and a handful of midwestern outlets, Fine finds a supremely hard-working, insular clique of professionals who often refer to themselves as a "band of brothers." In Fine's skilled hands, we learn their lingo, how they "read" weather conditions, how forecasts are written, and, of course, how those messages are conveyed to the public. Weather forecasts, he shows, are often shaped as much by social and cultural factors inside local offices as they are by approaching cumulus clouds. By opening up this unique world to us, Authors of the Storm offers a valuable and fascinating glimpse of a crucial profession.

SAT-Based Scalable Formal Verification Solutions Sep 16 2021 This book provides an engineering insight into how to provide a scalable and robust verification solution with ever increasing design complexity and sizes. It describes SAT-based model checking approaches and gives engineering details on what makes model checking practical. The book brings together the various SAT-based scalable emerging technologies and techniques covered can be synergistically combined into a scalable solution.

Programming Languages and Systems Jul 03 2020 This book constitutes the proceedings of the 17th Asian Symposium on Programming Languages

and Systems, APLAS 2019, held in Nusa Dua, Bali, Indonesia, in December 2019. The 22 papers presented in this volume were carefully reviewed and selected from 50 submissions. They were organized in topical sections named: Invited Papers, Types, Program Analysis, Semantics, Language Design and Implementation, Concurrency, Verification, and Logic and Automata.

UML Modeling Languages and Applications Sep 04 2020 This book constitutes the thoroughly refereed joint postproceedings of the satellite activities held at the 7th International Conference on the Unified Modeling Language, UML 2004, in Lisbon, Portugal in October 2004 complementing the main conference track. The book presents reports on the 10 workshops held at UML and covers a broad range of topics around systems modelling; these reports are compiled by the respective workshop organizers. Furthermore 12 revised reviewed papers from the industry track are included as well as 11 short papers corresponding to selected poster/demo presentations and a summary on the UML tools exhibition.

Weighted Statistical Testing Based on Active Learning and Formal Verification Techniques for Software Reliability Assessment Dec 08 2020 This work developed an automatic approach for the assessment of software reliability which is both theoretical sound and practical. The developed approach extends and combines theoretical sound approaches in a novel manner to systematically reduce the overhead of reliability assessment. This work was published by Saint Philip Street Press pursuant to a Creative Commons license permitting commercial use. All rights not granted by the work's license are retained by the author or authors.

Transactions on Large-Scale Data- and Knowledge-Centered Systems XXXVI Dec 28 2019 This volume, the 36th issue of Transactions on Large-Scale Data- and Knowledge-Centered Systems, contains eight revised, extended papers selected from the 3rd International Conference on Future Data and Security Engineering, FDSE 2016, and the 10th International Conference on Advanced Computing and Applications, ACOMP 2016, which were held in Can Tho City, Vietnam, in November 2016. Topics covered include big data analytics, massive dataset mining, security and privacy, cryptography, access control, deep learning, crowd sourcing, database watermarking, and query processing and optimization.

Advanced Computing Jan 21 2022 This volume constitutes the third of three parts of the refereed proceedings of the First International Conference on Computer Science and Information Technology, CCSIT 2010, held in Bangalore, India, in January 2011. The 46 revised full papers

presented in this volume were carefully reviewed and selected. The papers are organized in topical sections on soft computing, such as AI, Neural Networks, Fuzzy Systems, etc.; distributed and parallel systems and algorithms; security and information assurance; ad hoc and ubiquitous computing; wireless ad hoc networks and sensor networks.

Modelling and Verification of Secure Exams Aug 23 2019 In this book the author introduces a novel approach to securing exam systems. He provides an in-depth understanding, useful for studying the security of exams and similar systems, such as public tenders, personnel selections, project reviews, and conference management systems. After a short chapter that explains the context and objectives of the book, in Chap. 2 the author introduces terminology for exams and the foundations required to formulate their security requirements. He describes the tasks that occur during an exam, taking account of the levels of detail and abstraction of an exam specification and the threats that arise out of the different exam roles. He also presents a taxonomy that classifies exams by types and categories. Chapter 3 contains formal definitions of the authentication, privacy, and verifiability requirements for exams, a framework based on the applied pi-calculus for the specification of authentication and privacy, and a more abstract approach based on set-theory that enables the specification of verifiability. Chapter 4 describes the Huszti-Pethő protocol in detail and proposes a security enhancement. In Chap. 5 the author details Remark!, a protocol for Internet-based exams, discussing its cryptographic building blocks and some security considerations. Chapter 6 focuses on WATA, a family of computer-assisted exams that employ computer assistance while keeping face-to-face testing. The chapter also introduces formal definitions of accountability requirements and details the analysis of a WATA protocol against such definitions. In Chaps. 4, 5, and 6 the author uses the cryptographic protocol verifier ProVerif for the formal analyses. Finally, the author outlines future work in Chap. 7. The book is valuable for researchers and graduate students in the areas of information security, in particular for people engaged with exams or protocols.

