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Programming Sudoku

Wei-Meng Lee

This book catches the wave of huge popular demand for Sudoku and offers every developer their favorite approach to any puzzle like Sudoku: how to get a computer to solve it for them, using ingenious artificial intelligence and game theory techniques! This book is a fun and intriguing read for novice to advanced programmer alike. It uses the Microsoft's .NET platform as a base, but programmers from any background with an interest in Sudoku will find it interesting, since the core techniques involved will solve Sudoku on any programming platform.

Wei-Meng Lee, (http://weimenglee.blogspot.com), is a technologist and founder of Developer Learning Solutions, a technology company specializing in hands-on training on the latest Microsoft technologies. Wei-Meng speaks regularly at international conferences and has authored and coauthored numerous books on .NET, XML, and wireless technologies.

Market: Intermediate Programmers who are interested in learning the computing aspect of Sudoku
Location in bookstore: Computing / Programming

Beginning Spring
From Novice to Professional

Steven Devijver, Bram Smeets, and Seth Ladd

Written by a key member of the Spring community, Beginning Spring: From Novice to Professional will take developers through the first steps of using Spring while discussing the relevant technologies that Spring can be integrated with, what to be aware of and how working with Spring makes them easier to use. It focuses on the most useful features of Spring, including persistence and transaction management as well as the complete Spring web tools portfolio, and also introduces 3-tier application design and how to test these designs. Ideal for J2EE beginners, this book provides a broad insight into Spring's enterprise Java-based technologies, whilst showing how to use Spring correctly in applications lowers the enterprise Java learning curve without going into too much detail. Using less complex alternatives wherever possible, this book describes how Spring can make developers more productive in complicated environments where J2EE technologies need to be applied.

Steven Devijver is a senior enterprise Java consultant who has been working with enterprise Java since 2000. Steven has worked intensively with the Spring Framework since 2003–before the release of Spring 1.0. As an open source developer, Steven has contributed to the Spring Framework core and Spring Web Flow.

Market: Beginner-Intermediate Java and Open Source/Web Developers
Location in bookstore: Java
Beginning EJB 3
From Novice to Professional

Raghu R. Kodali and Jonathan Wetherbee

Beginning EJB 3 takes the reader through the details of the EJB 3.0 architecture, and shows how EJB can be used to develop powerful, standards-based backend business logic. With 12 years of combined EJB experience, the authors offer many practical insights into the entire EJB architecture, covering all areas of the EJB 3.0 specification, including its new persistence framework, simplified development model, and other key new features.

Raghu R. Kodali is a Consulting Product Manager and SOA Evangelist for Oracle Application Server. He has worked in the software industry for over 10 years as a developer, consultant and presales engineer in emerging technologies. He is responsible for J2EE features with expertise in SOA technologies like EJB, Web services and application development frameworks. His current area of focus is evangelizing Service Oriented Infrastructure and implementing Service Oriented Applications. Raghu is frequent presenter at number of technology conferences such as Oracle Open World, Java One, JavaZone, JAOO, and Sun Technology Days.

Jonathan R. Wetherbee is a Consulting Member of Technical Staff and tech lead for EJB development tools in Oracle's Java Tools division. He has over 10 years of experience in development at Oracle, working on a variety of O/R mapping tools and holding responsibility for Oracle's core EJB toolset since EJB 1.1.

Market: Beginner-Intermediate Java Programmers, Developers, and Architects
Location in bookstore: Java

Beginning Hibernate 3
From Novice to Professional

Dave Minter and Jeff Linwood

Beginning Hibernate 3: From Novice to Professional, is written for users experienced in using Java with databases (the traditional, or “connected” approach) but inexperienced in the use of the open source lightweight Hibernate, the most popular de-facto object-relational mapping and database-oriented application development framework. Experienced author, Dave Minter, with contributor Jeff Linwood, provides more in-depth examples than other books for Hibernate beginners and avoids direct competition with the theory-biased book Hibernate In Action published by Manning, by offering lively, example-based discourse.

Beginning Hibernate 3 is packed with brand new information on the latest release of the Hibernate persistence layer and provides a clear introduction to the de facto standard for object relational persistence in Java.

Jeff Linwood has been in software programming since he had a 286 in high school. He got caught up with the Internet when he got access to a UNIX shell account, and it has been downhill ever since. Jeff has published articles on several Jakarta Apache open source projects in Dr. Dobb’s Journal, CNET’s Builder.com, and JavaWorld. He currently works for the Gossamer Group in Austin, Texas, on content management and web application syndication systems. He gets to play with all the latest open source projects there.

