

Maple Tutorial Programming Guide

Maple V Mathematics Learning Guide is the fully revised introductory documentation for Maple V Release 5. It shows how to use Maple V as a calculator with instant access to hundreds of high-level math routines and as a programming language for more demanding or specialized tasks. Topics include the basic data types and statements in the Maple V language. The book serves as a tutorial introduction and explains the difference between numeric computation and symbolic computation, illustrating how both are used in Maple V Release 5. Extensive "how-to" examples are presented throughout the text to show how common types of calculations can be easily expressed in Maple. Graphics examples are used to illustrate the way in which 2D and 3D graphics can aid in understanding the behaviour of problems.

Updated with the latest advances from the field, **GUIDE TO COMPUTER FORENSICS AND INVESTIGATIONS, Fifth Edition** combines all-encompassing topic coverage and authoritative information from seasoned experts to deliver the most comprehensive forensics resource available. This proven author team's wide ranging areas of expertise mirror the breadth of coverage provided in the book, which focuses on techniques and practices for gathering and analyzing evidence used to solve crimes involving computers. Providing clear instruction on the tools and techniques of the trade, it introduces readers to every step of the computer forensics investigation—from lab set-up to testifying in court. It also details step-by-step guidance on how to use current forensics software. Appropriate for learners new to the field, it is also an excellent refresher and technology update for professionals in law enforcement, investigations, or computer security. **Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.**

If you're just learning how to program, Julia is an excellent JIT-compiled, dynamically typed language with a clean syntax. This hands-on guide uses Julia 1.0 to walk you through programming one step at a time, beginning with basic programming concepts before moving on to more advanced capabilities, such as creating new types and multiple dispatch. Designed from the beginning for high performance, Julia is a general-purpose language ideal for not only numerical analysis and computational science but also web programming and scripting. Through exercises in each chapter, you'll try out programming concepts as you learn them. Think Julia is perfect for students at the high school or college level as well as self-learners and professionals who need to learn programming basics. Start with the basics, including language syntax and semantics Get a clear definition of each programming concept Learn about values, variables, statements, functions, and data structures in a logical progression Discover how to work with files and databases Understand types, methods, and multiple dispatch Use debugging techniques to fix syntax, runtime, and semantic errors Explore interface design and data structures through case studies

The Master Cleanser: Original Edition The Master Cleanser diet otherwise known as the lemonade diet has been around close to 50 years. It's the easiest, most delicious, effective cleansing and weight loss diet available. You can feel good and get rid of what ails you. This diet has been used for every health problem with great success.

A Maple and MATLAB Approach, Third Edition

Maple V Flight Manual Release 4

for Release 5

The Maple Book

Bayesian Methods for Hackers

Think Julia

Master Bayesian Inference through Practical Examples and Computation—Without Advanced Mathematical Analysis Bayesian methods of inference are deeply natural and extremely powerful. However, most discussions of Bayesian inference rely on intensely complex mathematical analyses and artificial examples, making it inaccessible to anyone without a strong mathematical background. Now, though, Cameron Davidson-Pilon introduces Bayesian inference from a computational perspective, bridging theory to practice—freeing you to get results using computing power. *Bayesian Methods for Hackers* illuminates Bayesian inference through probabilistic programming with the powerful PyMC language and the closely related Python tools NumPy, SciPy, and Matplotlib. Using this approach, you can reach effective solutions in small increments, without extensive mathematical intervention. Davidson-Pilon begins by introducing the concepts underlying Bayesian inference, comparing it with other techniques and guiding you through building and training your first Bayesian model. Next, he introduces PyMC through a series of detailed examples and intuitive explanations that have been refined after extensive user feedback. You'll learn how to use the Markov Chain Monte Carlo algorithm, choose appropriate sample sizes and priors, work with loss functions, and apply Bayesian inference in domains ranging from finance to marketing. Once you've mastered these techniques, you'll constantly turn to this guide for the working PyMC code you need to jumpstart future projects. Coverage includes • Learning the Bayesian "state of mind" and its practical implications • Understanding how computers perform Bayesian inference • Using the PyMC Python library to program Bayesian analyses • Building and debugging models with PyMC • Testing your model's "goodness of fit" • Opening the "black box" of the Markov Chain Monte Carlo algorithm to see how and why it works • Leveraging the power of the "Law of Large Numbers" • Mastering key concepts, such as clustering, convergence, autocorrelation, and thinning • Using loss functions to measure an estimate's weaknesses based on your goals and desired outcomes • Selecting appropriate priors and understanding how their influence changes with dataset size • Overcoming the "exploration versus exploitation" dilemma: deciding when "pretty good" is good enough • Using Bayesian inference to improve A/B testing • Solving data science problems when only small amounts of data are available Cameron Davidson-Pilon has worked in many areas of applied mathematics, from the evolutionary dynamics of genes and diseases to stochastic modeling of financial prices. His contributions to the open source community include lifelines, an implementation of survival analysis in Python. Educated at the University of Waterloo and at the Independent University of Moscow, he currently works with the online commerce leader Shopify.