Formal Methods for Open Object-Based Distributed Systems Jan 09 2021 Formal Methods for Open Object-Based Distributed Systems presents the leading edge in several related fields, specifically object-orientated programming, open distributed systems and formal methods for object-oriented systems. With increased support within industry regarding these areas, this book captures the most up-to-date information on the subject. Many topics are discussed, including the following important areas: object-

oriented design and programming; formal specification of distributed systems; open distributed platforms; types, interfaces and behaviour; formalisation of object-oriented methods. This volume comprises the proceedings of the International Workshop on Formal Methods for Open Object-based Distributed Systems (FMOODS), sponsored by the International Federation for Information Processing (IFIP) which was held in Florence, Italy, in February 1999. Formal Methods for Open Object-Based Distributed Systems is suitable as a secondary text for graduate-level courses in computer science and telecommunications, and as a reference for researchers and practitioners in industry, commerce and government.

Multi-Agent-Based Simulation XIV May 25 2022 This book constitutes the thoroughly refereed post-conference proceedings of the 14th International Workshop on Multi-Agent-Based Simulation, MABS 2013, held in Saint Paul, Minnesota, USA, in May 2013. The workshop was help in conjunction with Twelfth International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2013. The 11 revised full papers included in this volume were carefully selected from 29 submissions. The papers are organized in topical sections on MABS for real-time and online data, formal approaches in MABS: design and validation, MABS in environmental modeling, simulating social phenomena.

A Practical Introduction to PSL Jan 27 2020 This book describes the Property Specification Language PSL, recently standardized as IEEE Standard 1850-2005. PSL was developed to fulfill the following requirements: easy to learn, write, and read; concise syntax; rigorously well-defined formal semantics; expressive power, permitting the specification for a large class of real world design properties; known efficient underlying algorithms in simulation, as well as formal verification. Basic features are covered, as well as advanced topics such as the use of PSL in multiply-clocked designs. A full chapter is devoted to common errors, gathered through the authors' many years of experience in using and teaching the language.

Real-Time Systems Jun 01 2020 The first book to provide a comprehensive overview of the subject rather than a collection of papers. The author is a recognized authority in the field as well as an outstanding teacher lauded for his ability to convey these concepts clearly to many different audiences. A handy reference for practitioners in the field.

SystemVerilog for Verification Aug 28 2022 Based on the highly successful second edition, this extended edition of SystemVerilog for Verification: A Guide to Learning the Testbench Language Features teaches all

verification features of the SystemVerilog language, providing hundreds of examples to clearly explain the concepts and basic fundamentals. It contains materials for both the full-time verification engineer and the student learning this valuable skill. In the third edition, authors Chris Spear and Greg Tumbush start with how to verify a design, and then use that context to demonstrate the language features, including the advantages and disadvantages of different styles, allowing readers to choose between alternatives. This textbook contains end-of-chapter exercises designed to enhance students' understanding of the material. Other features of this revision include: New sections on static variables, print specifiers, and DPI from the 2009 IEEE language standard Descriptions of UVM features such as factories, the test registry, and the configuration database Expanded code samples and explanations Numerous samples that have been tested on the major SystemVerilog simulators SystemVerilog for Verification: A Guide to Learning the Testbench Language Features, Third Edition is suitable for use in a one-semester SystemVerilog course on SystemVerilog at the undergraduate or graduate level. Many of the improvements to this new edition were compiled through feedback provided from hundreds of readers.