Market: Beginner-Intermediate Java Programmers/Developers
Location in bookstore: Java
SCJP Exam for J2SE 5
A Concise and Comprehensive Study Guide for The Sun Certified Java Programmer Exam

Paul Sanghera, Ph.D

Apress adds this new SCJP exam book to its list of certification books. Best selling author, Paul Sanghera, offers a cohesive, concise, yet comprehensive book on all the topics covered by the SCJP exam. With a laser sharp focus on the exam objectives, it goes beyond just being an ‘exam cram’. The material is presented in a logical learning sequence: a section builds upon previous sections and a chapter on previous chapters. All concepts, simple and complex, are defined and explained when they appear the first time. There is no hopping from topic to topic and no jargon without explanation. No prior knowledge of Java programming is assumed. Although the primary purpose of the book is to help the reader pass the SCJP exam, it will also serve as a good reference after the exam.

An expert in Java technologies, and TCP/IP networking, Paul Sanghera has ten years programming and substantial teaching experience in Java. He has earned several industry certifications including Sun Certified Java Programmer, Sun Certified Business Component Developer, CompTIA Project+, and CompTIA Network+. As a Software Engineer, Dr. Sanghera has contributed to the development of world class technologies such as Netscape Communicator, and Novell’s NDS. He has authored and co-authored more than 100 technical papers published in well reputed European and American research journals.

Market: Beginner to Advanced Java Programmers
Location in bookstore: Java

The Concordance Database Manual

Alan Haley

This book will teach a litigation support professional effective strategies for installing, administering and maintaining Concordance databases to ensure that their client population – those who discover – can search through otherwise unmanageable amounts of data to locate just that handful of document records that are useful. Beyond a technical discussion of recommended best practices, other important subjects such as establishing coding standards, locating reliable third party vendors, and exploiting complex search logic to aid in document review will be covered. A practical guide to the creation and population of a Concordance database is requisite to the development of such a wide array of skills. After reading this book, the reader will understand how to deploy a proper installation of Concordance and they will be able to offer this powerful software package to their client users as an essential tool for document management.

Alan Haley has 5 years litigation support experience for national law firms, Lieff, Cabraser, Heimann, LLP and Bernstein and Ropes and Gray, LLP. He has been assigned as a Concordance administrator and trainer. He also has 10 years experience with database technologies. He has published many articles in ACM’s periodical, Computing Reviews.

Market: Intermediate Litigation Support Professionals at Law Firms, Corporations or Government Entities; and Anyone Else who has to Manage Large Sets of Document Data
Location in bookstore: Professional Computing/Law
Beginning Excel PivotTables
From Novice to Professional
Second Edition

Paul Cornell

Beginning Excel PivotTables is an introduction to PivotTables for Excel users. To put it simply, PivotTables modify complex data from spreadsheets into a format that is easier to read and present. While PivotTables can be powerful data analysis tools, many Excel users are intimidated by their supposed complexity, and don’t take the time to learn how to use them to their full potential. When used correctly, PivotTables often present a more accurate representation of the data, and enable the user to make better decisions based on the information presented. This book will illustrate, both with real-world projects and multiple visual examples, when to use PivotTables and how to create them.

Paul Cornell works at Microsoft on the documentation team for Microsoft Visual Studio Tools for the Microsoft Office System. He worked as an editor, writer, and columnist on the MSDN Office Developer Center and edited the Microsoft Office Visual Basic Language Reference. Paul also founded the Power User Corner on Microsoft Office Online, where he was a frequent contributor. We want to identify as many opportunities as possible surrounding this book and its technology cluster, events, resources, themes, broadcast opportunities, websites, etc. that could help promote the book and get it seen by the end-customer.

Market: Beginning PivotTable users and information workers/analysts who specialize in data analysis and report generation
Location in bookstore: Microsoft Office

Beginning SharePoint with Excel
From Novice to Professional

Gini Courter and Annette Marquis

Excel is certainly the most established business tool in existence. It’s hard to imagine a company that doesn’t rely on spreadsheets and, for all intents and purposes, Excel is the only spreadsheet. SharePoint is Microsoft’s new collaborative tool that allows users to work together on shared documents. Beginning SharePoint with Excel is for advanced Excel users who want to leverage the collaborative features of SharePoint. It’s not essential for the reader to know a lot about SharePoint, but knowledge of Excel is a must. The book strongly emphasizes large business solutions and shows readers everything they need to know about Excel and SharePoint interactions. The instructions are easy-to-follow and very practical.

Gini Courter has designed and implemented computer training programs and databases for a multitude of schools, colleges, businesses and other organizations over the past 15 years. She brings a wealth of knowledge about how to effectively design, implement, and enhance technology in any size organization.

Annette Marquis has over 15 years executive management experience in health care and non-profit organizations and over 10 years experience providing software training and writing user documentation. She combines her experience of office systems with her knowledge of technology to provide practical, applicable technology training and information.

Market: Intermediate-Experienced Excel Users new to SharePoint and High-End Business Users
Location in bookstore: Microsoft Office
The Definitive Guide to Berkeley DB XML

Danny Brian

In this book, Danny Brian presents XML basics from the ground up, installation and configuration of Berkeley DB XML, and then delves into the cutting-edge technologies behind Berkeley DB XML: flexible XML indexing, powerful queries with XPath 2.0, and complex operations using XQuery and FLWOR expressions. The book continues with coverage of the API for C++, Java, Perl, Python, and PHP. In this book you will also learn how to manage the database and learn tips and tricks that you can immediately apply to your own applications.

