

## The Pivot Ge

Modern Chinese Grammar provides a comprehensive coverage of Chinese grammar through the clause-pivot theory and the double triangle approach, first proposed by Fuyi Xing in 1996. Translated into English for the first time, the book is widely regarded by linguists as a seminal text, and ground-breaking in linguistics research. The book contains discussion of the topics which are essential to Chinese grammar, from words and phrases, to complex sentences and sentence groups. It addresses such controversial issues as word class identification, the distinction between words and phrases, and between clauses and complex sentences. The book also shows, through a wealth of examples, how the clause-pivot theory and the double triangle approach can be applied productively in grammatical studies.

Modern Chinese Grammar: A Clause-Pivot Theoretical Approach is an essential purchase for researchers and graduate students of Chinese grammar and syntax.

Mathematical Tools for Physicists is a unique collection of 18 carefully reviewed articles, each one written by a renowned expert working in the relevant field. The result is beneficial to both advanced students as well as scientists at work; the former will appreciate it as a comprehensive introduction, while the latter will use it as a ready reference. The contributions range from fundamental methods right up to the latest applications, including: - Algebraic/ analytic / geometric methods - Symmetries and conservation laws - Mathematical modeling - Quantum computation The emphasis throughout is ensuring quick access to the information sought, and each article features: - an abstract - a detailed table of contents - continuous cross-referencing - references to the most relevant publications in the field, and - suggestions for further reading, both introductory as well as highly specialized. In addition, a comprehensive index provides easy access to the vast number of key words extending beyond the range of the headlines.

Demonstrates the programming language's strength as a Web development tool, covering syntax, data types, built-ins, the Python standard module library, and real world examples.

The Ninth International Conference on Austronesian Linguistics and the Fifth International Conference on Oceanic Linguistics were both held at The Australian National University in Canberra during January 2002. Rather than publish a single very diverse collection of conference papers, the organisers favoured a series of smaller compilations on specific topics. One such volume, on Austronesian historical phonology, has already been published by Pacific Linguistics as Issues in Austronesian historical phonology by John Lynch. The present volume represents another such compilation. It contains an introduction by the editors and ten papers on voice in Austronesian languages which provide both fresh data and some new perspectives on old problems. The papers touch on the many faces of Austronesian voice systems, ranging geographically from Teng on Puyuma in Taiwan to Otsuka on Tongan, typologically from voice in agglutinative languages in Taiwan and the Philippines to voice in isolating languages (Arka and Kosmas on Manggarai and Donohue on Palu'e), and in approach from Clayre's areal/historical survey of Kelabitic languages in Borneo to single-language studies of voice like Davies on Madurese, Quick on Pendau, and the Andersens on Moronene. Katagiri and Kaufman each take a fresh look at an aspect of Tagalog voice.

ELLP ACK is a many faceted system for solving elliptic partial differential equations. It is a forerunner of the very high level, problem solving environments or expert systems that will become common in the next decade. While it is still far removed from the goals of the future, it is also far advanced compared to the Fortran library approach in common current use. Many people will find ELLP ACK an easy way to solve simple or moderately complex elliptic problems. Others will be able to solve really hard problems by digging a little deeper into ELLP ACK. ELLP ACK is a research tool for the study of numerical methods for solving elliptic problems. Its original purpose was for the evaluation and comparison of numerical software for elliptic problems. Simple examples of this use are given in Chapters 9-11. The general conclusion is that there are many ways to solve most elliptic problems, there are large differences in their efficiency and the most common ways are often less efficient, sometimes dramatically so. Leaders have talked about the importance of corporate culture for decades, but the success of iconic companies like GE, Apple, and Google shows how culture is a strategic lever that can be utilized for driving growth, change, and innovation. In this new age of globalization, rapid technology shifts, and constant disruption, the 21st century marketplace is more volatile and uncertain than ever. To thrive, businesses need a new kind of emphasis around culture. Sara Roberts, former CEO and founder of Roberts Golden and a seasoned executive consultant to dozens of Fortune 500 companies and CEOs, sees how flourishing companies—from established market leaders to the surprising upstarts—share three distinct attributes: Nimble: They are much faster and more agile than ordinary organizations Focused: They use their sense of purpose as a lens to understand and meet the needs of customers and markets Feisty: They play big and act bold to capitalize on advantages and out-muscle the competition For successful companies in this new era, culture is not about playing defense but about going on offense. It's purposely designed, leveraged, and honed to deliver value and drive growth. In Nimble, Focused, Feisty, Roberts provides not only a look into what these organizations are doing differently but also a blueprint and framework so your company can create a cultural strategy to thrive in the new era.

