Gateway A2

The Concise Encyclopedia of Computer Science has been adapted from the full Fourth Edition to meet the needs of students, teachers and professional computer users in science and industry. As an ideal desktop reference, it contains shorter versions of 60% of the articles found in the Fourth Edition, putting computer knowledge at your fingertips. Organised to work for you, it has several features that make it an invaluable and accessible reference. These include: Cross references to closely related articles to ensure that you don't miss relevant information Appendices covering abbreviations and acronyms, notation and units, and a timeline of significant milestones in computing have been included to ensure that you get the most from the book. A comprehensive index containing article titles, names of persons cited, references to sub-categories and important words in general usage, guarantees that you can easily find the information you need. Classification of articles around the following nine main themes allows you to follow a self study regime in a particular area: Hardware Computer Systems Information and Data Software Mathematics of Computing Theory of Computation Methodologies Applications Computing Milieux. Presenting a wide ranging perspective on the key concepts and developments that define the discipline, the Concise Encyclopedia of Computer Science is a valuable reference for all computer users.
This book constitutes the proceedings of the 12th International Workshop on

Computational Logic in Multi-Agent Systems, CLIMA XII, held in Barcelona, Spain, in July 2011. The 22 papers presented were carefully reviewed and selected from 43 submissions. The purpose of the CLIMA workshops is to provide a forum for discussing techniques, based on computational logic, for representing, programming and reasoning about agents and multi-agent systems in a formal way. This volume features five thematic special sessions: secrets and trust, knowledge and beliefs, logics for games and social choice, cooperation, logic and languages, and norms and normative multi-agent systems.

This volume contains the proceedings of Formal Methods 2005, the 13th InternationalSymposiumonFormalMethodsheldinNewcastleuponTyne,UK, during July 18–22, 2005. Formal Methods Europe (FME, www.fmeurope.org) is an independent association which aims to stimulate the use of, and research on, formal methods for system development. FME conferences began with a VDM Europe symposium in 1987. Since then, the meetings have grown and have been held about once every 18 months. Throughout the years the symposia have been notablysuccessfulinbringingtogetherresearchers,tooldevelopers,vendors,and users, both from academia and from industry. Formal Methods 2005 con?rms this success. We received 130 submissions to the main conference, from all over the world. Each submission was carefully refereed by at least three reviewers. Then, after an intensive, in-depth discussion, the Program Committee selected 31 papers for presentation at the

conference. They form the bulk of this volume. We would like to thank all the Program Committee members and the referees for their excellent and e?cient work. Apart from the selected contributions, the Committee invited three keynote lectures from Mathai Joseph, Marie-Claude Gaudel and Chris Johnson. You will ?nd the abstracts/papers for their keynote lectures in this volume as well.

AninnovationfortheFM2005programwasapaneldiscussiononthehistory of formal methods, with Jean-Raymond Abrial, Dines Bjørner, Jim Horning and Cli? Jones as panelists. Unfortunately, it was not possible to re?ect this event in the current volume, but you will ?nd the material documenting it elsewhere (see the conference Web page). Large-Scale Simulation: Models, Algorithms, and Applications gives you firsthand insight on the latest advances in large-scale simulation techniques. Most of the research results are drawn from the authors' papers in top-tier, peer-reviewed, scientific conference proceedings and journals. The first part of the book presents the fundamentals of large-scale simulation, including high-level architecture and runtime infrastructure. The second part covers middleware and software architecture for large-scale simulations, such as decoupled federate architecture, fault tolerant mechanisms, grid-enabled simulation, and federation communities. In the third part, the authors explore mechanisms—such as simulation cloning methods and algorithms—that support quick evaluation of alternative scenarios. The final part describes how distributed computing technologies and many-core architecture are used to study social

phenomena. Reflecting the latest research in the field, this book guides you in using and further researching advanced models and algorithms for large-scale distributed simulation. These simulation tools will help you gain insight into large-scale systems across many disciplines.