Danny Brian has been programming for over 20 years. Since the advent of Linux and FreeBSD operating systems, his major development interests have been natural language processing, games, and XML technologies. Danny is a regular speaker at O'Reilly's Open Source Convention, starting in 2001, and won the Damian Conway award for Technical Excellence that same year. Formerly a columnist for The Perl Journal, he has recently worked as an analyst and software engineer for NTT/Verio, and today is CEO of an entertainment startup.

The Definitive Guide to SQLite

Mike Owens

The Definitive Guide to SQLite is the first book to devote complete coverage to the latest version of this powerful database. Offering experienced database developers a thorough overview of its capabilities and APIs, yet cognizant of newcomers who may be making their first foray into the database environment with SQLite, this book acts as both an ideal tutorial and reference guide.

Mike Owens is the IT Director for a major real estate firm in Fort Worth Texas, where he’s charged with the development and management of the company’s core systems. His prior experience includes time spent at Oak Ridge National Laboratory as a process design engineer, and at Nova Information Systems as a C++ programmer. He is the co-author of pysqlite, the Python extension for SQLite. Mike earned his bachelor’s degree in chemical engineering from the University of Tennessee in Knoxville.
The Definitive Guide to db4o

Jim Paterson, Stefan Edlich, Reidar Hörning, and Henrik Hörning

The Definitive Guide to db4o is the first book to comprehensively cover this project in detail. Readers are briefed on all of the topics necessary to begin using it in production environments, including installation and configuration, querying and managing objects, performing transactions, and data replication.

Dr. Stefan Edlich is a regular speaker and writer on enterprise and object-oriented topics, and has held numerous IT leadership positions over the past ten years including at one of Germany’s largest banks. Stefan is the author of several books on Java technologies, including Ant, Tapestry, Jakarta Commons, and open source J2EE development. He received his Doctorate in Engineering from Technische Universität Berlin in 1995.

Jim Paterson is a Lecturer in Computing at Bell College in the UK. He specialises in web development and object-oriented software and has a particular interest in using new tools in a teaching context. He has a PhD in Physics from Glasgow University, and worked previously as a research physicist and as a software engineer.

Henrik Hörning is the CTO of Biting Bit, author, and independent consultant at T-Systems (German Telecom), specializing in J2EE engineering and the development of mobile applications.

Reidar Hörning is the CEO of Biting Bit, a consultant and developer, and is currently working for a large German insurance company as J2EE architect and developer.

Market: Beginner to Intermediate Software Developers Looking for an Embeddable Object Database Solution, and Hardware Developers
Location in bookstore: Open Source

Building Search Applications with Lucene and Nutch

Jon Shoberg

Building Search Applications with Lucene and Nutch is the first book to comprehensively cover both the open source Lucene search engine library and web-search software Nutch. By introducing these two powerful technologies together, readers learn how to best integrate Lucene’s capabilities as a fast indexing engine and Nutch’s capabilities as an ideal search interface to build Web or desktop-based search facilities. Regardless of whether you’re intent on creating a more capable search engine engine to power a corporate website, or would like to distribute a powerful solution to filter your considerable MP3 library, this book will guide you through the steps required to make information immediately available and at the user’s fingertips.

Jon Shoberg is a senior developer for the Fisher College of Business at Ohio State University. He has extensive experience in developing enterprise systems in ecommerce, web, and search domains on the LAMP, Java, and .NET platforms, and has contributed to both books and industry publications in the capacity of technical reviewer and co-author, respectively. Jon earned his Bachelor of Science in Computer Science from Indiana University in 2000.

Market: Beginner-Intermediate Developers wishing to Create Web and Desktop-Based Search Applications, and Developers wishing to Incorporate Search into Data Warehouses
Location in bookstore: Open Source
Practical OCaml

Joshua B. Smith

Practical OCaml teaches Objective Caml in a straightforward and practical manner. All the features of this functional programming language are taught by example. You will learn how to utilize the OCaml language to create a simple database, do reporting, and create a spam filter. You will also learn how to do complex log file scanning, create your own network servers by creating a shoutcast server, and create a web crawler. By this book's conclusion, you will be well on your way to creating your own applications with OCaml, as well as knowing when and why OCaml should be used.

Joshua Smith is a consultant specializing in data problems and computing infrastructure. He got into computers while an undergraduate at Denison University and spends most of his programming time using Python, Ocaml, and Java. Josh lives in Chicago with his wife Carol and their two cats.