Matrix algorithms are at the core of scientific computing and are indispensable tools in most applications in engineering. This book offers a comprehensive and up-to-date treatment of modern methods in matrix computation. It uses a unified approach to direct and iterative methods for linear systems, least squares and eigenvalue problems. A thorough analysis of the stability, accuracy, and complexity of the treated methods is given. Numerical Methods in Matrix Computations is suitable for use in courses on scientific computing and applied technical areas at advanced undergraduate and graduate level. A large bibliography is provided, which includes both historical and review papers as well as recent research papers. This makes the book useful also as a reference and guide to further study and research work.

"This book is a grammar of Pendau, an Austronesian language spoken by around four thousand people in north-central Sulawesi, Indonesia. Pendau belongs to the Tomini-Tolitoli subgroup, and this book is the first comprehensive description of any of these languages. The Tomini-Tolitoli languages are of interest to typologists in general and more specifically to Austronesianists, since the languages appear to be transitional between better known Philippine style languages and Indonesian style languages. Intricate rules of vowel harmony in the prefixes used to form verb stems are of particular interest. The grammar is very richly exemplified and covers a wide range of linguistic phenomena from phonetics and phonology through to cohesion and prominence in discourse as well as an analysis of the discourse structure of a number of different genres."--Provided by publisher.

The Nato Advanced Study Institute on "Computer Design Aids for VLSI Circuits" was held from July 21 to August 1, 1980 at Sogesta, Urbino, Italy. Sixty-three carefully chosen professionals were invited to participate in this institute together with 12 lecturers and 7 assistants. The 63 participants were selected from a group of almost 140 applicants. Each had the background to learn effectively the set of computer IC design aids which were presented. Each also had individual expertise in at least one of the topics of the Institute. The Institute was designed to provide hands-on type of experience rather than consisting of solely lecture and discussion. Each morning, detailed presentations were made concerning the critical algorithms that are used in the various types of computer IC design aids. Each afternoon a lengthy period was used to provide the participants with direct access to the computer programs. In addition to using the programs, the individual could, if his expertise was sufficient, make modifications of and extensions to the programs, or establish limitations of these present aids. The interest in this hands-on activity was very high and many participants worked with the programs every free hour. The editors would like to thank the Direction of SOGESTA for the excellent facilities, ~1r. R. Riccioni of the SOGESTA Computer Center and Mr. 11. Vanzi of the University of Genova for enabling all the programs to run smoothly on the set date. P.Antognetti D.O.Pederson Urbino, Summer 1980.

A new class of methods, termed "group explicit methods," is introduced in this text. Their applications to solve parabolic, hyperbolic and elliptic equations are outlined, and the advantages for their implementation on parallel computers clearly portrayed. Also included are the introductory and fundamental concepts from which the new methods are derived, and on which they are dependent. With the increasing advent of parallel computing into all aspects of computational mathematics, there is no doubt that the new methods will be widely used.

Accuracy and Stability of Numerical Algorithms gives a thorough, up-to-date treatment of the behavior of numerical algorithms in finite precision arithmetic. It combines algorithmic derivations, perturbation theory, and rounding error analysis, all enlivened by historical perspective and informative quotations. This second edition expands and updates the coverage of the first edition (1996) and includes numerous improvements to the original material. Two new chapters treat symmetric indefinite systems and skew-symmetric systems, and nonlinear systems and Newton's method. Twelve new sections include coverage of additional error bounds for Gaussian elimination, rank revealing LU factorizations, weighted and constrained least squares problems, and the fused multiply-add operation found on some modern computer architectures.

Mathematical Tools for Physicists John Wiley & Sons

Mathematics of Computing -- Numerical Analysis.

