Gautam Shroff Enterprise Cloud Computing

How Humans Learn to Think Mathematically describes the development of mathematical thinking from the young child to the sophisticated adult. Professor David Tall reveals the reasons why mathematical concepts that make sense in one context may become problematic in another. For example, a child's experience of whole number arithmetic successively affects subsequent understanding of fractions, negative numbers, algebra, and the introduction of definitions and proof. Tall's explanations for these developments are accessible to a general audience while encouraging specialists to relate their areas of expertise to the full range of mathematical thinking. The book offers a comprehensive framework for understanding mathematical growth, from practical beginnings through theoretical developments, to the continuing evolution of mathematical thinking at the highest level.
The 6th International Conference on Computational and Information Sciences (ICCIS2014) will be held in NanChong, China. The 6th International Conference on Computational and Information Sciences (ICCIS2014)aims at bringing researchers in the areas of computational and information sciences to exchange new ideas and to explore new ground. The goal of the conference is to push the application of modern computing technologies to science, engineering, and information technologies.Following the success of ICCIS2004,ICCIS2010 and ICCIS2011,ICCIS2012,ICCIS2013,ICCIS2014 conference will consist of invited keynote presentations and contributed presentations of latest developments in computational and information sciences. The 2014 International Conference on Computational and Information Sciences (ICCIS 2014), now in its sixth run, has become one of the premier conferences in this dynamic and exciting field. The goal of ICCIS is to catalyze the communications among various communities in computational and information sciences. ICCIS provides a venue for the participants to share their recent research and development, to seek for collaboration resources and opportunities, and to build professional networks.
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. Prof. Dong-Seong Kim is Director of the KIT Convergence Research Institute and ICT Convergence Research Center (ITRC program), supported by the Korean government, at Kumoh National Institute of Technology, Gumi, South Korea. He is a senior member of the IEEE and ACM. Dr. Hoa Tran-Dang is a research professor, working in the NSL Laboratory, in the Department of ICT Convergence Engineering at Kumoh National Institute of Technology.
Cloud computing promises to revolutionize IT and business by making computing available as a utility over the internet. This book is intended primarily for practising software architects who need to assess the impact of such a transformation. It explains the evolution of the internet into a cloud computing platform, describes emerging development paradigms and technologies, and discusses how these will change the way enterprise applications should be architected for cloud deployment. Gautam Shroff provides a technical description of cloud computing technologies, covering cloud infrastructure and platform services, programming paradigms such as MapReduce, as well as 'do-it-yourself' hosted development tools. He also describes emerging technologies critical to cloud computing. The book also covers the fundamentals of enterprise computing, including a technical introduction to enterprise architecture, so it will interest programmers aspiring to become software architects and serve as a reference for a graduate-level course in software architecture or software engineering.
Building Applications and Infrastructure in the Cloud
The Myth of the Objective
The Power of Networks
Cloud Computing
Exploring the Three Worlds of Mathematics
CLOUD COMPUTING
Search, Smart Algorithms, and Big Data

