

## Tcl Tk Elsevier

Cloud Computing: Theory and Practice provides students and IT professionals with an in-depth analysis of the cloud from the ground up. Beginning with a discussion of parallel computing and architectures and distributed systems, the book turns to contemporary cloud infrastructures, how they are being deployed at leading companies such as Amazon, Google and Apple, and how they can be applied in fields such as healthcare, banking and science. The volume also examines how to successfully deploy a cloud application across the enterprise using virtualization, resource management and the right amount of networking support, including content delivery networks and storage area networks.

Developers will find a complete introduction to application development provided on a variety of platforms. Learn about recent trends in cloud computing in critical areas such as: resource management, security, energy consumption, ethics, and complex systems Get a detailed hands-on set of practical recipes that help simplify the deployment of a cloud based system for practical use of computing clouds along with an in-depth discussion of several projects Understand the evolution of cloud computing and why the cloud computing paradigm has a better chance to succeed than previous efforts in large-scale distributed computing

This book compiles the fundamentals, applications and viable product strategies of biomimetic lipid membranes into a single, comprehensive source. It broadens its perspective to interdisciplinary realms incorporating medicine, biology, physics, chemistry, materials science, as well as engineering and pharmacy at large. The book guides readers from membrane structure and models to biophysical chemistry and functionalization of membrane surfaces. It then takes the reader through a myriad of surface-sensitive techniques before delving into cutting-edge applications that could help inspire new research directions. With more than half the world's drugs and various toxins targeting these crucial structures, the book addresses a topic of major importance in the field of medicine, particularly biosensor design, diagnostic tool development, vaccine formulation, micro/nano-array systems, and drug screening/development.

Provides fundamental knowledge on biomimetic lipid membranes; Addresses some of biomimetic membrane types, preparation methods, properties and characterization techniques; Explains state-of-art technological developments that incorporate microfluidic systems, array technologies, lab-on-a-chip-tools, biosensing, and bioprinting techniques; Describes the integration of biomimetic membranes with current top-notch tools and platforms; Examines applications in medicine, pharmaceutical industry, and environmental monitoring.

Machine generated contents note: Chapter 1: Tcl/Tk Features Chapter 2: The Mechanics of Using the Tcl and Tk Interpreters Chapter 3: Introduction to the Tcl Language Chapter 4: File System, Disk I/O and Sockets Chapter 5: Using Strings and Lists Chapter 6: Basic list, array and dict Chapter 7: Advanced List, array and dict Chapter 8: Procedure Techniques Chapter 9: Namespaces Chapter 10:

Basic TclOO Chapter 11: Advanced TclOO Chapter 12: Packages and modules  
Chapter 13: Introduction to Tk Graphics Chapter 14: Overview of the canvas  
Widget Chapter 15: The text widget and htмлlib Chapter 16: Themed Widgets  
Chapter 17: Tk Megawidgets Chapter 18: Writing a Tcl Extension Chapter 19:  
Extensions and Packages Chapter 20: Programming Tools Chapter 21:  
Debugging and Optimization techniques Chapter 22: Tips and Techniques .

Software testing is indispensable and is one of the most discussed topics in software development today. Many companies address this issue by assigning a dedicated software testing phase towards the end of their development cycle. However, quality cannot be tested into a buggy application. Early and continuous unit testing has been shown to be crucial for high quality software and low defect rates. Yet current books on testing ignore the developer's point of view and give little guidance on how to bring the overwhelming amount of testing theory into practice. Unit Testing in Java represents a practical introduction to unit testing for software developers. It introduces the basic test-first approach and then discusses a large number of special issues and problem cases. The book instructs developers through each step and motivates them to explore further. Shows how the discovery and avoidance of software errors is a demanding and creative activity in its own right and can build confidence early in a project. Demonstrates how automated tests can detect the unwanted effects of small changes in code within the entire system. Discusses how testing works with persistency, concurrency, distribution, and web applications. Includes a discussion of testing with C++ and Smalltalk.

Biotechnology in its many guises has developed very considerably over the last few years. We now feel that it is appropriate for the publication of a series of books that discuss the technical aspects of biotechnology specifically as applied to foods, and in particular concentrating on new and emerging techniques, processes and products. Food is without doubt one of the oldest bioindustries; however, some of the new areas of biotechnology, such as diagnostic and health-care applications, are likely to mature much faster than applications in the food industry. Eventually, however, biotechnology must have a very great impact on a wide scale in the food industry, simply because of the size and diversity of the industry, and because most food products are substantially natural in origin and are therefore very suitable for processing by biocatalysts. Some of the ways in which the food industry is likely to be affected by developments in biotechnology include the following: The modification of food components to give products with new and/or improved properties, for instance high fructose corn syrups, and by modifying the functional properties of proteins. New methods of assaying food constituents, such as immobilized enzyme sensors. New processes for the production of foods and food components, for instance the use of plant cell cultures for the production of flavours. Many of these topics will be described in detail in this series of books.