Every year, in response to new technologies and new laws in different countries and regions, there are changes to the fundamental knowledge, skills, techniques, and tools required by all IT security professionals. In step with the lightning-quick, increasingly fast pace of change in the technology field, the Information Security Management Handbook, updated yearly, has become the standard on which all IT security programs and certifications are based. It reflects new updates to the Common Body of Knowledge (CBK) that IT security professionals all over the globe need to know. Captures the crucial elements of the CBK Exploring the ten domains of the CBK, the book explores access control, telecommunications and network security, information security and risk management, application security, and cryptography. In addition, the expert contributors address security architecture and design, operations security, business continuity planning and disaster recovery planning. The book also covers legal regulations, compliance, investigation, and physical security. In this anthology of treatises dealing with the management and technical facets of information security, the contributors examine varied topics such as anywhere computing, virtualization, podslurping, quantum computing, mashups, blue snarfing, mobile device theft, social

computing, voting machine insecurity, and format string vulnerabilities. Also available on CD-ROM Safeguarding information continues to be a crucial concern of all IT professionals. As new risks threaten the security of our systems, it is imperative that those charged with protecting that information continually update their armor of knowledge to guard against tomorrow's hackers and software vulnerabilities. This comprehensive Handbook, also available in fully searchable CD-ROM format keeps IT professionals abreast of new developments on the security horizon and reinforces timeless concepts, providing them with the best information, guidance, and counsel they can obtain.

In the 90s, new languages and architectures were developed, new systems and networks were produced and new applications invented. The basic topics discussed are; High Speed Data Communications Protocols, Services and Networks for high speed data and for combined voice and data applications - i.e. ATM, SMDS, Frame Relay - Network Management, OSS Platforms, OSI and other information Technology Services, Network Control and Routing, Emergency Control and Telecommunication Politics. This publication offers the material basis for propagating the most advanced ideas, products, decisions and results of the 90s, and thereby it celebrates the advancements of Computer Communication on the route towards a new era.

This informative text/reference presents a detailed review of the state of the art in industrial sensor and control networks. The book examines a broad range of

applications, along with their design objectives and technical challenges. The coverage includes fieldbus technologies, wireless communication technologies, network architectures, and resource management and optimization for industrial networks. Discussions are also provided on industrial communication standards for both wired and wireless technologies, as well as for the Industrial Internet of Things (IIoT). Topics and features: describes the FlexRay, CAN, and Modbus fieldbus protocols for industrial control networks, as well as the MIL-STD-1553 standard; proposes a dual fieldbus approach, incorporating both CAN and ModBus fieldbus technologies, for a ship engine distributed control system; reviews a range of industrial wireless sensor network (IWSN) applications, from environmental sensing and condition monitoring, to process automation; examines the wireless networking performance, design requirements, and technical limitations of IWSN applications; presents a survey of IWSN commercial solutions and service providers, and summarizes the emerging trends in this area; discusses the latest technologies and open challenges in realizing the vision of the IIoT, highlighting various applications of the IIoT in industrial domains; introduces a logistics paradigm for adopting IIoT technology on the Physical Internet. This unique work will be of great value to all researchers involved in industrial sensor and control networks, wireless networking, and the

Internet of Things.

Helps students prepare and practise for their school-leaving exams and equips them with lifelong learning and study skills. Taking an inductive approach to Grammar, this title revises and extends the students' knowledge of grammar and vocabulary through varied skills-based activities that recycle, revise, evaluate and develop language skills.

IP (internet protocol) Telephony, enabled by softswitches, is going to usher in a new era in telecommunications. By putting voice and data over one IP network, operators can enjoy lower costs and create new, revenue-generating "multimedia" services. This valuable reference offers a comprehensive overview of the technology behind IP telephony and offers essential information to network engineers, designers and managers who need to understand the protocols and explore the issues involved in migrating the existing telephony infrastructure to an IP-based real time communication service. Drawing on extensive research and practical development experience in VoIP from its earliest stages, the authors give access to all the relevant standards and cutting-edge techniques in a single resource. IP Telephony: Deploying Voice-over-IP Protocols: Assumes a working knowledge of IP and networking and addresses the technical aspects of real-time communication over IP. Presents a high level overview of packet media transport

technologies, covering all the major VoIP protocols – SIP, H323 and MGCP Details specific strategies to design services for public networks where endpoints cannot be trusted and can be behind firewalls. Explores the problems that may arise from incomplete protocol implementations, or architectures optimized for private networks which fail in a public environment. This amply illustrated, state-of-the art reference tool will be an invaluable resource for all those involved in the practical deployment of VoIP technology.

Gateway is an academically rich five-level course designed to lead teenage students to success in school-leaving and university entrance exams and prepare them for university and the world of work.