This practical resource highlights the systematic problems Internet of Things is encountering on its journey to mass adoption. Professionals are offered solutions to key questions about IoT systems today, including potential network scalability issues, storage, and computing. Security and privacy are explored and the value of sensor-collected data is explained. Costs of deployment and transformation are covered and the model-driven deployment of IoT systems is explored. Presenting a pragmatic real-world approach to IoT, this book covers technology components such as communication, computing, storage and mobility, as well as business insights and social implications.
If you're involved in planning IT infrastructure as a network or system architect, system administrator, or developer, this book will help you adapt your skills to work with these highly scalable, highly redundant infrastructure services. While analysts hotly debate the advantages and risks of cloud computing, IT staff and programmers are left to determine whether and how to put their applications into these virtualized services. Cloud Application Architectures provides answers -- and critical guidance -- on issues of cost, availability, performance, scaling, privacy, and security. With Cloud Application Architectures, you will: Understand the differences between traditional deployment and cloud computing Determine whether moving existing applications to the cloud makes technical and business sense Analyze and compare the long-term costs of cloud services, traditional hosting, and owning dedicated servers Learn how to build a transactional web application for the cloud or migrate one to it Understand how the cloud helps you better prepare for disaster recovery Change your perspective on application scaling To provide realistic examples of the book's principles in action, the author delves into some of the choices and operations available on Amazon Web Services, and includes high-level summaries of several of the other services available on the market today. Cloud Application Architectures provides best practices that apply to every available cloud service. Learn how to make the transition to the cloud and prepare your web applications to succeed.
Why cloud computing represents a paradigm shift for business, and how business users can best take advantage of cloud services. Most of the information available on cloud computing is either highly technical, with details that are irrelevant to non-technologists, or pure marketing hype, in which the cloud is simply a selling point. This book, however, explains the cloud from the user's viewpoint—the business user's in particular. Nayan Ruparelia explains what the cloud is, when to use it (and when not to), how to select a cloud service, how to integrate it with other technologies, and what the best practices are for using cloud computing. Cutting through the hype, Ruparelia cites the simple and basic definition of cloud computing from the National Institute of Science and Technology: a model enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources. Thus with cloud computing, businesses can harness information technology resources usually available only to large enterprises. And this, Ruparelia demonstrates, represents a paradigm shift for business. It will ease funding for startups, alter business plans, and allow big businesses greater agility. Ruparelia discusses the key issues for any organization considering cloud computing: service level agreements, business service delivery and consumption, finance, legal jurisdiction, security, and social responsibility. He introduces novel concepts made possible by cloud computing: cloud cells, or specialist clouds for specific uses; the personal cloud; the cloud of things; and cloud service exchanges. He examines use case patterns in terms of infrastructure and platform, software information, and business process; and he explains how to transition to a cloud service. Current and future users will find this book an indispensable guide to the cloud.
What would you do if your IT job was no longer performed in your country? Your survival does not lie in limiting global collaborative engineering. IT workers will survive and prosper because of their ability to innovate, to quickly learn and change directions, and to evolve from Information Technology into Distributed Knowledge Marketplace. You have no choice but to be pro-active, learn to stay current, even run ahead of the game. Integration-Ready Architecture and Design bridges the gap for a new generation of wired and wireless software technologies and teaches a set of skills that are demanded by fast moving software evolution. This up-to-date textbook integrates theory and practice, going from foundations and concepts to specific applications. Through deep insights into almost all areas of modern CIS and IT, Zhuk provides an entry into the new world of integrated knowledge and software engineering. Readers will learn the what s, why s, and how s on: J2EE, J2ME, .NET, JSAPI, JMS, JMF, SALT, VoiceXML, WAP, 802.11, CDNA, GPRS, CycL, XML, and multiple XML-based technologies including RDF, DAML, SOAP, UDDI, and WDSL. Students, architects, designers, coders, and even management benefit from innovative ideas and detailed examples for building multi-dimensional worlds of enterprise applications and creating distributed knowledge marketplace.
Computer Systems
Principles and Paradigms
Solving Enterprise Applications Performance Puzzles
Guide to Supporting Microsoft Private Clouds
The Practical Guide to Storing, Managing and Analyzing Big and Small Data
A Comprehensive Guide to Secure Cloud Computing
From Humble Beginnings to Global Leadership