SVA: The Power of Assertions in SystemVerilog Nov 30 2022 This book is a comprehensive guide to assertion-based verification of hardware designs using System Verilog Assertions (SVA). It enables readers to minimize the cost of verification by using assertion-based techniques in simulation testing, coverage collection and formal analysis. The book provides detailed descriptions of all the language features of SVA, accompanied by step-by-step examples of how to employ them to construct powerful and reusable sets of properties. The book also shows how SVA fits into the broader System Verilog language, demonstrating the ways that assertions can interact with other System Verilog components. The reader new to hardware verification will benefit from general material describing the nature of design models and behaviors, how they are exercised, and the different roles that assertions play. This second edition covers the features introduced by the recent IEEE 1800-2012. System Verilog standard, explaining in detail the new and enhanced assertion constructs. The book makes SVA usable and accessible for hardware designers, verification engineers, formal verification specialists and EDA tool developers. With numerous exercises, ranging in depth and difficulty, the book is also suitable as a text for students.

Creating Assertion-Based IP Jul 15 2021 This book presents formal

testplanning guidelines with examples focused on creating assertion-based verification IP. It demonstrates a systematic process for formal specification and formal testplanning, and also demonstrates effective use of assertions languages beyond the traditional language construct discussions Note that there many books published on assertion languages (such as SystemVerilog assertions and PSL). Yet, none of them discuss the important process of testplanning and using these languages to create verification IP. This is the first book published on this subject.

Intelligent Computer Mathematics Oct 25 2019 This book constitutes the refereed proceedings of the 15th International Conference on Intelligent Computer Mathematics, CICM 2022, held in Tbilisi, Georgia, in September 2022. The 17 full papers, 1 project/ survey paper, 4 short papers, and 2 abstracts of invited papers presented were carefully reviewed and selected from a total of 37 submissions. The papers focus on theoretical and practical solutions for these challenges including computation, deduction, narration, and data management.

Engineering Secure Software and Systems May 01 2020 This book constitutes the refereed proceedings of the Third International Symposium on Engineering Secure Software and Systems, ESSoS 2011, held in Madrid, Italy, in February 2011. The 18 revised full papers presented together with 3 idea papers were carefully reviewed and selected from 63 submissions. The papers are organized in topical sections on model-based security, tools and mechanisms, Web security, security requirements engineering, and authorization.

Functional Verification of Dynamically Reconfigurable FPGA-based Systems Aug 04 2020 This book analyzes the challenges in verifying Dynamically Reconfigurable Systems (DRS) with respect to the user design and the physical implementation of such systems. The authors describe the use of a simulation-only layer to emulate the behavior of target FPGAs and accurately model the characteristic features of reconfiguration. Readers are enabled with this simulation-only layer to maintain verification productivity by abstracting away the physical details of the FPGA fabric. Two implementations of the simulation-only layer are included: Extended Re Channel is a System C library that can be used to check DRS designs at a high level; ReSim is a library to support RTL simulation of a DRS reconfiguring both its logic and state. Through a number of case studies, the authors demonstrate how their approach integrates seamlessly with existing, mainstream DRS design flows and with well-established verification methodologies such as top-down modeling and coverage-

driven verification.

Logical Foundations for Rule-Based Systems Oct 06 2020 The book presents logical foundations for rule-based systems. An attempt has been made to provide an in-depth discussion of logical and other aspects of such systems, including languages for knowledge representation, inference mechanisms, inference control, design and verification. The ultimate goal was to provide a deeper theoretical insight into the nature of rule-based systems and put together the most complete presentation including details so frequently skipped in typical textbooks. The book may be useful to potentially wide audience, but it is aimed at providing specific knowledge for graduate, post-graduate and Ph.D. students, as well as knowledge engineers and research workers involved in the domain of AI. It also constitutes a summary of the Author's research and experience gathered through several years of his research work.

Enhanced Virtual Prototyping Feb 28 2020 This book presents a comprehensive set of techniques that enhance all key aspects of a modern Virtual Prototype (VP)-based design flow. The authors emphasize automated formal verification methods, as well as advanced coverage-guided analysis and testing techniques, tailored for SystemC-based VPs and also the associated Software (SW). Coverage also includes VP modeling techniques that handle functional as well as non-functional aspects and also describes correspondence analyses between the Hardware- and VP-level to utilize information available at different levels of abstraction. All approaches are discussed in detail and are evaluated extensively, using several experiments to demonstrate their effectiveness in enhancing the VP-based design flow. Furthermore, the book puts a particular focus on the modern RISC-V ISA, with several case-studies covering modeling as well as VP and SW verification aspects.