In a small Tlingit village in 1992, newly converted members of an all-native church started a bonfire of "non-Christian" items including, reportedly, native dancing regalia. The burnings recalled an earlier century in which church converts in the same village burned totem poles, and stirred long simmering tensions between native dance groups and fundamentalist Christian churches throughout the region. This book traces the years leading up to the most recent burnings and reveals the multiple strands of social tension defining Tlingit and Haida life in Southeast Alaska today. ø Author Kirk Dombrowksi roots these tensions in a history of misunderstanding and exploitation of native life, including,

most recently, the consequences of the Alaska Native Claims Settlement Act of 1971. He traces the results of economic upheaval, changes in dependence on timber and commercial fishing, and differences over the meaning of contemporary native culture that lie beneath current struggles. His cogent, highly readable analysis shows how these local disputes reflect broader problems of negotiating culture and Native American identity today. Revealing in its ethnographic details, arresting in its interpretive insights, Against Culture raises important practical and theoretical implications for the understanding of indigenous cultural and political processes.

This book explores recent developments in the concept of hybridity through a multi-disciplinary perspective, bringing ideas about legal plurality together with the fields of peace, development and cultural studies. Analysing the concepts of hybridity and hybridization, their history, their application in law and legal studies, and their implications for thinking and rethinking legal plurality, the book shows how the concept of hybridity can contribute to an understanding of the processes that occur when different normative or legal orders or frameworks confront each other.

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the world of work.

"This book communicates the various challenges and great opportunities that information systems research produces"--Provided by publisher.

Gateway A2 Student Book

No other description available.

This textbook explores all of the protocols and technologies essential to IoT communication mechanisms. Geared towards an upper-undergraduate or graduate level class, the book is presented from a perspective of the standard layered architecture with special focus on protocol interaction and functionality. The IoT protocols are presented and classified based on physical, link, network, transport and session/application layer functionality. The author also lets readers understand the impact of the IoT mechanisms on network and device performance with special emphasis on power consumption and computational complexity. Use cases provided throughout provide examples of IoT protocol stacks in action. The book is based on the author's popular class Fundamentals of IoT at Northeastern University. The book includes examples throughout and slides for classroom use. Also included is a "hands-on" section where the topics discussed as theoretical content are built as stacks in the context of an IoT network emulator so readers can experiment. Presents a comprehensive resource of the Internet of Things and its networking and protocols, intended for classroom use; Discusses the main families of networking architectures that rely on the IoT protocols (i.e. LWPAN vs WPAN); Introduces use cases and examples that focus on protocol interaction to build network stacks in addition to a suite of classroom materials including exercises and Q&A.

Explore the military and combat applications of modeling andsimulation Engineering Principles

of Combat Modeling and DistributedSimulation is the first book of its kind to address the threeperspectives that simulation engineers must master forsuccessful military and defense related modeling: the operationalview (what needs to be modeled); the conceptual view (how to docombat modeling); and the technical view (how to conductdistributed simulation). Through methods from the fields ofoperations research, computer science, and engineering, readers areguided through the history, current training practices, and modernmethodology related to combat modeling and distributed simulationsystems. Comprised of contributions from leading internationalresearchers and practitioners, this book provides a comprehensiveoverview of the engineering principles and state-of-the-art methodsneeded to address the many facets of combat modeling anddistributed simulation and features the following foursections: Foundations introducesrelevant topics and recommended practices, providing the neededbasis for understanding the challenges associated with combatmodeling and distributed simulation. Combat Modeling focuses onthe challenges in human, social, cultural, and behavioral modelingsuch as the core processes of "move, shoot, look, and communicate"within a synthetic environment and also equips readers with theknowledge to fully understand the related concepts andlimitations. Distributed Simulationintroduces the main challenges of advanced distributed simulation,outlines the basics of validation and verification, and exhibitshow these systems can support the operational environment of thewarfighter. Advanced Topics highlightsnew and developing special topic areas, including mathematicalapplications fo combat modeling; combat modeling with high-levelarchitecture and base object models; and virtual and interactivedigital worlds. Featuring practical examples and applications relevant toindustrial and government audiences, Engineering Principles

ofCombat Modeling and Distributed Simulation is an excellentresource for researchers and practitioners in the fields ofoperations research, military modeling, simulation, and computerscience. Extensively classroom tested, the book is also ideal forcourses on modeling and simulation; systems engineering; and combatmodeling at the graduate level.