This is a practical, step-by-step guide that will help you to quickly become a proficient Octave user. The book is packed with clear examples, screenshots, and code to carry out your data analysis without any problems. This book is intended for anyone interested in scientific computing and data analysis. The reader should have a good level of mathematics and a basic understanding of programming will be useful, although it is not a prerequisite.

This well-respected text gives an introduction to the theory and application of modern numerical approximation techniques for students taking a one- or two-semester course in numerical analysis. With an accessible treatment that only requires a calculus prerequisite, Burden and Faires explain how, why, and when approximation techniques can be expected to work, and why, in some situations, they fail. A wealth of examples and exercises develop students' intuition, and demonstrate the subject's practical applications to important everyday problems in math, computing, engineering, and physical science disciplines. The first book of its kind built from the ground up to serve a diverse undergraduate audience, three decades later Burden and Faires remains the definitive introduction to a vital and practical subject. Important Notice: Media content referenced within the product description or

the product text may not be available in the ebook version.

Thoroughly revised, this third edition focuses on modern techniques used to generate synthetic three-dimensional images in a fraction of a second. With the advent of programmable shaders, a wide variety of new algorithms have arisen and evolved over the past few years. This edition discusses current, practical rendering methods used in games and other applications. It also presents a solid theoretical framework and relevant mathematics for the field of interactive computer graphics, all in an approachable style. The authors have made the figures used in the book available for download for fair use.:Download Figures. Reviews Rendering has been a required reference for professional graphics practitioners for nearly a decade. This latest edition is as relevant as ever, covering topics from essential mathematical foundations to advanced techniques used by today's cutting edge games. -- Gabe Newell, President, Valve, May 2008 Rendering ... has been completely revised and revamped for its updated third edition, which focuses on modern techniques used to generate three-dimensional images in a fraction of the time old processes took. From practical rendering for games to math and details for better interactive applications, it's not to be missed. -- The Bookwatch, November 2008 You'll get brilliantly lucid explanations of concepts like vertex morphing and variance shadow mapping—as well as a new respect for the incredible craftsmanship that goes into today's PC games. -- Logan Decker, PC Gamer Magazine , February 2009

Maple 6

Maple V

Probabilistic Programming and Bayesian Inference

Literate Programming

First Steps in ABAP

Maple V Mathematics Programming Guide is the fully updated language and programming reference for Maple V Release 5. It presents a detailed description of Maple V Release 5 - the latest release of the powerful, interactive computer algebra system used worldwide as a tool for problem-solving in mathematics, the sciences, engineering, and education. This manual describes the use of both numeric and symbolic expressions, the data types available, and the programming language statements in Maple. It shows how the system can be extended or customized through user defined routines and gives complete descriptions of the system's user interface and 2D and 3D graphics capabilities.