Annotation The four-volume set LNCS 4487-4490 constitutes the refereed proceedings of the 7th International Conference on Computational Science, ICCS 2007, held in Beijing, China in May 2007. More than 2400 submissions were made to the main conference and its 35 topical workshops. The 80 revised full papers and 11 revised short papers of the main track were carefully reviewed and selected from 360 submissions and are presented together with 624 accepted workshop papers in four volumes. According to the ICCS 2007 theme "Advancing Science and Society through Computation" the papers cover a large volume of topics in computational science and related areas, from multiscale physics, to wireless networks, and from graph theory to tools for program development. The papers are arranged in topical sections on efficient data management, parallel monte carlo algorithms, simulation of multiphysics multiscale systems, dynamic data driven application systems, computer graphics and geometric modeling, computer algebra systems, computational chemistry, computational approaches and techniques in bioinformatics, computational finance and business intelligence, geocomputation, high-level parallel programming, networks theory and applications, collective intelligence for semantic and knowledge grid, collaborative and cooperative environments, tools for program development and analysis in CS, intelligent agents in computing systems, CS in software engineering, computational linguistics in HCI, internet computing in science and engineering, workflow systems in e-science, graph theoretic algorithms and applications in cs, teaching CS, high performance data mining, mining text, semi-structured, Web, or multimedia data, computational methods in energy economics, risk analysis, advances in computational geomechanics and geophysics, meta-synthesis and complex systems, scientific computing in electronics engineering, wireless and mobile systems, high performance networked media and services, evolution toward next generation internet, real time systems and adaptive applications, evolutionary algorithms and evolvable systems.

Ready to control you house with your smartphone or tablet? Spivey shows you how to control thermostats, home security systems, and much more! Best of all, with these plain-English instructions, you can do it yourself!

Circuit Simulation Methods and Algorithms provides a step-by-step theoretical consideration of methods, techniques, and algorithms in an easy-to-understand format. Many illustrations explain more difficult problems and present instructive circuits. The book works on three levels: The simulator-user level for practitioners and students who want to better understand circuit simulators. The basic theoretical level, with examples, dedicated to students and beginning researchers. The thorough level for deep insight into circuit simulation based on computer experiments using PSPICE and OPTIMA. Only basic mathematical knowledge, such as matrix algebra, derivatives, and integrals, is presumed. "Rather than parallelizing sequential algorithms, the authors develop new back-substitution free parallel algorithms, using a bidirectional elimination technique for the solution of both dense and sparse linear equations. They provide full coverage of bidirectional parallel algorithms based on Gaussian elimination, LU factorization, Householder reductions and modified Gram-Schmidt orthogonalization, Givens rotations, sparse Cholesky factorization, and sparse factorization, clearly demonstrating how the bidirectional approach allows for improved speedup, numerical stability, and efficient implementation on multiprocessor systems." "Plus, the book offers a useful survey of the vast literature on direct methods, introductory material on solving systems of linear equations, and exercises. It is an invaluable resource for computer scientists, researchers in parallel linear algebra, and anyone with an interest in parallel programming."--BOOK JACKET.

Sparse Matrices

This book constitutes the thoroughly refereed post-proceedings of the Third International Conference on Numerical Analysis and Its Applications, NAA 2004, held in Rouse, Bulgaria in June/July 2004. The 68 revised full papers presented together with 8 invited papers were carefully selected during two rounds of reviewing and improvement. All current aspects of numerical analysis are addressed. Among the application fields covered are computational sciences and engineering, chemistry, physics, economics, simulation, fluid dynamics, visualization, etc.