This book describes the latest advances, innovations and applications in the field

of waste management and environmental geomechanics as presented by leading researchers, engineers and practitioners at the International Conference on Sustainable Waste Management through Design (IC\_SWMD), held in Ludhiana (Punjab), India on November 2-3, 2018. Providing a unique overview of new directions, and opportunities for sustainable and resilient design approaches to protect infrastructure and the environment, it discusses diverse topics related to civil engineering and construction aspects of the resource management cycle, from the minimization of waste, through the eco-friendly re-use and processing of waste materials, the management and disposal of residual wastes, to water treatments and technologies. It also encompasses strategies for reducing construction waste through better design, improved recovery, re-use, more efficient resource management and the performance of materials recovered from wastes. The contributions were selected by means of a rigorous peer-review process and highlight many exciting ideas that will spur novel research directions and foster multidisciplinary collaboration among different waste management specialists.

**Properties of Polymers: Their Correlation with Chemical Structure; Their Numerical Estimation and Prediction from Additive Group Contributions** summarizes the latest developments regarding polymers, their properties in relation to chemical structure, and methods for estimating and predicting numerical properties from chemical structure. In particular, it examines polymer electrical properties, magnetic properties, and mechanical properties, as well as their crystallization and environmental behavior and failure. The rheological properties of polymer melts and polymer solutions are also considered.

Organized into seven parts encompassing 27 chapters, this book begins with an overview of polymer science and engineering, including the typology of polymers and their properties. It then turns to a discussion of thermophysical properties, from transition temperatures to volumetric and calorimetric properties, along with the cohesive aspects and conformation statistics. It also introduces the reader to the behavior of polymers in electromagnetic and mechanical fields of force. The book covers the quantities that influence the transport of heat, momentum, and matter, particularly heat conductivity, viscosity, and diffusivity; properties that control the chemical stability and breakdown of polymers; and polymer properties as an integral concept, with emphasis on processing and product properties. Readers will find tables that give valuable (numerical) data on polymers and include a survey of the group contributions (increments) of almost every additive function considered. This book is a valuable resource for anyone working on practical problems in the field of polymers, including organic chemists, chemical engineers, polymer processors, polymer technologists, and both graduate and PhD students.

An expert guide to Ruby, a popular new Object-Oriented Programming Language Ruby is quickly becoming a favourite among developers who need a simple, straight forward, portable programming language. Ruby is ideal for quick and

easy object-oriented programming such as processing text files or performing system management. Having been compared with other programming languages such as Perl, Python, PCL, Java, Eiffel, and C++; Ruby is popular because of its straight forward syntax and transparent semantics. Using step-by-step examples and real world applications, the Ruby Developer's Guide is designed for programmers and developer's looking to embrace the object-oriented features and functionality of this robust programming language. Readers will learn how to develop, implement, organize and deploy applications using Ruby. Ruby is currently experiencing a rapid rise in popularity in the object-oriented programming community Readers receive up-to-the minute links, white papers, and analysis for two years at solutions@syngress.com Comes with a wallet-sized CD containing a printable HTML version of the book, all of the source code examples and demos of popular Ruby third-party programming tools and applications

Sophisticated interactive maps are increasingly used to explore information - guiding us through data landscapes to provide information and prompt insight and understanding. Geovisualization is an emerging domain that draws upon disciplines such as computer science, human-computer interaction design, cognitive sciences, graphical statistics, data visualization, information visualization, geographic information science and cartography to discuss, develop and evaluate interactive cartography. This review and exploration of the current and future status of geovisualization has been produced by key researchers and practitioners from around the world in various cognate fields of study. The thirty-six chapters present summaries of work undertaken, case studies focused on new methods and their application, system descriptions, tests of their implementation, plans for collaboration and reflections on experiences of using and developing geovisualization techniques. In total, over 50 pages of color are provided in the book along with more than 250 color images on an enclosed CD-ROM.

This book captures the essence of the current state of research in active media technology and identifies the new changes and opportunities — both current and future — in the field. Distinguished researchers such as Prof Ning Zhong from the Maebashi Institute of Technology, Prof John Yen from the Pennsylvania State University, and Prof Sanker K Pal from the Indian Statistical Institute present their research papers.

Contents: Web Intelligence — A New Paradigm for Developing E-Business Intelligence (N Zhong)On Modeling and Simulating Agent Teamwork in Cast (J Yen et al.)Properties of Clustering Coefficient in Random Agent Networks (X Jing & J Liu)Research of the Radar Transmitter Power Measurement Based on Virtual Instrument (H Li et al.)Electroencephalogram Experiments of Human Visual and Auditory Calculation for Designing Brain Computer Interface in an Active Computer System (J Wu et al.)Behavior and Security Extensions to FIPA Architecture and Specifications (V S Alagar & J Holliday)Mobile Agent-Based Digital City Spatial Information Service (X Zhang et al.)A Built-in Data Security Scheduling in Distributed Real-Time Control System (F Zhang et al.)An Effective Method for Constructing Hopfield Neural Network in Arbitrary Waveform Synthesizer Design (S Zhang et al.)A Signal Processing Application for Non Destructive Testing of Material Structures (V H Tu & K Siljeg)An Embedded Web Media Development Platform (Y Wang et al.)Mixed Feature Extracting

Approaches for License-Plate Recognition (H Dong & P Wang) and other papers  
Readership: Graduate students, academics and researchers in computer science.  
Keywords: Agents; Active Computer Systems; Intelligent Systems; Multi Model  
Processing; Active Media