Poorly performing enterprise applications are the weakest links in a corporation's management chain, causing delays and disruptions of critical business functions. This groundbreaking book frames enterprise application performance engineering not as an art but as applied science built on model-based methodological foundation. The book introduces queuing models of enterprise application that visualize, demystify, explain, and solve system performance issues. Analysis of these models will help to discover and clarify unapparent connections and correlations among workloads, hardware architecture, and software parameters.
Written in a tutorial style, this comprehensive guide follows a structured approach explaining cloud techniques, models and platforms. Popular cloud services such as Amazon, Google and Microsoft Azure are explained in the text. The security risks and challenges of cloud computing are discussed in detail with useful examples. Emerging trends including mobile cloud computing and internet of things are discussed in the book for the benefit of the readers. Numerous review questions, multiple choice exercises and case studies facilitate enhanced understanding. This textbook is ideal for undergraduate and graduate students of computer science engineering, and information technology.
Enterprise Cloud ComputingTechnology, Architecture, ApplicationsCambridge University Press
This IMA Volume in Mathematics and its Applications ALGORITHMS FOR PARALLEL PROCESSING is based on the proceedings of a workshop that was an integral part of the 1996-97 IMA program on "MATHEMATICS IN HIGH-PERFORMANCE COMPUTING. " The workshop brought together algorithm developers from theory, combinatorics, and scientific computing. The topics ranged over models, linear algebra, sorting, randomization, and graph algorithms and their analysis. We thank Michael T. Heath of University of lllinois at Urbana (Com puter Science), Abhiram Ranade of the Indian Institute of Technology (Computer Science and Engineering), and Robert S. Schreiber of Hewlett Packard Laboratories for their excellent work in organizing the workshop and editing the proceedings. We also take this opportunity to thank the National Science Founda tion (NSF) and the Army Research Office (ARO), whose financial support made the workshop possible. A vner Friedman Robert Gulliver v PREFACE The Workshop on Algorithms for Parallel Processing was held at the IMA September 16 - 20, 1996; it was the first workshop of the IMA year dedicated to the mathematics of high performance computing. The work shop organizers were Abhiram Ranade of The Indian Institute of Tech nology, Bombay, Michael Heath of the University of Illinois, and Robert Schreiber of Hewlett Packard Laboratories. Our idea was to bring together researchers who do innovative, exciting, parallel algorithms research on a wide range of topics, and by sharing insights, problems, tools, and methods to learn something of value from one another.
Industrial Sensors and Controls in Communication Networks
Enterprise Cloud Computing
From Wired Technologies to Cloud Computing and the Internet of Things
The Power of Events
The Management Transformation of Huawei
International Conference on Computational and Information Sciences (ICCIS) 2014
Event Processing in Action

What makes WiFi faster at home than at a coffee shop? How does Google order search results? Is it really true that everyone on Facebook is connected by six steps or less? The Power of Networks answers questions like these for the first time in a way that all of us can understand. Using simple language, analogies, stories, hundreds of illustrations, and no more math than simple addition and multiplication, Christopher Brinton and Mung Chiang provide a smart and accessible introduction to the handful of big ideas that drive the computer networks we use every day. The Power of Networks unifies these ideas through six fundamental principles of networking. These principles explain the difficulties in sharing network resources efficiently, how crowds can be wise or not so wise depending on the nature of their connections, why there are many layers in a network, and more. Along the way, the authors also talk with and share the special insights of renowned experts such as Google's Eric Schmidt, former Verizon Wireless CEO Dennis Strigl, and "fathers of the Internet" Vint Cerf and Bob Kahn.
Huawei has become China's most prominent multinational company and a leader in the ICT sector. Given unprecedented access to the company, the authors of this book examine the management transformation of Huawei from its inception in 1987 until 2019, observing in detail not only the creation of its organizational routines but also the breaking of routines across most major functional areas: Management, Product Development, HR, Supply Chain, Finance, R&D, Intellectual Property, and International Business. 'Dynamic capabilities' are central to theories of competitive advantage and this book highlights Huawei as an ideal case study for the successful implementation of change routines and change-supporting values. The chapters cover all the major change initiatives the firm has undertaken since 1996 to import best practices from the West, with the help of consultants. The insights presented in the book will be particularly interesting for academics in the field of strategy, management, and business history.
"The promise of cloud computing is here. These pages provide the 'eyes wide open' insights you need to transform your business." --Christopher Crowhurst, Vice President, Strategic Technology, Thomson Reuters A Down-to-Earth Guide to Cloud Computing Cloud Computing: A Practical Approach provides a comprehensive look at the emerging paradigm of Internet-based enterprise applications and services. This accessible book offers a broad introduction to cloud computing, reviews a wide variety of currently available solutions, and discusses the cost savings and organizational and operational benefits. You'll find details on essential topics, such as hardware, platforms, standards, migration, security, and storage. You'll also learn what other organizations are doing and where they're headed with cloud computing. If your company is considering the move from a traditional network infrastructure to a cutting-edge cloud solution, you need this strategic guide. Cloud Computing: A Practical Approach covers: Costs, benefits, security issues, regulatory concerns, and limitations Service providers, including Google, Microsoft, Amazon, Yahoo, IBM, EMC/VMware, Salesforce.com, and others Hardware, infrastructure, clients, platforms, applications, services, and storage Standards, including HTTP, HTML, DHTML, XMPP, SSL, and OpenID Web services, such as REST, SOAP, and JSON Platform as a Service (PaaS), Software as a Service (SaaS), and Software plus Services (S+S) Custom application development environments, frameworks, strategies, and solutions Local clouds, thin clients, and virtualization Migration, best practices, and emerging standards
Well-known security experts decipher the most challenging aspect of cloud computing-security Cloud computing allows for both large and small organizations to have the opportunity to use Internet-based services so that they can reduce start-up costs, lower capital expenditures, use services on a pay-as-you-use basis, access applications only as needed, and quickly reduce or increase capacities. However, these benefits are accompanied by a myriad of security issues, and this valuable book tackles the most common security challenges that cloud computing faces. The authors offer you years of unparalleled expertise and knowledge as they discuss the extremely challenging topics of data ownership, privacy protections, data mobility, quality of service and service levels, bandwidth costs, data protection, and support. As the most current and complete guide to helping you find your way through a maze of security minefields, this book is mandatory reading if you are involved in any aspect of cloud computing. Coverage Includes: Cloud Computing Fundamentals Cloud Computing Architecture Cloud Computing Software Security Fundamentals Cloud Computing Risks Issues Cloud Computing Security Challenges Cloud Computing Security Architecture Cloud Computing Life Cycle Issues Useful Next Steps and Approaches
Cloud Computing Bible
Cloud Security
Principles of Database Management
Optimization for Machine Learning
Cloud Computing: A Practical Approach
Introduction to IoT
Queuing Models to the Rescue