Incorporating HC 788-i and ii of session 2001-02

This book constitutes the refereed proceedings of the 6th EAI International Conference on Industrial Networks and Intelligent Systems, INISCOM 2020, held in Hanoi, Vietnam, in August 2020. Due to COVID-19 pandemic the conference was held virtually. The 26 full papers were selected from 59 submissions and are organized thematically in tracks on telecommunications systems and networks; hardware, software and application designs; information processing and data analysis; industrial networks and intelligent systems; security and privacy.

This volume constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2014, and Ontologies, Databases, and Applications of Semantics, ODBASE 2014, held as part of OTM 2014 in October 2014 in Amantea, Italy. The 39 full papers presented together with 12 short papers and 5 keynotes were carefully reviewed and selected from a total of 115 submissions. The OTM program covers subjects as follows: process designing and modeling, process enactment, monitoring and quality assessment, managing similarity, software services, improving alignment, collaboration systems and applications,

ontology querying methodologies and paradigms, ontology support for web, XML, and RDF data processing and retrieval, knowledge bases querying and retrieval, social network and collaborative methodologies, ontology-assisted event and stream processing, ontology-assisted warehousing approaches, ontology-based data representation, and management in emerging domains.

This book systematically identifies the lack of methodological support for development of requirements and software architecture in the state-of-the-art. To overcome this deficiency, the QuaDRA framework is proposed as a problem-oriented approach. It provides an instantiation of the Twin Peaks model for supporting the intertwining relationship of requirements and software architecture. QuaDRA includes several structured methods which guide software engineers in quality- and pattern-based co-development of requirements and early design alternatives in an iterative and concurrent manner.

This book constitutes the proceedings of the Second Asia Pacific Conference on Business Process Management held in Brisbane, QLD, Australia, in July 2014. In all, 33 contributions from 12 countries were submitted. After each submission was reviewed by at least three Program Committee members, nine full papers were accepted for publication in this volume. These nine papers cover various topics that can be categorized under four main research focuses in BPM: process mining, process modeling and repositories, process model comparison, and process analysis.

Ultra wideband (UWB) has advanced and merged as a technology, and many more people are aware of the potential for this exciting technology. The current UWB field is changing rapidly with new techniques and ideas where several issues are involved in developing the systems. Among UWB system design, the UWB RF transceiver and UWB antenna are the key components. Recently, a considerable amount of researches has been devoted to the development of the UWB RF transceiver and antenna for its enabling high data transmission rates and low power consumption. Our book attempts to present current and emerging trends in-research and development of UWB systems as well as future expectations.

A fascinating bird's eye view on a hugely relevant topic. This book constitutes the refereed proceedings of the 4th International Conference on Ubiquitous Intelligence and Computing held in Hong Kong, China in 2007, co-located with ATC 2007, the 4th International Conference on Autonomic and Trusted Computing. The 119 revised full papers presented together with 1 keynote paper and 1 invited paper were carefully reviewed and selected from 463 submissions. The papers are organized in topical sections.

Provides a comprehensive overview of regional water supply and demand conditions that has not been available on a statewide basis for over ten years.

This Festschrift volume, published in honor of Carolyn Talcott on the occasion of her 70th birthday, contains a collection of papers presented at a symposium held in Menlo Park, California, USA, in November 2011. Carolyn Talcott is a leading researcher and mentor of international renown among computer scientists. She has made key contributions to a number

of areas of computer science including: semantics and verification of progamming languages; foundations of actor-based systems; middleware, meta-architectures, and systems; Maude and rewriting logic; and computational biology. The 21 papers presented are organized in topical sections named: Essays on Carolyn Talcott; actors and programming languages; cyberphysical systems; middleware and meta-architectures; formal methods and reasoning tools; and computational biology.

Find soul mate…check. Harness the power of the Wiccan gods…check. Defeat the evil First Traveler…check. Live a normal life…maybe not. Dagny and Marc are done with destiny. After defeating the First Traveler, they want to leave the Wiccan world behind. But as they settle back into the routine of high school, it seems destiny has other plans. Prophetic dreams, a secret cult and a stranger calling himself the Guardian force Dagny and Marc to face the truth. Channeling the powers of the gods comes with a price and the gods have come to collect. Now Dagny and Marc must choose between each other and the path the gods have written, a path leading to a mysterious gateway that if opened will shatter the Wiccan world. Their love survived the threat of an ancient witch, but can it survive the will of the gods? In this story of love, betrayal and magic, no one is safe and there is no such thing as destiny.