Formal Verification: An Essential Toolkit for Modern VLSI Design presents practical approaches for design and validation, with hands-on advice to help working engineers integrate these techniques into their work. Formal Verification (FV) enables a designer to directly analyze and mathematically explore the quality or other aspects of a Register Transfer Level (RTL) design without using simulations. This can reduce time spent validating designs and more quickly reach a final design for manufacturing. Building on a basic knowledge of SystemVerilog, this book demystifies FV and presents the practical applications that are bringing it into mainstream design and validation processes at Intel and other companies. After reading this book, readers will be prepared to introduce FV in their organization and effectively deploy FV techniques to increase design and validation productivity. Learn formal verification algorithms to gain full coverage without exhaustive simulation Understand formal verification tools and how they differ from simulation tools Create instant test benches to gain insight into how models work and find initial bugs Learn from Intel insiders sharing their hard-won knowledge and solutions to complex design problems

This is a book which will be welcomed not only by researchers and engineers, but also by teachers and students, as it contains the only comprehensive review of the dynamics of ocean waves. Existing books are now either out of date or restricted to specialized aspects of the subject, whereas this book covers all types of ocean waves, ranging from capillary to planetary waves. Because of its completeness of coverage, its use of elementary mathematics and the provision of numerous problems and exercises, the book will be an indispensable text for everyone. It is completed by a very lengthy bibliography which includes many references to the Russian literature.

This is the second volume in a series of critical reviews of the chemical thermodynamic data of those elements of particular importance in the safety assessment modeling of high-level radioactive waste storage and disposal facilities. The objective of these reviews is to provide a set of reliable thermodynamic data that can be used to describe the behaviour of these elements under conditions relevant for radioactive waste disposal systems and the geochemical environments. The present volume is a review of experimental data reported in the literature for americium. On a few occasions, where no data existed, comparisons and estimates were made based on experimental data on analog lanthanide elements. The basic philosophy was to develop a minimum set of solid phases and solution species of americium that would fit all experimental data being reviewed.

Tcl/TkA Developer's Guide Elsevier

The papers presented in this volume examine topics of central interest in contemporary philosophy of logic. They include reflections on the nature of logic and its relevance for philosophy today, and explore in depth developments in informal logic and the relation of informal to symbolic logic, mathematical metatheory and the limiting metatheorems, modal logic, many-valued logic, relevance and paraconsistent logic, free logics, extensional v. intensional logics, the logic of fiction, epistemic logic, formal logical and semantic paradoxes, the concept of truth, the formal theory of entailment, objectual and

substitutional interpretation of the quantifiers, infinity and domain constraints, the Löwenheim-Skolem theorem and Skolem paradox, vagueness, modal realism v. actualism, counterfactuals and the logic of causation, applications of logic and mathematics to the physical sciences, logically possible worlds and counterpart semantics, and the legacy of Hilbert's program and logicism. The handbook is meant to be both a compendium of new work in symbolic logic and an authoritative resource for students and researchers, a book to be consulted for specific information about recent developments in logic and to be read with pleasure for its technical acumen and philosophical insights. - Written by leading logicians and philosophers - Comprehensive authoritative coverage of all major areas of contemporary research in symbolic logic - Clear, in-depth expositions of technical detail - Progressive organization from general considerations to informal to symbolic logic to nonclassical logics - Presents current work in symbolic logic within a unified framework - Accessible to students, engaging for experts and professionals - Insightful philosophical discussions of all aspects of logic - Useful bibliographies in every chapter

Written by two of Europe's leading robotics experts, this book provides the tools for a unified approach to the modelling of robotic manipulators, whatever their mechanical structure. No other publication covers the three fundamental issues of robotics: modelling, identification and control. It covers the development of various mathematical models required for the control and simulation of robots. - World class authority - Unique range of coverage not available in any other book - Provides a complete course on robotic control at an undergraduate and graduate level

Practical UML Statecharts in C/C++ Second Edition bridges the gap between high-level abstract concepts of the Unified Modeling Language (UML) and the actual programming aspects of modern hierarchical state machines (UML statecharts). The book describes a lightweight, open source, event-driven infrastructure, called QP that enables direct manual coding UML statecharts and concurrent event-driven applications in C or C++ without big tools. This book is presented in two parts. In Part I, you get a practical description of the relevant state machine concepts starting from traditional finite state automata to modern UML state machines followed by state machine coding techniques and state-machine design patterns, all illustrated with executable examples. In Part II, you find a detailed design study of a generic real-time framework indispensable for combining concurrent, event-driven state machines into robust applications. Part II begins with a clear explanation of the key event-driven programming concepts such as inversion of control ( Hollywood Principle ), blocking versus non-blocking code, run-to-completion (RTC) execution semantics, the importance of event queues, dealing with time, and the role of state machines to maintain the context from one event to the next. This background is designed to help software developers in making the transition from the traditional sequential to the modern event-driven programming, which can be one of the trickiest paradigm shifts. The lightweight QP event-driven infrastructure goes several steps beyond the traditional real-time operating system (RTOS). In the simplest configuration, QP runs on bare-metal microprocessor, microcontroller, or DSP completely replacing the RTOS. QP can also work with almost any OS/RTOS to take advantage of the existing device drivers, communication stacks, and other middleware. The accompanying website to this book contains complete open source code for QP, ports to popular processors and operating

systems, including 80x86, ARM Cortex-M3, MSP430, and Linux, as well as all examples described in the book.