Annotation Your work demands results, and you don't have time for tedious, repetitive mathematical tasks. Sage is a free, open-source software package that automates symbolic and numerical calculations with the power of the Python programming language, so you can focus on the analytical and creative aspects of your work or studies. Sage Beginner's Guide shows you how to do calculations with Sage. Each concept is illustrated with a complete example that you can use as a starting point for your own work. You will learn how to use many of the functions that are built in to Sage, and how to use Python to write sophisticated programs that utilize the power of Sage. This book starts by showing you how to download and install Sage, and introduces the command-line interface and the graphical notebook interface. It also includes an introduction to Python so you can start programming in Sage. Every major concept is illustrated with a practical example. After learning the fundamentals of variables and functions in Sage, you will learn how to symbolically simplify expressions, solve equations, perform integrals and derivatives, and manipulate vectors and matrices. You will learn how Sage can produce numerous kinds of plots and graphics. The book will demonstrate numerical methods in Sage, and explain how to use object-oriented programming to improve your code. Sage Beginner's Guide will give you the tools you need to unlock the full potential of Sage for simplifying and automating mathematical computing. Effectively use Sage to eliminate tedious algebra, speed up numerical calculations, implement algorithms and data structures, and illustrate your work with publication-quality plots and graphics.

This introduction to the theory of dynamical systems utilizes MAPLE to facilitate the understanding of the theory and to deal with the examples, diagrams, and exercises. A wide range of topics in differential equations and discrete dynamical systems is discussed with examples drawn from many different areas of application, including mechanical systems and materials science, electronic circuits and nonlinear optics, chemical reactions and meteorology, and population modeling.

Problem Solving is essential to solve real-world problems. Advanced Problem Solving with Maple: A First Course applies the mathematical modeling process by formulating, building, solving, analyzing, and criticizing mathematical models. It is intended for a course introducing students to mathematical topics they will revisit within their further studies. The authors present mathematical modeling and problem-solving topics using Maple as the computer algebra system for mathematical explorations, as well as obtaining plots that help readers perform analyses. The book presents cogent applications that demonstrate an effective use of Maple, provide discussions of the results obtained using Maple, and stimulate thought and analysis of additional applications. Highlights: The book's real-world case studies prepare the student for modeling applications Bridges the study of topics and applications to various fields of mathematics, science, and engineering Features a flexible format and tiered approach offers courses for students at various levels The book can be used for students with only algebra or calculus behind

them About the authors: Dr. William P. Fox is an emeritus professor in the Department of Defense Analysis at the Naval Postgraduate School. Currently, he is an adjunct professor, Department of Mathematics, the College of William and Mary. He received his Ph.D. at Clemson University and has many publications and scholarly activities including twenty books and over one hundred and fifty journal articles. William C. Bauldry, Prof. Emeritus and Adjunct Research Prof. of Mathematics at Appalachian State University, received his PhD in Approximation Theory from Ohio State. He has published many papers on pedagogy and technology, often using Maple, and has been the PI of several NSF-funded projects incorporating technology and modeling into math courses. He currently serves as Associate Director of COMAP's Math Contest in Modeling (MCM).

A Guide to MATLAB

The Master Cleanser

Applications of Abstract Algebra with Maple and MATLAB, Second Edition

A Primer

Maple

Tutorials for Calculus, Linear Algebra, and Differential Equations

This book offers a new approach to introductory scientific computing. It aims to make students comfortable using computers to do science, to provide them with the computational tools and knowledge they need throughout their college careers and into their professional careers, and to show how all the pieces can work together. Rubin Landau introduces the requisite mathematics and computer science in the course of realistic problems, from energy use to the building of skyscrapers to projectile motion with drag. He is attentive to how each discipline uses its own language to describe the same concepts and how computations are concrete instances of the abstract. Landau covers the basics of computation, numerical analysis, and programming from a computational science perspective. The first part of the printed book uses the problem-solving environment Maple as its context, with the same material covered on the accompanying CD as both Maple and Mathematica programs; the second part uses the compiled language Java, with equivalent materials in Fortran90 on the CD; and the final part presents an introduction to LaTeX replete with sample files. Providing the essentials of computing, with practical examples, A First Course in Scientific Computing adheres to the principle that science and engineering students learn computation best while sitting in front of a computer, book in hand, in trial-and-error mode. Not only is it an invaluable learning text and an essential reference for students of mathematics, engineering, physics, and other sciences, but it is also a consummate model for future textbooks in computational science and engineering courses. A broad spectrum of computing tools and examples that can be used throughout an academic career Practical computing aimed at solving realistic problems Both symbolic and numerical computations A multidisciplinary approach: science + math + computer science Maple and Java in the book itself; Mathematica, Fortran90, Maple and Java on the accompanying CD in an interactive workbook format

This book constitutes refereed proceedings of the 4th Maple Conference, MC 2020, held in Waterloo, Ontario, Canada, in November 2020. The 25 revised full papers and 3 short papers were carefully reviewed and selected out of 75 submissions, one invited paper is also presented in the volume. The papers included in this book cover topics in education, algorithms, and applications of the mathematical software Maple.