A DEFINITIVE TEXT ON DEVELOPING CIRCUIT SIMULATORS Circuit Simulation gives a clear description of the numerical techniques and algorithms that are part of modern circuit simulators, with a focus on the most commonly used simulation modes: DC analysis and transient analysis. Tested in a graduate course on circuit simulation at the University of Toronto, this unique text provides the reader with sufficient detail and mathematical rigor to write his/her own basic circuit simulator. There is detailed coverage throughout of the mathematical and numerical techniques that are the basis for the various simulation topics, which facilitates a complete understanding of practical simulation techniques. In addition, Circuit Simulation: Explores a number of modern techniques from numerical analysis that are not synthesized anywhere else Covers network equation formulation in detail, with an emphasis on modified nodal analysis Gives a comprehensive treatment of the most relevant aspects of linear and nonlinear system solution techniques States all theorems without proof in order to maintain the focus on the end-goal of providing coverage of practical simulation methods Provides ample references for further study Enables newcomers to circuit simulation to understand the material in a concrete and holistic manner With problem sets and computer projects at the end of every

chapter, Circuit Simulation is ideally suited for a graduate course on this topic. It is also a practical reference for design engineers and computer-aided design practitioners, as well as researchers and developers in both industry and academia.

This is the most authoritative and accessible single-volume reference book on applied mathematics. Featuring numerous entries by leading experts and organized thematically, it introduces readers to applied mathematics and its uses; explains key concepts; describes important equations, laws, and functions; looks at exciting areas of research; covers modeling and simulation; explores areas of application; and more. Modeled on the popular Princeton Companion to Mathematics, this volume is an indispensable resource for undergraduate and graduate students, researchers, and practitioners in other disciplines seeking a user-friendly reference book on applied mathematics. Features nearly 200 entries organized thematically and written by an international team of distinguished contributors Presents the major ideas and branches of applied mathematics in a clear and accessible way Explains important mathematical concepts, methods, equations, and applications Introduces the language of applied mathematics and the goals of applied mathematical research Gives a wide range of examples of mathematical modeling Covers continuum mechanics, dynamical systems, numerical analysis, discrete and combinatorial mathematics, mathematical physics, and much more Explores the connections between applied mathematics and other disciplines Includes suggestions for further reading, cross-references, and a comprehensive index

Numerical analysis deals with the development and analysis of algorithms for scientific computing, and is in itself a very important part of mathematics, which has become more and more prevalent across the mathematical spectrum. This book is an introduction to numerical methods for solving linear and nonlinear systems of equations as well as ordinary and partial differential equations, and for approximating curves, functions, and integrals.

How could General Electric--perhaps America's most iconic corporation--suffer such a swift and sudden fall from grace? This is the definitive history of General Electric's epic decline, as told by the two Wall Street Journal reporters who covered its fall. Since its founding in 1892, GE has been more than just a corporation. For generations, it was job security, a solidly safe investment, and an elite business education for top managers. GE electrified America, powering everything from lightbulbs to turbines, and became fully integrated into the American societal mindset as few companies ever had. And after two decades of leadership under legendary CEO Jack Welch, GE entered the twenty-first century as America's most valuable corporation. Yet, fewer than two decades later, the GE of old was gone. ?Lights Out examines how Welch's handpicked successor, Jeff Immelt, tried to fix flaws in Welch's profit machine, while stumbling headlong into mistakes of his own. In the end, GE's traditional win-at-all-costs driven culture seemed to lose its direction, which ultimately caused the company's decline on both a personal and organizational scale. Lights Out details how one of America's all-time great companies has been reduced to a cautionary tale for our times.

In the history of mathematics there are many situations in which calculations were performed incorrectly for important practical applications. Let us look at some examples, the history of computing the number  $\pi$  began in Egypt and Babylon about 2000 years BC, since then many mathematicians have calculated  $\pi$  (e. g. , Archimedes, Ptolemy, Viète, etc. ). The first formula for computing decimal digits of  $\pi$  was discovered by J. Machin (in 1706), who was the first to correctly compute 100 digits of  $\pi$ . Then many people used his method, e. g. , W. Shanks calculated  $\pi$  with 707 digits (within 15 years), although due to mistakes only the first 527 were correct. For the next examples, we can mention the history of computing the fine-structure constant  $\alpha$  (that was first discovered by A. Sommerfeld), and the mathematical tables, exact calculations, and formulas, published in many mathematical textbooks, were not verified rigorously [25]. These errors could have a large effect on results obtained by engineers. But sometimes, the solution of such problems required such technology that was not available at that time. In modern mathematics there exist computers that can perform various mathematical operations for which humans are incapable. Therefore the computers can be used to verify the results obtained by humans, to discover new results, to prove the result that a human can obtain without any technology. With respect to our example of computing  $\pi$ , we can mention that recently (in 2002) Y. Kanada, Y. Ushiro, H. Kuroda, and M.