55% new material in the latest edition of this “must-have for students and practitioners of image & video processing! This Handbook is intended to serve as the basic reference point on image and video processing, in the field, in the research laboratory, and in the classroom. Each chapter has been written by carefully selected, distinguished experts specializing in that topic and carefully reviewed by the Editor, Al Bovik, ensuring that the greatest depth of understanding be communicated to the reader. Coverage includes introductory, intermediate and advanced topics and as such, this book serves equally well as classroom textbook as reference resource.

- Provides practicing engineers and students with a highly accessible resource for learning and using image/video processing theory and algorithms
- Includes a new chapter on image processing education, which should prove invaluable for those developing or modifying their curricula
- Covers the various image and video processing standards that exist and are emerging, driving today’s explosive industry
- Offers an understanding of what images are, how they are modeled, and gives an introduction to how they are perceived
- Introduces the necessary, practical background to allow engineering students to acquire and process their own digital image or video data
- Culminates with a diverse set of applications chapters, covered in sufficient depth to serve as extensible models to the reader’s own potential applications

About the Editor... Al Bovik is the Cullen Trust for Higher Education Endowed Professor at The University of Texas at Austin, where he is the Director of the Laboratory for Image and Video Engineering (LIVE). He has published over 400 technical articles in the general area of image and video processing and holds two U.S. patents. Dr. Bovik was Distinguished Lecturer of the IEEE Signal Processing Society (2000), received the IEEE Signal Processing Society Meritorious Service Award (1998), the IEEE Third Millennium Medal (2000), and twice was a two-time Honorable Mention winner of the international Pattern Recognition Society Award. He is a Fellow of the IEEE, was Editor-in-Chief, of the IEEE Transactions on Image Processing (1996-2002), has served on and continues to serve on many other professional boards and panels, and was the Founding General Chairman of the IEEE International Conference on Image Processing which was held in Austin, Texas in 1994.

- \* No other resource for image and video processing contains the same breadth of up-to-date coverage
- \* Each chapter written by one or several of the top experts working in that area
- \* Includes all essential mathematics, techniques, and algorithms for every type of image and video processing used by electrical engineers, computer scientists, internet developers, bioengineers, and scientists in various, image-intensive disciplines

Practical Model-Based Testing gives a practical introduction to model-based testing, showing how to write models for testing purposes and how to use model-based testing tools to generate test suites. It is aimed at testers and software developers who wish to use model-based testing, rather than at tool-developers or academics. The book focuses on the mainstream practice of functional black-box testing and covers different styles of models, especially transition-based models (UML state machines) and pre/post models (UML/OCL specifications and B notation). The steps of applying model-based testing are demonstrated on examples and case studies from a variety of software domains, including embedded software and information systems. From this

book you will learn: The basic principles and terminology of model-based testing How model-based testing differs from other testing processes How model-based testing fits into typical software lifecycles such as agile methods and the Unified Process The benefits and limitations of model-based testing, its cost effectiveness and how it can reduce time-to-market A step-by-step process for applying model-based testing How to write good models for model-based testing How to use a variety of test selection criteria to control the tests that are generated from your models How model-based testing can connect to existing automated test execution platforms such as Mercury Test Director, Java JUnit, and proprietary test execution environments Presents the basic principles and terminology of model-based testing Shows how model-based testing fits into the software lifecycle, its cost-effectiveness, and how it can reduce time to market Offers guidance on how to use different kinds of modeling techniques, useful test generation strategies, how to apply model-based testing techniques to real applications using case studies

The development of nitride-based light-emitting diodes (LEDs) has led to advancements in high-brightness LED technology for solid-state lighting, handheld electronics, and advanced bioengineering applications. Nitride Semiconductor Light-Emitting Diodes (LEDs) reviews the fabrication, performance, and applications of this technology that encompass the state-of-the-art material and device development, and practical nitride-based LED design considerations. Part one reviews the fabrication of nitride semiconductor LEDs. Chapters cover molecular beam epitaxy (MBE) growth of nitride semiconductors, modern metalorganic chemical vapor deposition (MOCVD) techniques and the growth of nitride-based materials, and gallium nitride (GaN)-on-sapphire and GaN-on-silicon technologies for LEDs. Nanostructured, non-polar and semi-polar nitride-based LEDs, as well as phosphor-coated nitride LEDs, are also discussed. Part two covers the performance of nitride LEDs, including photonic crystal LEDs, surface plasmon enhanced LEDs, color tuneable LEDs, and LEDs based on quantum wells and quantum dots. Further chapters discuss the development of LED encapsulation technology and the fundamental efficiency droop issues in gallium indium nitride (GaInN) LEDs. Finally, part three highlights applications of nitride LEDs, including liquid crystal display (LCD) backlighting, infrared emitters, and automotive lighting. Nitride Semiconductor Light-Emitting Diodes (LEDs) is a technical resource for academics, physicists, materials scientists, electrical engineers, and those working in the lighting, consumer electronics, automotive, aviation, and communications sectors. Reviews fabrication, performance, and applications of this technology that encompass the state-of-the-art material and device development, and practical nitride-based LED design considerations Covers the performance of nitride LEDs, including photonic crystal LEDs, surface plasmon enhanced LEDs, color tuneable LEDs, and LEDs based on quantum wells and quantum dots Highlights applications of nitride LEDs, including liquid crystal display (LCD) backlighting, infra-red emitters, and automotive lighting Newly updated with over 150 pages of material on the latest Tcl extensions, Tcl/Tk: A Developer's Guide is a unique practical tutorial for professional programmers and beginners alike. Starting with a clear picture of the basics, Tcl/Tk covers the variety of tools in this "Swiss army knife" of programming languages, giving you the ability to enhance your programs, extend your application's capabilities, and become a more effective programmer. This updated edition covers all of the new features of version