Market: Beginning/Intermediate Programmers Wishing to Learn a Functional Language
Location in bookstore: Open Source

Beginning SUSE Linux
From Novice to Professional
Second Edition

Keir Thomas

Beginning SUSE Linux: From Novice to Professional, Second Edition, is the update to the best-selling first edition, and is the perfect book for newcomers to the Linux platform. Presenting topics of interest to users of all levels, yet assuming little in terms of the reader's familiarity with the Linux platform, readers of all levels stand to benefit from the book's coverage of SUSE's ability to play MP3s and DVDs, burn CDs, perform office tasks and data backups, and offer a secure operating system environment. Whether it's a reader evaluating SUSE for deployment in a corporate environment, or a student interested in foregoing expensive licensing arrangements, this book serves as an invaluable guide to the Linux platform.

Keir Thomas has been writing about computers for a decade and his work has appeared in many leading computer magazines and websites around the world. He started out as a lab rat, testing and writing about cutting-edge equipment, before moving on to edit several highly successful computer magazines. These include PC Utilities, PC Tools, and Linux User & Developer. In his spare time he plays the tin whistle and goes hiking on the local mountains near his home, although he rarely does both at the same time.

Market: Beginner-Intermediate Organizations and Individuals Interested in Experimenting with Migration to the Linux Desktop
Location in bookstore: Open Source
Apress: Oracle

Pro Oracle Collaboration Suite 10g

John Watson

This book gives you all you need to know in order to install and configure OCS for use, but it is much more than a to-do list. It covers the architecture of the server processes and the applications, giving you the theoretical knowledge necessary to take OCS beyond the basics. If you are new to the Oracle database, the Oracle Components for Java (OC4J) environment, HTTP web servers, or LDAP internet directories, don’t worry - all will be explained. If you are already familiar with such things, you will learn how to exploit them to the full in order to optimize your OCS installation.

John Watson has been in IT since 1982. He has worked for governmental, NGO, and commercial organizations in the UK and Europe doing systems and database support, then served six years for Oracle Corporation in South Africa. He is now consulting and lecturing throughout Africa and Europe on Oracle server technologies.

Market: Intermediate-Advanced OCS Administrators, OSC Users, Managers, and Planning Staff
Location in bookstore: Oracle

Apress: Technology

The Hacker’s Hardware Guide to the Mac Mini

John Biggs

The Mac mini is a very powerful, very inexpensive computer that strongly lends itself to hacking, upgrading, and expanding. That it can be “improved” is as much of its attraction as the price and performance. The Hacker’s Hardware Guide to the Mac Mini shows how to break down the mini, swap out parts, and build it into a computer that can do almost anything you want: as a music center for the home or car, as a home appliance monitoring system, as a gaming console, as a multimedia device, and so on. The instructions are clear and concise and the hardware parts are exactly identified. The book is written for beginning to intermediate hackers and hobbyists.

John Biggs is the author Black Hat: Misfits, Criminals, and Scammers in the Internet Age, published by Apress in June, 2004. John is currently Senior Editor at Gizmodo.com, the gadgets weblog with 200,000 unique visitors per day as well as Editor of MacMini-Gear.com, a popular Mac Mini site. He has written for Linux Journal and the New York Times on open source and security. He has worked for over ten years in the IT industry and recently completed a Master’s Degree in Business and Economic Reporting at NYU.

Market: Beginner Mac geeks, and Hackers
Location in bookstore: Technology
Pro Ajax and Java

Ryan Asleson and Nathaniel T. Schutta

Ajax (Asynchronous JavaScript and XML) is the ultimate web programming methodology for producing dynamic, rich web experiences—it is one of the hottest technology topics around today, and it can be used in conjunction with all of the major server-side development tools, including Java, PHP, ASP.NET etc. Java developers are crying out for guides showing how to add Ajax functionality to web applications, and Apress will meet their needs with Pro Ajax and Java. This is the book every Java developer needs to become expert in Ajax. The authors provide the reader with the perfect Java/Ajax toolkit to get started quickly, exploring Ajax development in detail using the 4 most popular Java web application frameworks—Struts, Spring, JSF, and Tapestry.

Ryan Asleson is a software developer who works and lives in the Twin Cities area of Minnesota. Ryan has been building web applications since 1998 and has extensive experience with JavaScript and web development tools. He helped his organization make the transition from servlet-based content creation to Java Server Pages and has also maintained a corporate web application framework based on Java Enterprise Edition. He is the co-creator of the open source Taconite framework (taconite.sf.net), which greatly simplifies Ajax development.

Nathaniel T. Schutta is a senior software engineer in the Twin Cities area of Minnesota with extensive experience developing Java Enterprise Edition-based web applications. He has a master’s of science degree in software engineering from the University of Minnesota and for the last several years has focused on user interface design. Nathaniel has contributed to corporate interface guidelines and consulted on a variety of web-based applications. A long time member of the Association for Computer Machinery’s Computer-Human Interaction Special Interest Group and a Sun-certified Web component developer, Nathaniel believes that if the user can’t figure out your application, then you’ve done something wrong.