This volume contains information offered at the international conference held in Curacao, Netherlands Antilles. It presents the latest developments in the most active areas of abelian groups, particularly in torsion-free abelian groups.;For both researchers and graduate students, it reflects the current status of abelian group theory.;Abelian Groups discusses: finite rank Butler groups; almost completely decomposable groups; Butler groups of infinite rank; equivalence theorems for torsion-free groups; cotorsion groups; endomorphism algebras; and interactions of set theory and abelian groups.;This volume contains contributions from international experts. It is aimed at algebraists and logicians, research mathematicians, and advanced graduate students in these disciplines.

New applications, research, and fundamental theories in nonlinear analysis are presented in this book. Each chapter provides a unique insight into a large domain of research focusing on functional equations, stability theory, approximation theory, inequalities, nonlinear functional analysis, and calculus of variations with applications to optimization theory. Topics include: Fixed point theory Fixed-circle theory Coupled fixed points Nonlinear duality in Banach spaces Jensen's integral inequality and applications Nonlinear differential equations Nonlinear integro-differential equations Quasiconvexity, Stability of a Cauchy-Jensen additive mapping Generalizations of metric spaces Hilbert-type integral inequality, Solitons Quadratic functional equations in fuzzy Banach spaces Asymptotic orbits in Hill's problem Time-domain electromagnetics Inertial Mann algorithms Mathematical modelling Robotics Graduate students and researchers will find this book helpful in comprehending current applications and developments in mathematical analysis. Research scientists and engineers studying essential modern methods and techniques to solve a variety of problems will find this book a valuable source filled with examples that illustrate concepts.

Start-Ups, Pivots and Pop-Ups is a must read for anyone with a business idea and the desire to be successful. It gives the reader the skills and knowledge to survive in today's innovation and entrepreneurial-focused world. This book is about starting a business. It's about putting your toe in the entrepreneurial water - perhaps through doing a short term business gig or a pop-up business - and then seeing what happens. It shows you how to listen to the customer and work out why failures may happen, and when they do, you'll learn how to deal with them and create a

new business that is robust and ready to grow. Start-Ups, Pivots and Pop-Ups shows you the best ways of starting, testing and growing a business. It shares the stories, experience and insights of those who've done it, and explains how to innovate, trial, refine and succeed. Even if your business idea struggles, you'll find out how to learn so much that you'll pivot your business, try again and then win big time. You'll learn from a range of organizations including abnormal beauty company Deciem, Leon fast-food, Triumph lingerie, New York fashion tech Nineteenth Amendment, Brew Dog beer, Cambridge Satchels, Allbirds, and the Cornish Seaweed Company.

This book constitutes the thoroughly refereed post-proceedings of the Second International Conference on Numerical Analysis and Its Applications, NAA 2000, held in Rousse, Bulgaria in June 2000. The 90 revised papers presented were carefully selected for inclusion in the book during the two rounds of inspection and reviewing. All current aspects of numerical analysis are addressed. Among the application fields covered are computational sciences and engineering, chemistry, physics, economics, simulation, etc.

Finite Element Programming in Non-linear Geomechanics and Transient Flow delivers a textbook reference for both students and practitioners alike, with provided codes to understand and modify. Starting with the fundamentals, the reference covers the basics of finite element methods, including coupling geomechanics and transient fluid flow. The next phase moves from theory into practical application from programs Flow3D and Geo3D, utilizing source codes to solve real field challenges. Stability of perforations during oil and gas production, sand production problems, rock failure, casing collapse, and reservoir compaction problems are just some examples. Next, the reference elevates to hands-on experience, sharing source codes with additional problems engineers can work on independently. This gives students and engineers a starting point to modify their own code in a fraction of the time. Helps users understand finite element programs such as Flow3D and Geo3D to solve geomechanics problems, including casing stability, reservoir compaction challenges, and sand production Bridges the gap between theory, applications and source codes to help readers develop or modify their own computer programs with provided source codes Includes cases studies and practice examples that illustrate real-world applications