8.6, including object-oriented programming and the creation of megawidgets, existing data structure implementations, themed widgets and virtual events. Extensive code snippets and online tutorials in various languages will give you a firm grasp on how to use the Tcl/Tk libraries and interpreters and, most importantly, on what constitutes an effective strategy for using Tcl/Tk. Includes the latest features of Tcl/Tk 8.6 Covers Tcl development tools, popular extensions, and packages to allow developers to solve real-world problems with Tcl/Tk immediately Provides straightforward explanations for beginners and offers tips, style guidelines, and debugging techniques for advanced users

Digital Systems Design with FPGAs and CPLDs explains how to design and develop digital electronic systems using programmable logic devices (PLDs). Totally practical in nature, the book features numerous (quantify when known) case study designs using a variety of Field Programmable Gate Array (FPGA) and Complex Programmable Logic Devices (CPLD), for a range of applications from control and instrumentation to semiconductor automatic test equipment. Key features include: \* Case studies that provide a walk through of the design process, highlighting the trade-offs involved. \* Discussion of real world issues such as choice of device, pin-out, power supply, power supply decoupling, signal integrity- for embedding FPGAs within a PCB based design. With this book engineers will be able to: \* Use PLD technology to develop digital and mixed signal electronic systems \* Develop PLD based designs using both schematic capture and VHDL synthesis techniques \* Interface a PLD to digital and mixed-signal systems \* Undertake complete design exercises from design concept through to the build and test of PLD based electronic hardware This book will be ideal for electronic and computer engineering students taking a practical or Lab based course on digital systems development using PLDs and for engineers in industry looking for concrete advice on developing a digital system using a FPGA or CPLD as its core. Case studies that provide a walk through of the design process, highlighting the trade-offs involved. Discussion of real world issues such as choice of device, pin-out, power supply, power supply decoupling, signal integrity- for embedding FPGAs within a PCB based design. In the past, radiographs of the hand have been described as the “skeleton’s calling card”, showing manifestations of many different diseases. As hand and wrist imaging has become increasingly sophisticated, this observation has become more true than ever. This is a comprehensive, up-to-date textbook on imaging of the hand and wrist. In the first part of the book, the various imaging techniques are discussed in detail. Individual chapters are devoted to radiography, ultrasound, CT, MRI and nuclear medicine. The second part of the book gives an authoritative review of the various pathologies that may be encountered in the hand and wrist, encompassing congenital and developmental abnormalities, trauma, and the full range of localized and systemic disorders. Each chapter is written by an acknowledged expert in the field, and a wealth of illustrative material is included. This book will be of great value to musculoskeletal and general radiologists, orthopaedic surgeons and rheumatologists.

The traditional division of labor between the database (which only stores and manages SQL and XML data for fast, easy data search and retrieval) and the application server (which runs application or business logic, and presentation logic) is obsolete. Although the books primary focus is on programming the Oracle Database, the concepts and techniques provided apply to most RDBMS that support Java including Oracle, DB2,

Sybase, MySQL, and PostgreSQL. This is the first book to cover new Java, JDBC, SQLJ, JPublisher and Web Services features in Oracle Database 10g Release 2 (the coverage starts with Oracle 9i Release 2). This book is a must-read for database developers audience (DBAs, database applications developers, data architects), Java developers (JDBC, SQLJ, J2EE, and OR Mapping frameworks), and to the emerging Web Services assemblers. Describes pragmatic solutions, advanced database applications, as well as provision of a wealth of code samples. Addresses programming models which run within the database as well as programming models which run in middle-tier or client-tier against the database. Discusses languages for stored procedures: when to use proprietary languages such as PL/SQL and when to use standard languages such as Java; also running non-Java scripting languages in the database. Describes the Java runtime in the Oracle database 10g (i.e., OracleJVM), its architecture, memory management, security management, threading, Java execution, the Native Compiler (i.e., NCOMP), how to make Java known to SQL and PL/SQL, data types mapping, how to call-out to external Web components, EJB components, ERP frameworks, and external databases. Describes JDBC programming and the new Oracle JDBC 10g features, its advanced connection services (pooling, failover, load-balancing, and the fast database event notification mechanism) for clustered databases (RAC) in Grid environments. Describes SQLJ programming and the latest Oracle SQLJ 10g features , contrasting it with JDBC. Describes the latest Database Web services features, Web services concepts and Services Oriented Architecture (SOA) for DBA, the database as Web services provider and the database as Web services consumer. Abridged coverage of JPublisher 10g, a versatile complement to JDBC, SQLJ and Database Web Services.