Market: Intermediate-Expert Java Developers who want to add Ajax Functionality to their Applications
Location in bookstore: Web Development

Beginning Ajax with PHP
From Novice to Professional

Lee Babin

Pro Ajax and PHP: From Novice to Professional is the first book to introduce how these two popular technologies can work together to create next generation applications. Covering many of the most commonplace topics developers encounter in daily web application development tasks, Babin guides readers through topics such as enhanced forms validation, data display and manipulation, JavaScript debugging, and security considerations. The result is a book that not only discusses how two of the world’s most talked about technologies can come together to create amazing applications, but is also based upon a real-world context, enabling developers to immediately begin applying what they’ve learned to their own situation.

Lee Babin is a programmer based in Calgary, Alberta, Canada, where he serves as the Chief Programmer for an innovative development firm duly named The Code Shoppe. He has been developing complex web driven applications since his graduation from DeVry University in early 2002 and has since worked on over 50 custom websites and online applications.

Market: Beginner/Intermediate Web Application Developers, and Web Designers
Location in bookstore: Web Development
Beginning CSS Web Development
From Novice to Professional

Simon Collison

Cascading style sheets are one of the most important technologies on the web today, giving web developers the power to style their web sites so they are usable, lean and small in file size, look great, display consistently across most if not all web browsers, and are quick and efficient to change the look of if desired. There are many books out there on CSS, but this one is different—it wastes less time discussing theory, and gets straight to the practical learning, giving the reader what they need to know quicker. In addition, it is bang up to date, covering the most modern CSS standards and design techniques. As well as all the essential CSS basics, advanced techniques are covered, such as accessibility, hacks, and filters, and the book concludes with a case study, and a CSS reference section to allow the reader to look up required syntax as quickly as possible.

Simon Collison is Lead Web Developer at Agenzia (www.agenzia.co.uk), and has worked on numerous web projects for record labels, high-profile recording artists, and leading visual artists and illustrators, including The Libertines, Black Convoy, and Project Facade. Simon also oversees a production line of business, community and voluntary sector websites, and passionately ensures everything he builds is accessible and usable, and complies with current web standards. Simon regularly reviews CSS-based websites for Stylegala, and does his best to keep his highly popular blog (www.collylogic.com) updated with noise about web standards, music, film, travels, and more web standards.

Market: Beginner-Intermediate Developers who need a Solid Introduction to CSS
Location in bookstore: Web Development

Beginning JavaScript with DOM Scripting and Ajax
From Novice to Professional

Christian Heilmann

JavaScript has been around for many years, so what makes this book different? Well, a lot of the competitors out there are large tomes; this book assumes a different approach, showing that you can give the reader all they need to know to hit the ground running, without making them trawl through hundreds of pages of syntax. The book also gives the most up-to-date picture of the topic—JavaScript support in the most modern web browsers, and adding unobtrusive JavaScript enhancements to web sites. This book promotes the most modern programming techniques and practices. Finally, the book provides an introduction to Ajax-style programming, which is an essential topic for modern web developers to understand. JavaScript is core to Ajax, so an understanding of it is essential when learning how to program Ajax functionality. This book therefore provides a great stepping stone for readers wishing to take this path.

Christian Heilmann was born in Germany, survived dot-com crashes in the States, and currently works as a lead web developer in London. His vision is a web that is so easy to use that you don’t realize how helpful it is—regardless of your physical or mental abilities.

Market: Beginner-Intermediate Aspiring Web Developers and any Experienced Developer who wants to learn about JavaScript and Ajax
Location in bookstore: Web Development
Beginning Mac OS X Programming with Xcode and WebObjects
From Novice to Professional

Charles Hill, Sacha Mallais, and Steven K. Besler

Beginning Mac OS X Programming with Xcode and WebObjects guides the novice developer in developing a robust web application from initial conception through deployment. The application is developed and deployed iteratively, with the new concepts in each chapter used to enhance and improve on the previous iteration. The book features the use of the latest, most trusted industry standard Mac development Xcode IDE as well as the latest reliable WebObjects tools (WOBUILDER and EOModeler).

Charles Hill is a senior developer at Global Village Consulting, a software development consultancy that specializes in WebObjects-based web applications.

Sacha Mallais is a senior developer at Global Village Consulting, a software development consultancy that specializes in WebObjects-based web applications. Mallais is also the president of Global Village.

Market: Beginner-Intermediate Mac programmers, and Java programmers for Mac
Location in bookstore: Web Development

The Definitive Guide to Stellent Content Server Development

Brian Huff

The Stellent Content Server has a flexible and highly extensible service-oriented architecture. It is relatively easy to develop custom applications with it, or make modifications to the existing interface. However, there has never been a good manual on how to make such applications. That’s where this book comes in: to help administrators and web developers create custom applications with the Content Server. It contains step-by-step instructions on how to create many different types of applications, including simple business forms, new web interfaces for existing services, new skins, and new functionality with custom Java code. It also contains detailed reference material for the inner workings of the Content Server. You’ll need this vital resource when creating custom Stellent applications, and you’ll find this information only in this complete guide to Stellent Content Server.