Maple is a comprehensive symbolic mathematics application which is well suited for demonstrating physical science topics and solving associated problems. Because Maple is such a rich application, it has a somewhat steep learning curve. Most existing texts concentrate on mathematics; the Maple help facility is too detailed and lacks physical science examples, many Maple-related websites are out of date giving readers information on older Maple versions. This book records the author's journey of discovery; he was familiar with SMath but not with Maple and set out to learn the more advanced application. It leads readers through the basic Maple features with physical science worked examples, giving them a firm base on which to build if more complex features interest them.

This comprehensive, detailed reference provides readers with both a working knowledge of Mathematica in general and a detailed knowledge of the key aspects needed to create the fastest, shortest, and most elegant implementations possible. It gives users a deeper understanding of Mathematica by instructive implementations, explanations, and examples from a range of disciplines at varying levels of complexity. The three volumes -- Programming, Graphics, and Mathematics, total 3,000 pages and contain more than 15,000 Mathematica inputs, over 1,500 graphics, 4,000+ references, and more than 500 exercises. This first volume begins with the structure of Mathematica expressions, the syntax of Mathematica, its programming, graphic, numeric and symbolic capabilities. It then covers the hierarchical construction of objects out of symbolic expressions, the definition of functions, the recognition of patterns and their efficient application, program flows and program structuring, and the manipulation of lists. An indispensable resource for students, researchers and professionals in mathematics, the sciences, and engineering.

First Leaves: A Tutorial Introduction to Maple V

The Concise and Complete Guide to Nonprofit Board Service

Edition 3.10

The Mathematica GuideBook for Programming

Symbolic, Graphic, and Numeric Modeling Using Maple, Java, Mathematica, and Fortran90

An Introduction with Maple and Matlab

An essential guide to using Maxima, a popular open source symbolic mathematics engine to solve problems, build models, analyze data and explore fundamental concepts Symbolic Mathematics for Chemists offers students of chemistry a guide to Maxima, a popular open source symbolic mathematics engine that can be used to solve problems, build models, analyze data, and explore fundamental chemistry concepts. The author — a noted expert in the field — focuses on the analysis of experimental data obtained in a laboratory setting and the fitting of data and modeling experiments. The text contains a wide variety of illustrative examples and applications in physical chemistry, quantitative analysis and instrumental techniques. Designed as a practical resource, the book is organized around a series of worksheets that are provided in a companion website. Each worksheet has clearly defined goals and learning objectives and a detailed abstract that provides motivation and context for the material. This important resource: Offers an introduction to text that shows how to use popular symbolic mathematics engines to solve problems Includes a series of worksheets that are prepared in Maxima Contains step-by-step instructions written in clear terms and includes illustrative examples to enhance critical thinking, creative problem solving and the ability to connect concepts in chemistry Offers hints and case studies that help to master the basics while proficient users are offered more advanced avenues for exploration Written for advanced undergraduate and graduate students in chemistry and instructors looking to enhance their lecture or lab course with symbolic mathematics materials, Symbolic Mathematics for Chemists: A Guide for Maxima Users is an essential resource for solving and exploring quantitative problems in chemistry.

Maple V Programming Guide for Release 5 Springer Science & Business Media

This tutorial shows how to use Maple both as a calculator with instant access to hundreds of high-level math routines and as a programming language for more demanding tasks. It covers topics such as the basic data types and statements in the Maple language. It explains the differences between numeric computation and symbolic computation and illustrates how both are used in Maple. Extensive "how-to" examples are used throughout the tutorial to show how common types of calculations can be expressed easily in Maple. The manual also uses many graphics examples to illustrate the way in which 2D and 3D graphics can aid in understanding the behavior of functions.