Our responses to our thermal environment have a considerable effect on our performance and behavior, not least in the realm of work. There has been considerable scientific investigation of these responses and formal methods have been developed for environmental evaluation and design. In recent years these have been developed to the extent that detailed national and international standards of practice have now become feasible. This new edition of Ken Parson's definitive text brings us back up to date. He covers hot, moderate and cold environments, and defines these in terms of six basic parameters: air temperature, radiate temperature, humidity, air velocity, clothing worn, and the person's activity. There is a focus on the principles and practice of human response, which incorporates psychology, physiology and environmental physics with applied ergonomics. Water requirements, computer modeling and computer-aided design are brought in, as are current standards. Special populations, such as the aged or disabled and specialist environments such as those found in vehicles are also considered. This book continues to be the standard text for the design of environments for humans to live and work safely, comfortably and effectively, and for the design of materials which help the same people cope with their environments.

Welcome to the 8th International Workshop on Groupware (CRIWG 2002)! The previous workshops took place in Lisbon, Portugal (1995), Puerto Varas, Chile

(1996), El Escorial, Spain (1997), Búzios, Brazil (1998), Cancun, Mexico (1999), Madeira, Portugal (2000), and Darmstadt, Germany (2001). CRIWG workshops follow a simple recipe for success: good papers, a small number of participants, extensive time for lively and constructive discussions, and a high level of cooperation both within and between paper sessions. CRIWG 2002 continued this tradition. CRIWG 2002 attracted 36 submissions from 13 countries, nine of them outside Ibero-America. Each of the 36 articles submitted was reviewed by at least three members of an internationally renowned Program Committee. This year we used a double-blind reviewing process, i. e. , the reviewers did not know who the authors of the papers were. In addition, the reviewers were chosen based on their expertise and we also ensured that they came from countries and institutions not related to those of the paper's authors. This reviewer assignment worked remarkably well, as indicated by the high average confidence value the reviewers gave their own reviews. This means that papers were usually reviewed by experts in the paper's topic. As a consequence, reviews were usually quite extensive and contained many suggestions for - provements. I would like to thank all the members of the Program Committee for their hard work, which I am sure contributed to improving the quality of the final articles.

Violent Python shows you how to move from a theoretical understanding of offensive computing concepts to a practical implementation. Instead of relying on another attacker's tools, this book will teach you to forge your own weapons using the Python programming language. This book demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts. It also shows how to write code to intercept and analyze network traffic using Python, craft and spoof wireless frames to attack wireless and Bluetooth devices, and how to data-mine popular social media websites and evade modern anti-virus. Demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts Write code to intercept and analyze network traffic using Python. Craft and spoof wireless frames to attack wireless and Bluetooth devices Data-mine popular social media websites and evade modern anti-virus Information technology (IT) can be collectively described as that used by man to gather, store and retrieve, manipulate and communicate data and information. Today , in the 'Information Age', this takes place over and across vast geographical, demographical, socio-political and economic scopes, and the ceasing of it will choke society, as know it today, to a pre-historic standstill. It is, understandably implemented through various aspects of computing and Electronic Technology. With the growing complexity of the information processing needs throughout fields as diverse as business, science, technology, exploration and entertainment, several issues involving data security, time complexity. Bandwidth and thought put, parallel and alternative computing technology and the technology used in an ever-increasing band of newer types of devices, are posing the most crucial questions to the future of society in general and IT in

particular. The book is a collection of articles written by professors, industry persons and researchers of international repute and comprises the latest breakthroughs in the fields of Information Theory and Coding, Information Security, Next Generation Internet technology, Data Mining and Knowledge Management, Mobile Computing and Communication, Bioinformatics, Soft Computing, Multimedia Systems and Communication, Quantum Computing, Image Processing and other areas which together comprise IT. This book is a must read for those seeking to expand their knowledge about various aspects of Information Technology.

XML Schema is the new language standard from the W3C and the new foundation for defining data in Web-based systems. There is a wealth of information available about Schemas but very little understanding of how to use this highly formal specification for creating documents. Grasping the power of Schemas means going back to the basics of documents themselves, and the semantic rules, or grammars, that define them. Written for schema designers, system architects, programmers, and document authors, *Modeling Business Objects with XML Schema* guides you through understanding Schemas from the basic concepts, type systems, type derivation, inheritance, namespace handling, through advanced concepts in schema design. \*Reviews basic XML syntax and the Schema recommendation in detail. \*Builds a knowledge base model step by step (about jazz music) that is used throughout the book. \*Discusses Schema design in large environments, best practice design patterns, and Schema's relation to object-oriented concepts.