Brian ‘Bex’ Huff has worked at Stellent for six years. He wore many hats while in the company, including architect, designer, and developer, as well as training, documentation, and consulting. He is a moderator and frequent contributor to the intradoc_users Yahoo group for Stellent developers.

Market: Intermediate-advanced users of Stellent Content Management Products
Location in bookstore: Web Development
Beginning XML with DOM and Ajax
From Novice to Professional

Sas Jacobs

XML has been around for many years, so what makes this book different? Well, a lot of the competitors out there are large tomes; this book assumes a different approach, showing that you can give the reader all they need to know to hit the ground running, without making them trawl through hundreds of pages of syntax. The book also gives the most up-to-date picture of the topic—XML support in the most modern web browsers, creating XML-driven applications using the most versions of web standards and server-side languages, including CSS 2.1/3, DOM, XSLT and XPath 2, PHP 5, ASP.NET 2, and many more. Finally, the book provides an introduction to Ajax-style programming, which is an essential topic for modern web developers to understand. XML is core to Ajax, so an understanding of it is essential when learning how to program Ajax functionality. This book therefore provides a great stepping stone for readers wishing to take this path.

Sas Jacobs is a web developer who set up her own business, Anything is Possible, in 1994, working in the areas of web development, IT training, and technical writing. The business works with large and small clients building web applications with ASP.NET, Flash, XML, and databases. Sas has spoken at such conferences as Flash Forward, MXDU, and Flaskit on topics relating to XML and dynamic content in Flash.

Market: Beginner-Intermediate Aspiring Web Developers and any Experienced Developer who wants to learn about XML Web Development
Location in bookstore: Web Development

Building Flickr Applications with PHP

Rob Kunkle and Andrew Morton

Building Flickr Applications with PHP is the first book allowing you to take advantage of both your photos and Flickr's enormous cache, to create new and compelling extensions to the Flickr platform. Using the popular PHP-driven "Phlickr" API in conjunction with MySQL, you'll discover how to take advantage of open source tools (like PHP, Apache, and MySQL) and the Flickr architecture to manage, retrieve, and format photos in imaginative ways. You'll also learn how to build upon Flickr's photo collaboration features to create interfaces for working with others on photo album projects. And you will learn how to take advantage of RSS to distribute photo updates with ease.

Rob Kunkle is a developer and consultant with ten years' experience building applications for a variety of platforms. Rob is also an experienced photographer and self-avowed Flickr addict.

Andrew Morton is a developer for Cypress Systems, Inc. and creator of the PHP-driven Phlickr API.

Market: Beginner-Intermediate Developers
Location in bookstore: Web Development
Google Maps Application Development

Michael Purvis, Jeffrey Sambells, and Cameron Turner

Google Maps Application Development is the first book to comprehensively introduce the service from a developer-perspective, showing readers how they can integrate mapping features into their Web applications. Proceeding far beyond creating a simplistic map display, readers are shown how to draw upon a variety of data sources such as geocode.us and the U.S. Census Bureau’s TIGER/Line data to build comprehensive geocoding services for mapping any location in North America. Readers are also guided through various examples demonstrating how to encourage user interaction such as pinpointing map locations, adding comments, and building community-driven maps.

Mike Purvis is an Engineering student at the University of Waterloo. He maintains a weblog at uwmike.com and enjoys cooking, cycling, and playing with LEGO. He’s worked on many web projects of various sizes and has a strong interest in independent standards and open source.

Jeff Sambells is a Graphic Designer and self taught Web Application developer best known for his unique ability to merge the visual world of graphics with the mental realm of code. In late 1999, he co-founded We–Create Inc., an internet software company based in Waterloo, Ontario, which began many long nights of challenging and creative innovation. Currently, as Director of Research and Development for We–Create, Jeffrey is responsible for investigating new and emerging internet technologies and integrating them using web standards compliant methods.

Cameron Turner has been programming interactive games since his first computer in 1985; interactive web sites since 1994 and since 1999 has been one of the founders of We–Create Inc. As the Chief Technology Officer at We–Create Inc., Cam has been involved in all aspects of Internet software development, design and specification. More than a manager, Cam maintains an active ability to develop in all of the latest break-through technologies as well as an ability to easily translate tech-talk into lay-English for clients and their stakeholders.

Market: Beginner-Intermediate Web Application Developers
Location in bookstore: Web Development

Beginning Ruby on Rails
From Novice to Professional

David Rupp

Beginning Ruby on Rails will not only teach the necessary skill set to become a proficient Ruby on Rails developer, but it will explain the theory needed for the developer to explore and learn on their own. The reader will not be burdened by yet another set of “hello world” and other mundane examples. In this text, readers will learn Ruby on Rails by creating real world projects; a task manager, RSS aggregator, a community manager similar to MySpace.com, and an Amazon based store.