India is in the throes of great developments in the field of higher education. This book identifies the needs and gaps in this sector and provides suggestions for improvement based on the lessons learnt from the experiences of other countries. It facilitates a clear and holistic understanding of the sector's complex nature and breaks several myths related to it. The availability of quality higher education in India, though increasing, is unable to meet the demands of a growing youth population, improvements in school education and a growing middle class. At the same time, it has been widely recognised that the country has a unique opportunity to convert its demographic surplus into its economic strength by providing its young people the right kind of skills. Following this understanding, and due to the persisting problems in the sector, higher education now occupies a central position in the country's strategy for global competitiveness and inclusive growth, and several steps have been taken for its improvement. Apart from an analysis of the prevailing situation, the author also suggests a framework for the creation of a competitive environment in higher education that would ensure better utilisation of public funds and improvement of both public and private institutions. This book will be a valuable resource for centres of education and higher education in universities and research organisations, as well as think-tanks. It would also be a useful tool for consultants and private organisations working in the higher education sector.
You may regard cloud computing as an ideal way for your company to control IT costs, but do you know how private and secure this service really is? Not many people do. With Cloud Security and Privacy, you'll learn what's at stake when you trust your data to the cloud, and what you can do to keep your virtual infrastructure and web applications secure. Ideal for IT staffers, information security and privacy practitioners, business managers, service providers, and investors alike, this book offers you sound advice from three well-known authorities in the tech security world. You'll learn detailed information on cloud computing security that-until now-has been sorely lacking. Review the current state of data security and storage in the cloud, including confidentiality, integrity, and availability Learn about the identity and access management (IAM) practice for authentication, authorization, and auditing of the users accessing cloud services Discover which security management frameworks and standards are relevant for the cloud Understand the privacy aspects you need to consider in the cloud, including how they compare with traditional computing models Learn the importance of audit and compliance functions within the cloud, and the various standards and frameworks to consider Examine security delivered as a service-a different facet of cloud security
The primary purpose of this book is to capture the state-of-the-art in Cloud Computing technologies and applications. The book will also aim to identify potential research directions and technologies that will facilitate creation a global market-place of cloud computing services supporting scientific, industrial, business, and consumer applications. We expect the book to serve as a reference for larger audience such as systems architects, practitioners, developers, new researchers and graduate level students. This area of research is relatively recent, and as such has no existing reference book that addresses it. This book will be a timely contribution to a field that is gaining considerable research interest, momentum, and is expected to be of increasing interest to commercial developers. The book is targeted for professional computer science developers and graduate students especially at Masters level. As Cloud Computing is recognized as one of the top five emerging technologies that will have a major impact on the quality of science and society over the next 20 years, its knowledge will help position our readers at the forefront of the field.
Why does modern life revolve around objectives? From how science is funded, to improving how children are educated -- and nearly everything in-between -- our society has become obsessed with a seductive illusion: that greatness results from doggedly measuring improvement in the relentless pursuit of an ambitious goal. In Why Greatness Cannot Be Planned, Stanley and Lehman begin with a surprising scientific discovery in artificial intelligence that leads ultimately to the conclusion that the objective obsession has gone too far. They make the case that great achievement can't be bottled up into mechanical metrics; that innovation is not driven by narrowly focused heroic effort; and that we would be wiser (and the outcomes better) if instead we whole-heartedly embraced serendipitous discovery and playful creativity. Controversial at its heart, yet refreshingly provocative, this book challenges readers to consider life without a destination and discovery without a compass.
Software Engineering with XML, Java, .NET, Wireless, Speech, and Knowledge Technologies
Envisioning the Future
The Intelligent Web
Cloud Application Architectures
High Availability for Your Growing Applications
Digital Design, Fundamentals of Computer Architecture and Assembly Language