Finally! Board member orientation truly simplified. Serving on a nonprofit board can be an incredibly rewarding experience for the properly prepared board member. This book is for the generous and busy people who agree to give of their time and talents by serving on nonprofit boards. Nonprofit boards often fail to do a good job of board member orientation for a variety of reasons. It takes a significant amount of time and effort to plan and conduct quality board member orientation programs, and every time a new board member arrives, it's time to do it again! Because of the challenges associated with providing quality board member orientation, many nonprofit organizations do not do it at all, leaving their board members to wing it. This book provides help and support to the truly great men and women serving on nonprofit boards whose service makes a positive difference in the lives of countless people every day. This book is a concise and appropriately comprehensive guide to nonprofit board service designed especially for new board members. It is a quick read, (about one hour), yet it addresses with accuracy the most significant elements of board service, such as mission, responsibility, duty, risk, liability, and board meeting dynamics. Hooey Alerts! Watch for Hooey Alerts! where the author identifies and dispels common myths and legends about nonprofit board service. There are many sources of false or misleading information about the nonprofit board service environment. A perfect example is the often vaguely-worded and intimidating assertion or implication that the Sarbanes-Oxley Act passed by Congress in 2002 applies to nonprofit organizations in a manner similar to how it applies to publicly-traded companies. (It does not.) Reviews "This book is the perfect guide for every nonprofit board member! Concise, highly informative, and loaded with nuggets of wisdom, it's a must read that will take board members to the next level of successful board governance." -- J. Todd Chasteen, General Counsel, Samaritan's Purse "Mike Batts has put his quarter century of advising and serving on nonprofit boards to good use in this accurate and easy-to-read book. In addition to describing major principles of nonprofit law and governance, the book provides helpful questions to guide board members in understanding the practical applications of the concepts discussed. While geared primarily toward helping new board members get up to speed quickly, it should also help veteran board members discharge their stewardship roles wisely and efficiently." -- Chuck Hartman, Associate Professor of Business Law and Accounting, Cedarville University "This book, Board Member Orientation, is exactly what a busy volunteer board member needs. The board member's duties are presented in a clear and concise manner from the perspective of someone who has been around many boards. With a focus on those issues that are most common and/or most important, it is perfect for board member orientation and for quick reference reminders for the experienced board member." -- Doug Starcher, Partner, Broad & Cassel "This book provides clear, no-nonsense guidance on the basic issues for new nonprofit board members. Using this book for board member orientation will ensure your organization has communicated fundamental governance issues and will assist the board in determining risk management strategies." -- Dan Busby, President, ECFA ***** The Simple Board Member Orientation Process Using This Book: 1. Your board members read Chapters 1-9 of the book, which will provide them with insights regarding the key elements of nonprofit board service. 2. You provide the board members with copies of the documents described in Chapter 10 related to your organization. 3. You meet with your board members to discuss the unique attributes of your organization following the discussion questions provided in Chapter 10. Done!

Advanced Problem Solving with Maple

Beginner's Guide ; Become a Proficient Octave User by Learning this High-level Scientific Numerical Tool from the Ground Up
Mathematical Biology

4th Maple Conference, MC 2020, Waterloo, Ontario, Canada, November 2-6, 2020, Revised Selected Papers

Maple in Mathematics Education and Research

A Guide for Maxima Users

Most of the GNU Emacs integrated environment is written in the programming language called Emacs Lisp. The code written in this programming language is the software (the sets of instructions) that tell the computer what to do when you give it commands. Emacs is designed so that you can write new code in Emacs Lisp and easily install it as an extension to the editor. This introduction to Emacs Lisp is designed to get you started: to guide you in learning the fundamentals of programming, and more importantly, to show you how you can teach yourself to go further. This manual is available online for free at gnu.org. This manual is printed in grayscale.