IoT and Cloud Computing Advancements in Vehicular Ad-Hoc Networks Feb 07 2021 The optimization of traffic management operations has become a considerable challenge in today's global scope due to the significant increase in the number of vehicles, traffic congestions, and automobile accidents. Fortunately, there has been substantial progress in the application of intelligent computing devices to transportation processes. Vehicular ad-hoc networks (VANETs) are a specific practice that merges the connectivity of wireless technologies with smart vehicles. Despite its relevance, empirical research is lacking on the developments being made in VANETs and how certain intelligent technologies are being applied within transportation systems. IoT and Cloud Computing

Advancements in Vehicular Ad-Hoc Networks provides emerging research exploring the theoretical and practical aspects of intelligent transportation systems and analyzing the modern techniques that are being applied to smart vehicles through cloud technology. Featuring coverage on a broad range of topics such as health monitoring, node localization, and fault tolerance, this book is ideally designed for network designers, developers, analysists, IT specialists, computing professionals, researchers, academics, and post-graduate students seeking current research on emerging computing concepts and developments in vehicular ad-hoc networks.

Mathematical and Engineering Methods in Computer Science Apr 11 2021 This volume constitutes the thoroughly refereed post-conference proceedings of the 7th International Doctoral Workshop on Mathematical and Engineering Methods in Computer Science, MEMICS 2011, held in Lednice, Czech Republic, on October 14-16, 2011. The 13 revised full papers presented together with 6 invited talks were carefully reviewed and selected from 38 submissions. The papers address all current issues of mathematical and engineering methods in computer science, especially: software and hardware dependability, computer security, computer-aided analysis and verification, testing and diagnostics, simulation, parallel and distributed computing, grid computing, computer networks, modern hardware and its design, non-traditional computing architectures, software engineering, computational intelligence, quantum information processing, computer graphics and multimedia, signal, text, speech, and image processing, and theoretical computer science.

Writer Identification and Verification Oct 30 2022

Creating Assertion-Based IP Jul 27 2022 This book presents formal testplanning guidelines with examples focused on creating assertion-based verification IP. It demonstrates a systematic process for formal specification and formal testplanning, and also demonstrates effective use of assertions languages beyond the traditional language construct discussions Note that there many books published on assertion languages (such as SystemVerilog assertions and PSL). Yet, none of them discuss the important process of testplanning and using these languages to create verification IP. This is the first book published on this subject.

Boolean Circuit Rewiring Feb 19 2022 Demonstrates techniques which will allow rewiring rates ofover 95%, enabling adoption of deep sub-micron chips for industrialapplications Logic synthesis is an essential part of the modern digital ICdesign process in semi-conductor industry. This book

discusses alogic synthesis technique called “rewiring” and itslatest technical advancement in term of rewirability. Rewiringtechnique has surfaced in academic research since 1993 and there iscurrently no book available on the market which systematically andcomprehensively discusses this rewiring technology. The authorscover logic transformation techniques with concentration onrewiring. For many decades, the effect of wiring on logicstructures has been ignored due to an ideal view of wires and theirnegligible role in the circuit performance. However intoday’s semiconductor technology wiring is the major playerin circuit performance degeneration and logic synthesis engines canbe improved to deal with this through wire-based transformations.This book introduces the automatic test pattern generation(ATPG)-based rewiring techniques, which are recently active in therealm of logic synthesis/verification of VLSI/SOC designs. Unique comprehensive coverage of semiconductor rewiringtechniques written by leading researchers in the field Provides complete coverage of rewiring from an introductory tointermediate level Rewiring is explained as a flexible technique for Boolean logicsynthesis, introducing the concept of Boolean circuittransformation and testing, with examples Readers can directly apply the described techniques toreal-world VLSI design issues Focuses on the automatic test pattern generation (ATPG) basedrewiring methods although some non-ATPG based rewiring methods suchas graph based alternative wiring (GBAW), and “set of pairsof functions to be distinguished” (SPFD) based rewiring arealso discussed A valuable resource for researchers and postgraduate students inVLSI and SoC design, as well as digital design engineers, EDAsoftware developers, and design automation experts that specializein the synthesis and optimization of logical circuits.

Verification of the FtCayuga Fault-tolerant Microprocessor System. Volume 1: A Case Study in Theorem Prover-based Verification Jun 13 2021

Selected Water Resources Abstracts Dec 20 2021