Unlike traditional information systems which work by issuing requests and waiting for responses, event-driven systems are designed to process events as they occur, allowing the system to observe, react dynamically, and issue personalized data depending on the recipient and situation. Event Processing in Action introduces the major concepts of event-driven architectures and shows how to use, design, and build event processing systems and applications. Written for working software architects and developers, the book looks at practical examples and provides an in-depth explanation of their architecture and implementation. Since patterns connect the events that occur in any system, the book also presents common event-driven patterns and explains how to detect and implement them. Throughout the book, readers follow a comprehensive use case that incorporates all event processing programming styles in practice today. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.
As we use the Web for social networking, shopping, and news, we leave a personal trail. These days, linger over a Web page selling lamps, and they will turn up at the advertising margins as you move around the Internet, reminding you, tempting you to make that purchase. Search engines such as Google can now look deep into the data on the Web to pull out instances of the words you are looking for. And there are pages that collect and assess information to give you a snapshot of changing political opinion. These are just basic examples of the growth of "Web intelligence", as increasingly sophisticated algorithms operate on the vast and growing amount of data on the Web, sifting, selecting, comparing, aggregating, correcting; following simple but powerful rules to decide what matters. While original optimism for Artificial Intelligence declined, this new kind of machine intelligence is emerging as the Web grows ever larger and more interconnected. Gautam Shroff takes us on a journey through the computer science of search, natural language, text mining, machine learning, swarm computing, and semantic reasoning, from Watson to self-driving cars. This machine intelligence may even mimic at a basic level what happens in the brain.
Discusses concepts of smart grid technologies, from the perspective of integration with cloud computing and data management approaches.
Introductory, theory-practice balanced text teaching the fundamentals of databases to advanced undergraduates or graduate students in information systems or computer science.
An Introduction to Complex Event Processing in Distributed Enterprise Systems
Smart Grid Technology
Technology, Architecture, Applications
Cloud Security and Privacy
Planning Extreme Programming
A Cloud Computing and Data Management Approach
Foundations and Applications Programming