A lot of SAP professionals start their careers as programmers and focus on turning functional specifications into technical specifications and writing code. First Steps in SAP ABAP (Advanced Business Application Programming) is the resource that every beginner needs to have. You will learn how to write your own ABAP code step by step and progressively build your own ABAP application. - Step-by-Step instructions for beginners - Comprehensive descriptions and code examples - A guide to create your first ABAP application - Tutorials that provide answers to the most commonly asked programming questions Get a head start on SAP ABAP! This book provides you with the tools you need to get started with a job as an SAP ABAP programmer

This book revisits many of the problems encountered in introductory quantum mechanics, focusing on computer implementations for finding and visualizing analytical and numerical solutions. It subsequently uses these implementations as building blocks to solve more complex problems, such as coherent laser-driven dynamics in the Rubidium hyperfine structure or the Rashba interaction of an electron moving in 2D. The simulations are highlighted using the programming language Mathematica. No prior knowledge of Mathematica is needed; alternatives, such as Matlab, Python, or Maple, can also be used.

Maple is a very powerful computer algebra system used by students, educators, mathematicians, statisticians, scientists, and engineers for doing numerical and symbolic computations. Greatly expanded and updated from the author's MAPLE V Primer, The MAPLE Book offers extensive coverage of the latest version of this outstanding software package, MAPLE 7.0 The MAPLE Book serves both as an introduction to Maple and as a reference. Organized according to level and subject area of mathematics, it first covers the basics of high school algebra and graphing, continues with calculus and differential equations then moves on to more advanced topics, such as linear algebra, vector calculus, complex analysis, special functions, group theory, number theory and combinatorics. The MAPLE Book includes a tutorial for learning the Maple programming language. Once readers have learned how to program, they will appreciate the real power of Maple. The convenient format and straightforward style of The MAPLE Book let users proceed at their own pace, practice with the examples, experiment with graphics, and learn new functions as they need them. All of the Maple commands used in the book are available on the Internet, as are links to various other files referred to in the book. Whatever your level of expertise, you'll want to keep The MAPLE Book next to your computer.

Applied Abstract Algebra with Maple™ and MATLAB®

MATLAB Guide

Symbolic Mathematics for Chemists

GNU Octave

Dynamical Systems with Applications using MAPLE

Understanding Maple

Applied Abstract Algebra with Maple™ and MATLAB® provides an in-depth introduction to real-world abstract algebraic problems. This popular textbook covers a variety of topics including block designs, coding theory, cryptography, and counting techniques, including Pólya's and Burnside's theorems. The book also includes a concise review of all prerequisite advanced mathematics. The use of sophisticated mathematical software packages such as Maple™ and MATLAB® allows students to work through realistic examples without having to struggle with extensive computations. Notable additions to the third edition include expanded contemporary applications, coverage of the two-message problem, and a full chapter on symmetry in Western music. Several other parts of the book were also updated, including some MATLAB sections due to their adoption of the MuPAD computer algebra system since the last edition. This edition also contains more than 100 new exercises. This new edition includes the two most widely used mathematical software packages. It builds upon the successful previous editions, favored by instructors and students alike.

The third edition of this highly acclaimed undergraduate textbook is suitable for teaching all the mathematics for an undergraduate course in any of the physical sciences. As well as lucid descriptions of all the topics and many worked examples, it contains over 800 exercises. New stand-alone chapters give a systematic account of the 'special functions' of physical science, cover an extended range of practical applications of complex variables, and give an introduction to quantum operators. Further tabulations, of relevance in statistics and numerical integration, have been added. In this edition, half of the exercises are provided with hints and answers and, in a separate manual available to both students and their teachers, complete worked solutions. The remaining exercises have no hints, answers or worked solutions and can be used for unaided homework; full solutions are available to instructors on a password-protected web site, www.cambridge.org/9780521679718.