This volume contains the papers of the 19th International Congress of Computer Assisted Radiology and Surgery (CARS 2005) held in Berlin, Germany between 22 and 25 June 2005. For 20 years, CARS has developed a culture of innovation with its focus on interdisciplinary and international cooperation. In approximately 20,000 pages of proceedings written by several thousand authors from more than 50 countries, many innovative developments have been reported which now assist the daily practice of physicians in their care of patients. Examples are PACS, a concept on which CARS was founded, and computer assisted surgical tools and systems, which were initially reported in CAR 85 and have now become mainstream developments. Some of these innovations are incremental, making noticeable improvements in daily practice, but others like PACS or minimally invasive surgery are transformational innovations in a sense that they have fundamentally changed the way "things" are done. CARS has established itself as the major event for the presentation of R & D work of high actuality. In addition to the traditional scientific/medical sessions, some of the outstanding topics presented and which are included in the CARS 2005 conference proceedings include: Interventional Radiology; Colon and Liver CAD; Intra-Operative Imaging; Minimal Invasive Spine Surgery; PACS Beyond Radiology (in conjunction with EuroPACS); Surgical PACS and the Digital Operating Room (in conjunction with SPIE Integrating the Health Care Enterprise (in conjunction with EuroPACS). The

process of innovation in these fields is a continuum with many examples of other new developments being presented at CARS 2005, which marks the 20th anniversary of the congress.

Practical Programming in Tcl/Tk, 4th edition Authoritative coverage of every Tcl and Tk command in the core toolkits State-of-the-art Tk GUI coverage for Tcl, Perl, Python, and Ruby developers Covers all key Tcl 8.4 enhancements: VFS, internationalization and performance improvements, new widgets, and much more Covers multi-threaded Tcl applications and Starkits, a revolutionary way to package and deploy Tcl applications The world's #1 guide to Tcl/Tk has been thoroughly updated to reflect Tcl/Tk8.4's powerful improvements in functionality, flexibility, and performance! Brent Welch, Ken Jones, and Jeffrey Hobbs, three of the world's leading Tcl/Tk experts, cover every facet of Tcl/Tk programming, including cross-platform scripting and GUI development, networking, enterprise application integration, and much more. Coverage includes: Systematic explanations and sample code for all Tcl/Tk 8.4 core commands Complete Tk GUI development guidance--perfect for developers working with Perl, Python, or Ruby Insider's insights into Tcl 8.4's key enhancements: VFS layer, internationalized font/character set support, new widgets, and more Definitive coverage of TclHttpd web server--written by its creator New ways to leverage Tcl/Tk 8.4's major performance improvements Advanced coverage: threading, Safe Tcl, Tcl script library, regular expressions, and namespaces Whether you're upgrading to Tcl/Tk 8.4, or building GUIs for applications created with other languages, or just searching for a better cross-platform scripting solution, Practical Programming in Tcl and Tk, Fourth Edition delivers all you need to get results!

The purpose of this Special Issue is to provide a thorough and up-to-date presentation of research investigating the impact of coffee and/or caffeine intake on various health outcomes. We welcome the submission of original research articles and/or systematic Reviews/meta-analyses focusing on several aspects of coffee/caffeine intake in relation to human health. Areas of interest include, but are not limited to, the following topics: - Human clinical trials of coffee or caffeine use in relation to disease or intermediate phenotypes. - Epidemiological studies of habitual coffee or caffeine intake in relation to human health, among the general public, as well as, among special populations (i.e., children, pregnant women, diabetics, cancer patients, hypertensives, etc.) - Mechanisms of action of nutrients and other bioactive components of coffee/caffeine. - Studies integrating genetic or physiological markers of coffee/caffeine intake to investigations of coffee and health.

In just a few chapters you will learn about Tcl features that allow you to isolate and protect your code from being damaged in large applications. You will even learn how to extend the language itself. Tcl/Tk: A Developer's Guide clearly discusses development tools, proven techniques, and existing extensions. It shows how to use Tcl/Tk effectively and provides many code examples. This fully

revised new edition is the complete resource for computer professionals, from systems administrators to programmers. It covers versions 7.4 to 8.4 and includes a CD-ROM containing the interpreters, libraries, and tutorials to get you started quickly. Additional materials in the book include case studies and discussions of techniques for the advanced user. On the CD-ROM \*Distributions for Tcl 8.3 and 8.4 for Linux, Solaris, Macintosh, and Windows. \*A copy of ActiveTcl from ActiveState. \*The latest release of TclTutor. \*How-to's and tutorials as well as copies of all the tools discussed in the book.

Successful businesses and organizations are continually looking for ways to improve service and customer satisfaction in order to achieve long-term customer loyalty. In light of these goals, software developers must ask the question: how does customer orientation influence traditional approaches, methods, and principles of software development? In this book, a leading software architect and his team of software engineers describe how the idea of customer orientation in an organization leads to the creation of application-oriented software. This book describes what application-oriented software development is and how it can be conceptually and constructively designed with object-oriented techniques. It goes further to describe how to best fit together the many different methodologies and techniques that have been created for object-orientation (such as frameworks, platforms, components, UML, Unified Process, design patterns, and eXtreme Programming) to design and build software for real projects. This book brings together the best of research, development, and day-to-day project work to the task of building large software systems. \*Written by and for developers of large, interactive, and long-lived software systems \*Includes patterns of proven analysis, design, and documentation techniques \*Shows how to develop an appropriate design approach and concrete software development techniques