David Rupp is a developer and trainer based in Highlands Ranch, Colorado. His experience as a programmer ranges widely, from mainframe assembler language, to COBOL, to Java, to Lisp and Ruby. David’s multilingual tendencies aren’t just confined to the computer, either. In the Real World, he has studied Spanish, French, German, Italian, and Hebrew. David earned his B.S. degree in Computer Science at the University of Florida. He is currently working on his Master’s in Computer Science and the University of Colorado at Denver.

Market: Beginning Programmers Wishing to Learn Ruby on Rails or any Web Based Programming Language
Location in bookstore: Web Development
Beginning DotNetNuke 4.0 Website Creation with Visual Web Developer 2005 Express
From Novice to Professional

Nick Symmonds

This book teaches you how to create your own dynamic websites using the free products DotNetNuke 4.0 and Visual Web Developer 2005 Express. It’s a book for beginners and hobbyists, people who don’t necessarily have a deep understanding of computer systems, but who never the less want to get the job done and create a website that will be of value to their lives or businesses. After reading this book, and for no additional outlay, they will be able to create a website on their computer that is virtually indistinguishable from one that cost thousands from a professional firm. All they need to do then is host it.

Nick Symmonds works for the Integrated System Solutions division of Ingersoll-Rand, developing and integrating security software. He started out his professional life as an electronics technician. While getting his bachelor’s degree in electrical engineering from the University of Hartford, he started to gravitate toward programming. Nick has spent quite a few years programming in assembly, C, C++, and Visual Basic. Recently, he has latched onto .NET like a lamprey and loves digging into the .NET core. Nick has written several articles on programming and has three books currently out.

Market: Beginning .NET Developers, and People Interested in Setting up their own Personal Websites using DNN as a Hobby

Location in bookstore: Web Development

Pro XML Development with Java
From Professional to Expert

Ajay Vohra and Deepak Vohra

XML has been around for many years, and there have been a few best-selling Java/XML drill down books in the past, so what makes this book different? Well, a lot of the competitors out there are large tomes, and are very old now; this book assumes a different approach, showing that you can give the reader all they need to know to hit the ground running, without making them trawl through hundreds of pages of syntax. The book is also bang up-to-date, looking at all the newest XML standards (DOM 3.0, XSLT 2.0, XPath 2.0) and Java tools (including JAXB, Xerces2-j, JAXP, XML Beans, and many more,) and the latest features of Java 5 and 6 are covered where appropriate. In short, the reader is given all they need to master cutting edge XML development with Java.

Market: Intermediate-Expert Java Developers

Location in bookstore: Web Development

July 2006
ISBN 1-59059-681-1
Approx. $39.99
Approx. 450 p.
Softcover

September 2006
ISBN 1-59059-706-0
Approx. $39.99
Approx. 400 p.
Softcover
Pro Ajax and the .NET 2.0 Platform

Dan Woolston

This book follows on from *Apress’* extremely successful *Foundations of Ajax* (1-59059-582-3) title. It takes the reader on a detailed journey through the Ajax technology and shows them how to integrate Ajax with Microsoft’s popular .NET 2.0 Framework to produce their own implementations of the functionality they’re beginning to see on the web. The keystone of the book is practicality. We show people how to put theory into practice and bring Ajax to their web applications in a professional manner. Crucially, for a book in such a rapidly moving field, we also look ahead to when Microsoft will unveil its ‘Atlas’ Ajax toolkit for Visual Studio 2005. We tell people what to expect and how they can begin preparing for it.

Daniel Woolston is a software developer from the Grand Rapids, Michigan area. He’s currently working with Nusoft Solutions, a Microsoft Gold Partner on an Ajax.Net implementation for an upcoming site release. His current ambitions involve developing next generation .NET web applications utilizing the latest technologies and beyond. His work efforts have branched from Fortune 500 enterprise application development to pattern-driven project implementations on various corporate levels. Check out his site at http://www.danwoolston.com for more information.


Location in bookstore: Web Development

Practical Ajax Projects and Java

Frank Zammetti

This book will save Java developers countless hours of development time by providing them with 7 complete Ajax applications to learn from and adapt for use in their own projects, including an online calendaring/scheduling system, a Flickr™-style photo gallery application, and even an Ajax role-playing game. It also details the set up of a perfect Java/Ajax development environment in which to construct the applications; Java technologies covered include Apache, Ant, Ajax Tags, Struts, Prototype, DWR, Dojo, and more. This is the first book of its kind, aimed at Java/Ajax developers.

Frank W. Zammetti is a Web Architect Specialist for a leading worldwide financial company by day and a PocketPC and open-source developer by night. He is the Founder and Chief Software Architect of Omnytex Technologies, a PocketPC development house. He has over 12 years of professional experience in the IT field, and over 12 more of “amateur” experience. Frank holds numerous certifications including SCJP, MCSD, CNA, i-Net+, A+, CIW, MCP and numerous BrainBench certifications. He is a contributor to a number of open-source projects, including DataVision, Struts, PocketFrog and Jakarta Commons.