Eliminating the need for heavy number-crunching, sophisticated mathematical software packages open the door to areas like cryptography, coding theory, and combinatorics that are dependent on abstract algebra. Applications of Abstract Algebra with Maple and MATLAB®, Second Edition explores these topics and shows how to apply the software programs to abstract algebra and its related fields. Carefully integrating Maple™ and MATLAB®, this book provides an in-depth introduction to real-world abstract algebraic problems. The first chapter offers a concise and comprehensive review of prerequisite advanced mathematics. The next several chapters examine block designs, coding theory, and cryptography while the final chapters cover counting techniques, including Pólya's and Burnside's theorems. Other topics discussed include the Rivest, Shamir, and Adleman (RSA) cryptosystem, digital signatures, primes for security, and elliptic curve cryptosystems. New to the Second Edition Three new chapters on Vigenère ciphers, the Advanced Encryption Standard (AES), and graph theory as well as new MATLAB and Maple sections Expanded exercises and additional research exercises Maple and MATLAB files and functions available for download online and from a CD-ROM With the incorporation of MATLAB, this second edition further illuminates the topics discussed by eliminating extensive computations of abstract algebraic techniques. The clear organization of the book as well as the inclusion of two of the most respected mathematical software packages available make the book a useful tool for students, mathematicians, and

computer scientists.

This manual provides a bridge between several courses to show that computer algebra is useful across the curriculum. It also provides documentation for the Student Version of Maple V.

A First Course in Scientific Computing

Maple V Flight Manual

For Beginners and Experienced Users

Numerical Analysis

Mathematical Methods for Physics and Engineering

Real-Time Rendering

Literate programming is a programming methodology that combines a programming language with a documentation language, making programs more easily maintained than programs written only in a high-level language. A literate programmer is an essayist who writes programs for humans to understand. When programs are written in the recommended style they can be transformed into documents by a document compiler and into efficient code by an algebraic compiler. This anthology of essays includes Knuth's early papers on related topics such as structured programming as well as the Computer Journal article that launched literate programming. Many examples are given, including excerpts from the programs for TeX and METAFONT. The final essay is an example of CWEB, a system for literate programming in C and related languages. Index included.

This is a short, focused introduction to MATLAB, a comprehensive software system for mathematical and technical computing. It contains concise explanations of essential MATLAB commands, as well as easily understood instructions for using MATLAB's programming features, graphical capabilities, simulation models, and rich desktop interface. Written for MATLAB 7, it can also be used with earlier (and later) versions of MATLAB. This book teaches how to graph functions, solve equations, manipulate images, and much more. It contains explicit instructions for using MATLAB's companion software, Simulink, which allows graphical models to be built for dynamical systems. MATLAB's new "publish" feature is discussed, which allows mathematical computations to be combined with text and graphics, to produce polished, integrated, interactive documents. For the beginner it explains everything needed to start using MATLAB, while experienced users making the switch to MATLAB 7 from an earlier version will also find much useful information here.

This text presents mathematical biology as a field with a unity of its own, rather than only the intrusion of one science into another. The book focuses on problems of contemporary interest, such as cancer, genetics, and the rapidly growing field of genomics.

Mathematics of Computing -- Mathematical Software.

iPhone iOS4 Development Essentials - Xcode 4 Edition

Sage Beginner's Guide

Guide to Computer Forensics and Investigations

Why's (Poignant) Guide to Ruby

A Comprehensive Guide

Maple V Programming Guide

A Student's Guide to the Study, Practice, and Tools of Modern Mathematics provides an accessible introduction to the world of mathematics. It offers tips on how to study and write mathematics as well as how to use various mathematical tools, from LaTeX and Beamer to Mathematica® and Maple™ to MATLAB® and R. Along with a color insert, the text includes exercises and challenges to stimulate creativity and improve problem solving abilities. The first section of the book covers issues pertaining to studying mathematics. The authors explain how to write mathematical proofs and papers, how to perform mathematical research, and how to give mathematical presentations. The second section focuses on the use of mathematical tools for mathematical typesetting, generating data, finding patterns, and much more. The text describes how to compose a LaTeX file, give a presentation using Beamer, create mathematical diagrams, use computer algebra systems, and display ideas on a web page. The authors cover both popular commercial software programs and free and open source software, such as Linux and R. Showing how to use technology to understand mathematics, this guide supports students on their way to becoming professional mathematicians. For beginning mathematics students, it helps them study for tests and write papers. As time progresses, the book aids them in performing advanced activities, such as computer programming, typesetting, and research.

A Student's Guide to the Study, Practice, and Tools of Modern Mathematics

A Student's Manual

Using Mathematica for Quantum Mechanics

Maple 8 Learning Guide

Learning Guide

An Introduction to Programming in Emacs Lisp