Designed for the mixed practice large animal veterinarian, veterinary students, and camelid caretakers alike, *Llama and Alpaca Care* covers all major body systems, herd health, physical examination, nutrition, reproduction, surgery, anesthesia, and multisystem diseases of llamas and alpacas. Written by world-renowned camelid specialists and experts in the field, this comprehensive and uniquely global text offers quick access to the most current knowledge in this area. With coverage ranging from basic maintenance such as restraint and handling to more complex topics including anesthesia and surgery, this text provides the full range of knowledge required for the management of llamas and alpacas. "...an essential text for anyone working with South American camelids." Reviewed by Claire E. Whitehead on behalf of *Veterinary Record*, July 2015 Over 500 full-color images provide detailed, highly illustrated coverage of all major body systems, physical examination, nutrition, anesthesia, fluid therapy, multisystem diseases, and surgical disorders. World-renowned camelid experts and specialists in the field each bring a specific area of expertise for a uniquely global text. Comprehensive herd health content includes handling techniques, vaccinations, biosecurity, and protecting the herd from predators. Coverage of

anesthesia and analgesia includes the latest information on pharmacokinetics of anesthetic drugs, chemical restraint, injectable and inhalation anesthesia, neuroanesthesia, and pain management. Reproduction section contains information on breeding management, lactation, infertility, and embryo transfer. Nutrition information offers detailed nutritional requirements and discusses feeding management systems and feeding behavior.

A cookbook of algorithms for common image processing applications Thanks to advances in computer hardware and software, algorithms have been developed that support sophisticated image processing without requiring an extensive background in mathematics. This bestselling book has been fully updated with the newest of these, including 2D vision methods in content-based searches and the use of graphics cards as image processing computational aids. It's an ideal reference for software engineers and developers, advanced programmers, graphics programmers, scientists, and other specialists who require highly specialized image processing. Algorithms now exist for a wide variety of sophisticated image processing applications required by software engineers and developers, advanced programmers, graphics programmers, scientists, and related specialists This bestselling book has been completely updated to include the latest algorithms, including 2D vision methods in content-based searches, details on modern classifier methods, and graphics cards used as image processing computational aids Saves hours of mathematical calculating by using distributed processing and GPU programming, and gives non-mathematicians the shortcuts needed to program relatively sophisticated applications. Algorithms for Image Processing and Computer Vision, 2nd Edition provides the tools to speed development of image processing applications.

This book discusses a broad range of basic and advanced topics in the field of protein structure, function, folding, flexibility, and dynamics. Starting with a basic introduction to protein purification, estimation, storage, and its effect on the protein structure, function, and dynamics, it also discusses various experimental and computational structure determination approaches; the importance of molecular interactions and water in protein stability, folding and dynamics; kinetic and thermodynamic parameters associated with protein-ligand binding; single molecule techniques and their applications in studying protein folding and aggregation; protein quality control; the role of amino acid sequence in protein aggregation; muscarinic acetylcholine receptors, antimuscarinic drugs, and their clinical significances. Further, the book explains the current understanding on the therapeutic importance of the enzyme dopamine beta hydroxylase; structural dynamics and motions in molecular motors; role of cathepsins in controlling degradation of extracellular matrix during disease states; and the important structure-function relationship of iron-binding proteins, ferritins. Overall, the book is an important guide and a comprehensive resource for understanding protein structure, function, dynamics, and interaction.

This book presents the thoroughly refereed joint post-proceedings of three

workshops held during the 17th International Conference on Conceptual Modeling, ER '98, in Singapore in November 1998. The 50 revised papers presented have gone through two rounds of reviewing and revision. The book is divided in sections on knowledge discovery, data mining, data and web warehousing, multidimensional databases, data warehouse design, caching, data dissemination, replication, mobile networks, mobile platforms, tracking and monitoring, collaborative work support, temporal data modelling, moving objects and spatial indexing, spatio-temporal databases, and video database contents. The aim of IFIP Working Group 2.7 (13.4) for User Interface Engineering is to investigate the nature, concepts and construction of user interfaces for software systems. The group's scope is:

- developing user interfaces based on knowledge of system and user behaviour;
- developing frameworks for reasoning about interactive systems;
- and • developing engineering models for user interfaces.

Every three years, the group holds a "working conference" on these issues. The conference mixes elements of a regular conference and a workshop. As in a regular conference, the papers describe relatively mature work and are thoroughly reviewed. As in a workshop, the audience is kept small, to enable in-depth discussions. The conference is held over 5-days (instead of the usual 3-days) to allow such discussions. Each paper is discussed after it is presented. A transcript of the discussion is found at the end of each paper in these proceedings, giving important insights about the paper. Each session was assigned a "notes taker", whose responsibility was to collect/transcribe the questions and answers during the session. After the conference, the original transcripts were distributed (via the Web) to the attendees and modifications that clarified the discussions were accepted.

Middleware is the bridge that connects distributed applications across different physical locations, with different hardware platforms, network technologies, operating systems, and programming languages. This book describes middleware from two different perspectives: from the viewpoint of the systems programmer and from the viewpoint of the applications programmer. It focuses on the use of open source solutions for creating middleware and the tools for developing distributed applications. The design principles presented are universal and apply to all middleware platforms, including CORBA and Web Services. The authors have created an open-source implementation of CORBA, called MICO, which is freely available on the web. MICO is one of the most successful of all open source projects and is widely used by demanding companies and institutions, and has also been adopted by many in the Linux community. \*

Provides a comprehensive look at the architecture and design of middleware the bridge that connects distributed software applications \* Includes a complete, commercial-quality open source middleware system written in C++ \* Describes the theory of the middleware standard CORBA as well as how to implement a design using open source techniques

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