Cloud Computing: Implementation, Management, and Security provides an understanding of what cloud computing really means, explores how disruptive it may become in the future, and examines its advantages and disadvantages. It gives business executives the knowledge necessary to make informed, educated decisions regarding cloud initiatives. The authors first discuss the evolution of computing from a historical perspective, focusing primarily on advances that led to the development of cloud computing. They then survey some of the critical components that are necessary to make the cloud computing paradigm feasible. They also present various standards based on the use and implementation issues surrounding cloud computing and describe the infrastructure management that is maintained by cloud computing service providers. After addressing significant legal and philosophical issues, the book concludes with a hard look at successful cloud computing vendors. Helping to overcome the lack of understanding currently preventing even faster adoption of cloud computing, this book arms readers with guidance essential to make smart, strategic decisions on cloud initiatives.
This book aims at providing the necessary knowledge in understanding the concepts of software testing and software quality assurance so that you can take any internationally recognized software testing / quality assurance certification examination and come out with flying colors. Also, equipped with this knowledge, you can do a great job as a testing and quality assurance professional in your career and contribute in developing reliable software for different applications, which in turn improves the quality of life of everyone on this earth. - Introduction - Software Development Life Cycle and Quality Assurance - Fundamentals of Testing - Testing Levels and Types - Static Testing Techniques - Dynamic Testing and Test Case Design Techniques - Managing the Testing Process - Software Testing Tools - Code of Ethics for Software Professionals
Distributed and Cloud Computing: From Parallel Processing to the Internet of Things offers complete coverage of modern distributed computing technology including clusters, the grid, service-oriented architecture, massively parallel processors, peer-to-peer networking, and cloud computing. It is the first modern, up-to-date distributed systems textbook; it explains how to create high-performance, scalable, reliable systems, exposing the design principles, architecture, and innovative applications of parallel, distributed, and cloud computing systems. Topics covered by this book include: facilitating management, debugging, migration, and disaster recovery through virtualization; clustered systems for research or ecommerce applications; designing systems as web services; and social networking systems using peer-to-peer computing. The principles of cloud computing are discussed using examples from open-source and commercial applications, along with case studies from the leading distributed computing vendors such as Amazon, Microsoft, and Google. Each chapter includes exercises and further reading, with lecture slides and more available online. This book will be ideal for students taking a distributed systems or distributed computing class, as well as for professional system designers and engineers looking for a reference to the latest distributed technologies including cloud, P2P and grid computing. Complete coverage of modern distributed computing technology including clusters, the grid, service-oriented architecture, massively parallel processors, peer-to-peer networking, and cloud computing Includes case studies from the leading distributed computing vendors: Amazon, Microsoft, Google, and more Explains how to use virtualization to facilitate management, debugging, migration, and disaster recovery Designed for undergraduate or graduate students taking a distributed systems course—each chapter includes exercises and further reading, with lecture slides and more available online
Cloud computing is the delivery of different services through the Internet, including data storage, servers, databases, networking, and software. Cloud-based storage makes it possible to save files to a remote database and retrieve them on demand.
How to Maintain High Availability and Manage Risk in the Cloud
Architecting for Scale
Зборник радова научно-стручног скупа Информатика 2018
Proceedings of the International Conference on Information Technology and Computer Application Engineering (ITCAE 2013)
Algorithms for Parallel Processing
Why Greatness Cannot Be Planned
cloud computing - on-demand computing