This monograph provides a micro-analytic description of the structure and communicative use of syntactic pivot constructions in German. Using the methodology of Conversation Analysis, this work shows that pivots emerge in interaction in response to local communicative needs. Exclusively found in spoken German, pivots allow a speaker to extend an utterance beyond a possible completion point in a syntactically and prosodically unobtrusive way. Speakers utilize this basic property to promote context-specific actions: managing boundaries of speakership, bridging sequential and topical junctures, and dealing with different types of interactional trouble. Through a close examination of syntactic pivots as an interactional resource, this work shows that spoken linguistic structures can only be fully understood if we acknowledge the temporality of language and view grammar as usage-based and negotiable. This book thus contributes to a growing body of research at the intersection of grammar and interaction.

A successor to the first and second editions, this updated and revised book is a leading companion guide for students and engineers alike, specifically software engineers who design algorithms. While succinct, this edition is mathematically rigorous, covering the foundations for both computer scientists and mathematicians with interest in the algorithmic foundations of Computer Science. Besides expositions on traditional algorithms such as Greedy, Dynamic Programming and Divide & Conquer, the book explores two classes of algorithms that are often overlooked in introductory textbooks: Randomised and Online algorithms — with emphasis placed on the algorithm itself. The book also covers algorithms in Linear Algebra, and the foundations of Computation. The coverage of Randomized and Online algorithms is timely: the former have become ubiquitous due to the emergence of cryptography, while the latter are essential in numerous fields as diverse as operating systems and stock market predictions. While being relatively short to ensure the essentiality of content, a strong focus has been placed on self-containment, introducing the idea of pre/post-conditions and loop invariants to readers of all backgrounds, as well as all the necessary mathematical foundations. The programming exercises in Python will be available on the web (see <http://www.msoltys.com/book> for the companion web site). Contents: Preliminaries Greedy Algorithms Divide and Conquer Dynamic Programming Online Algorithms Randomized Algorithms Algorithms in Linear Algebra Computational Foundations Mathematical Foundations Readership: Students of undergraduate courses in algorithms and programming and associated professionals. Keywords: Algorithms;Greedy;Dynamic Programming;Online;Randomized;Loop InvariantReview:0

Designed for graduate students, researchers, and engineers in mathematics, optimization, and economics, this self-contained volume presents theory, methods, and applications in mathematical analysis and approximation theory. Specific topics include: approximation of functions by linear positive operators with applications to computer aided geometric design, numerical analysis, optimization theory, and solutions of differential equations. Recent and significant developments in approximation theory, special functions and q-calculus along with their applications to mathematics, engineering, and social sciences are discussed and analyzed. Each chapter enriches the understanding of current research problems and theories in pure and applied research.

Daoism is the oldest indigenous philosophic-spiritual tradition of China and one of the most ancient of the world's spiritual structures. The name Daoism comes from the term dao, which means a "way" or a "road" through the field or woods to one's village. It is also means the "way" to do something, such as how a master craftsman carves wood, makes a bell, or even butchers an ox. But dao is also a nominative in the history of Daoism, referring to the energizing process that permeates and animates all of reality and moves it along. However, both text and practice in this tradition insist that dao itself cannot be described in words; it is not God in the sense of Western philosophy or religion. Daoism has no supreme being, even if there is an extensive grammar about nominally self-conscious entities and powers for which the Chinese use the word "spirit" (shen). For example, the highest powers of Daoism are variously called Taishang Laojun (the deified Laozi), the Celestial Worthy of Primordial Beginning (Yuanshi tianzun), the Jade Emperor (Yuhuang Shangdi), or the Perfected Warrior (Zhenwu). But these are expressions of dao in specific shen; they are not identical to Dao, except in the most unique case—when Laozi, the putative founder of Daoism and author of its major work, Daodejing, is said to be one with the dao. Historical Dictionary of Daoism contains a chronology, an introduction, appendixes, an extensive bibliography, and more than 400 cross-referenced entries related to the Chinese belief and worldview known as Daoism, including dozens of Daoist terms, names, and practices. This book is an excellent resource for students, researchers, and anyone wanting to know more about Daoism.

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