An up-to-date account of the interplay between optimization and machine learning, accessible to students and researchers in both communities. The interplay between optimization and machine learning is one of the most important developments in modern computational science. Optimization formulations and methods are proving to be vital in designing algorithms to extract essential knowledge from huge volumes of data. Machine learning, however, is not simply a consumer of optimization technology but a rapidly evolving field that is itself generating new optimization ideas. This book captures the state of the art of the interaction between optimization and machine learning in a way that is accessible to researchers in both fields. Optimization approaches have enjoyed prominence in machine learning because of their wide applicability and attractive theoretical properties. The increasing complexity, size, and variety of today's machine learning models call for the reassessment of existing assumptions. This book starts the process of reassessment. It describes the resurgence in novel contexts of established frameworks such as first-order methods, stochastic approximations, convex relaxations, interior-point methods, and proximal methods. It also devotes attention to newer themes such as regularized optimization, robust optimization, gradient and subgradient methods, splitting techniques, and second-order methods. Many of these techniques draw inspiration from other fields, including operations research, theoretical computer science, and subfields of optimization. The book will enrich the ongoing cross-fertilization between the machine learning community and these other fields, and within the broader optimization community.
This proceedings volume brings together some 189 peer-reviewed papers presented at the International Conference on Information Technology and Computer Application Engineering, held 27-28 August 2013, in Hong Kong, China. Specific topics under consideration include Control, Robotics, and Automation, Information Technology, Intelligent Computing and Telecommunication, Computer Science and Engineering, Computer Education and Application and other related topics. This book provides readers a state-of-the-art survey of recent innovations and research worldwide in Information Technology and Computer Application Engineering, in so-doing furthering the development and growth of these research fields, strengthening international academic cooperation and communication, and promoting the fruitful exchange of research ideas. This volume will be of interest to professionals and academics alike, serving as a broad overview of the latest advances in the dynamic field of Information Technology and Computer Application Engineering.
Complex Event Processing (CEP) is a defined set of tools and techniques for analyzing and controlling the complex series of interrelated events that drive modern distributed information systems. This emerging technology helps IS and IT professionals understand what is happening within the system, quickly identify and solve problems, and more effectively utilize events for enhanced operation, performance, and security. CEP can be applied to a broad spectrum of information system challenges, including business process automation, schedule and control processes, network monitoring and performance prediction, and intrusion detection. "The Power of Events" introduces CEP and shows specifically how this innovative technology can be utilized to enhance the quality of large-scale, distributed enterprise systems. The book describes the challenges faced by today's information systems, explains fundamental CEP concepts, and highlights CEP's role within a complex and evolving contemporary context. After thoroughly introducing the concept, the book moves on to a more detailed, technical explanation of CEP, featuring the Rapide(TM) event pattern language, reactive event pattern rules, event pattern constraints, and event processing agents. It offers practical advice on building CEP-based solutions that solve real world IS/IT problems. Readers will learn about such essential topics as: Managing the open electronic enterprise in the "global event cloud"Process architectures and on-the-fly process evolutionEvents, timing, causality, and aggregationEvent patterns and event abstraction hierarchiesCausal event tracking and information gapsMultiple views and hierarchical viewingDynamic process architecturesThe Rapide event pattern languageEvent pattern rules, constraints, and agentsEvent processing networks (EPNs)Causal models and event pattern mapsImplementing event abstraction hierarchies Several comprehensive case studies illustrate the benefits of CEP, as well as key strategies for applying the technology. Examples include the real-time monitoring of events flowing between the business processes of collaborating enterprises, and a hierarchically organized set of event-driven views of a financial trading system. One of the case studies shows how to apply CEP to network viewing and intrusion detection. The book concludes with a look at building an infrastructure for CEP, showing how the technology can provide a significant competitive advantage amidst the myriad of event-driven, Internet-based applications now coming onto the market.
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The complete reference guide to the hot technology of cloud computing Its potential for lowering IT costs makes cloud computing a major force for both IT vendors and users; it is expected to gain momentum rapidly with the launch of Office Web Apps later this year. Because cloud computing involves various technologies, protocols, platforms, and infrastructure elements, this comprehensive reference is just what you need if you?ll be using or implementing cloud computing. Cloud computing offers significant cost savings by eliminating upfront expenses for hardware and software; its growing popularity is expected to skyrocket when Microsoft introduces Office Web Apps This comprehensive guide helps define what cloud computing is and thoroughly explores the technologies, protocols, platforms and infrastructure that make it so desirable Covers mobile cloud computing, a significant area due to ever-increasing cell phone and smartphone use Focuses on the platforms and technologies essential to cloud computing Anyone involved with planning, implementing, using, or maintaining a cloud computing project will rely on the information in Cloud Computing Bible.
Implementation, Management, and Security
Six Principles That Connect Our Lives
Integration-Ready Architecture and Design
Distributed and Cloud Computing
Istqb Certification Study Guide: Iseb, Istqb/ Itb, Qai Certification, 2008 Ed

An Enterprise Perspective on Risks and Compliance
IOT Technical Challenges and Solutions

Every day, companies struggle to scale critical applications. As traffic volume and data demands increase, these applications become more complicated and brittle, exposing risks and compromising availability. This practical guide shows IT, devops, and system reliability managers how to prevent an application from becoming slow, inconsistent, or downright unavailable as it grows. Scaling isn't just about handling more users; it's also about managing risk and ensuring availability. Author Lee Atchison provides basic techniques for building applications that can handle huge quantities of traffic, data, and demand without affecting the quality your customers expect. In five parts, this book explores: Availability: learn techniques for building highly available applications, and for tracking and improving availability going forward Risk management: identify, mitigate, and manage risks in your application, test your recovery/disaster plans, and build out systems that contain fewer risks Services and microservices: understand the value of services for building complicated applications that need to operate at higher scale Scaling applications: assign services to specific teams, label the criticalness of each service, and devise failure scenarios and recovery plans Cloud services: understand the structure of cloud-based services, resource allocation, and service distribution

GUIDE TO SUPPORTING MICROSOFT PRIVATE CLOUDS instructs future network administrators how to effectively implement and maintain Microsoft private clouds with a balance of conceptual expertise and hands-on skills. Ideal for your server administration course, this text prepares students to work with large providers, such as Amazon, Microsoft, and Google, as well as implement smaller scale cloud computing solutions within their own network environments. GUIDE TO SUPPORTING MICROSOFT PRIVATE CLOUDS begins with a conceptual foundation and by the last chapter, students have completed over 75 lab activities as they learn to put in place a high-availability cluster to support a Microsoft private cloud. Clear learning objectives, review questions, case projects, and complete instructor support further reinforce student understanding of cloud computing. Successive chapters help refine key skills students need to implement private cloud stations using Microsoft technologies, including Windows Server 2008 R2, Hyper-V virtualization, Virtual Machine Manager, Self-Service Portal, Virtual Desktop Infrastructure (VDI), Storage Server, Failover Cluster Manager, and Windows PowerShell. To encourage teamwork, lab activities are designed for three-member teams who share private cloud stations consisting of three networked servers. Rely on GUIDE TO SUPPORTING MICROSOFT PRIVATE CLOUDS to teach your students the private cloud computing skills they will need now and in the future. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This textbook covers digital design, fundamentals of computer architecture, and assembly language. The book starts by introducing basic number systems, character coding, basic knowledge in digital design, and components of a computer. The book goes on to discuss information representation in computing; Boolean algebra and logic gates; sequential logic; input/output; and CPU performance. The author also covers ARM architecture, ARM instructions and ARM assembly language which is used in a variety of devices such as cell phones, digital TV, automobiles, routers, and switches. The book contains a set of laboratory experiments related to digital design using Logisim software; in addition, each chapter features objectives, summaries, key terms, review questions and problems. The book is targeted to students majoring Computer Science, Information System and IT and follows the ACM/IEEE 2013 guidelines. • Comprehensive textbook covering digital design, computer architecture, and ARM architecture and assembly • Covers basic number system and coding, basic knowledge in digital design, and components of a computer • Features laboratory exercises in addition to objectives, summaries, key terms, review questions, and problems in each chapter

Every day, companies struggle to scale critical applications. As traffic volume and data demands increase, these applications become more complicated and brittle, exposing risks and compromising availability. With the popularity of software as a service, scaling has never been more important. Updated with an expanded focus on modern architecture paradigms such as microservices and cloud computing, this practical guide provides techniques for building systems that can handle huge quantities of traffic, data, and demand—without affecting the quality your customers expect. Architects, managers, and directors in engineering and operations organizations will learn how to build applications at scale that run more smoothly and reliably to meet the needs of customers. Learn how scaling affects the availability of your services, why that matters, and how to improve it Dive into a modern service-based application architecture that ensures high availability and reduces the effects of service failures Explore the Single Team Owned Service Architecture paradigm (STOSA)—a model for scaling your development organization in tandem with your application Understand, measure, and mitigate risk in your systems Use the cloud to build highly scalable applications

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Mastering Cloud Computing

Information Technology and Computer Application Engineering

Indian Higher Education

How Humans Learn to Think Mathematically

From Parallel Processing to the Internet of Things

Mastering Cloud Computing is designed for undergraduate students learning to develop cloud computing applications. Tomorrow's applications won□t live on a single computer but will be deployed from and reside on a virtual server, accessible anywhere, any time. Tomorrow's application developers need to understand the requirements of building apps for these virtual systems, including concurrent programming, high-performance computing, and data-intensive systems. The book introduces the principles of distributed and parallel computing underlying cloud architectures and specifically focuses on virtualization, thread programming, task programming, and map-reduce programming. There are examples demonstrating all of these and more, with exercises and labs throughout. Explains how to make design choices and tradeoffs to consider when building applications to run in a virtual cloud environment Real-world case studies include scientific, business, and energy-efficiency considerations

A guide to XP leads the developer, project manager, and team leader through the software development planning process, offering real world examples and tips for reacting to changing environments quickly and efficiently.

A valuable guide for new and experienced readers, featuring the complex and massive world of IoT and IoT-based solutions.