Market: Intermediate-Experienced Java Developers who want to expand their knowledge of implementing Ajax by studying complete example applications

Location in bookstore: Web Development
Microsoft .NET provides a rich set of tools that allow you to do just that: interoperate with existing code. These tools simplify the transition to an all-.NET environment, allowing you to replace a component here and a component there. The problem is that sometimes those tools are difficult to understand and use. And in many cases, Microsoft has provided more than one way to accomplish a particular interop task. Finding the appropriate tool for the task at hand can sometimes be a frustrating experience. This book has been written as a guide for other Windows developers who are transitioning from native Windows code to .NET managed code. It will guide you past the myriad of infrequently used interop options and focus on those that you will use most often.

Bruce Bukovics has been a working developer for over 25 years. Over the last quarter-century he has designed and developed applications in such widely-varying areas as banking, corporate finance, credit card processing, payroll processing and retail automation. He has first-hand developer experience with C, C++, Delphi, VB, C# and Java and rode the waves of technology as they drifted from mainframe to client / server to n-Tier, from COM to COM+, and from Web Services to .NET Remoting and beyond.

Market: Intermediate/Advanced Developers Migrating to .NET
Location in bookstore: Windows

The problem for the typical SME is money is scarce. In many ways they are as affected by cash-flow as the home user, but unlike home users, the requirements their business places upon technology is much greater: networks needs to be running all the time, they need to understand how to ‘fix’ problems quickly, configuration of critical systems is essential, system and data security is paramount, backup and restore habits need to be rigorous – all at a very affordable cost. This is where this book comes in. It gives a no-nonsense insight into exactly what you need to do with Microsoft’s Small Business Server, making it easy for the SME owner to set up and configure a fully operational IT infrastructure with no hassle.

Tony Campbell is a veteran Microsoft consultant (MCP) specializing in the architecture and design of secure Microsoft-centric business solutions. He also has vast experience in many other industry niches such as networking, collaboration, security, business logic and disaster recovery and resilience. Tony has been involved with all sizes of business, from the very small to the very large, and has successfully delivered secure, reliable, robust solutions to over 150,000 clients in his 18 years in the business. Tony is a regular contributor to a number of I.T. journals distributed across the globe.

Market: SME Owners and Microsoft Small Business Server Users
Location in bookstore: Windows
Most .NET-based Web services are simply containers for limited RPC-style methods. This book will show you how to shift your development paradigm to create Web services that process sophisticated XML messages within a secure, service-oriented, loosely-coupled architecture. Expert Service-Oriented Architecture in C#, Second Edition provides deep insight into the newest release of the WSE toolkit: blending theory with ample C# code samples, and directly teaching you how to implement SOA solutions that are based on specifications such as the revised WS-Security, WS-Policy, and WS-Addressing. The authors give you the practical information you need today, while at the same time preparing you for what you will need tomorrow.

Jeffrey Hasan is the President of Bluestone Partners, Inc., a software development and consulting company based in Orange County, California. His company provides architectural design and software development services to businesses that implement advanced Microsoft technologies. Jeff is an experienced architect and .NET developer, and is the coauthor of several books and articles on .NET.

C++/CLI Primer

This book gives developers – both the experienced and those who have only taken their first few steps – a small, fast-paced primer that will kick-start them into the world of C++/CLI. In twenty no-fluff chapters Microsoft insiders take readers into the heart of the C++/CLI language and explain both how the language elements work and how Microsoft intends them to be used. At the end of this short book readers will have a deep thorough grounding in the core language elements and the confidence to explore further that comes from a solid understanding of a language's syntax and grammar.

Gordon Hogenson is current manager of documentation for Visual C++. He has been at Microsoft since 1998, before which he spent time researching computational methods in quantum theory at the University of Washington Department of Chemistry as a Department of Energy Computational Science Graduate Fellow.

Marcus Heege is developing software for Microsoft since the first versions of MS-DOS. He works as a course author and instructor for DevelopMentor, where he has recently written the "Essential C++/CLI seminar". In addition to that he provides troubleshooter consulting for software developers. Marcus is a Microsoft Certified Solution Developer and Microsoft Certified trainer.
Practical Software Factories in .NET
Gunther Lenz and Christoph Wienands

For the first time, with this book, .NET developers and architects can see how to put this methodology to practical use in real projects. Throughout the book, every chapter is accompanied with hands-on examples performed on a real-world case study, using Microsoft’s Software Factory tools. Software Factories are Microsoft’s vision of the future of software development. Certain products, such as Visual Studio Team Systems, already provide some support for SF concepts, via use of parts of the DSL toolkit that is provided in the SDK. In Orcas (codename for the next version of Visual Studio) support will be much more comprehensive. In short, all professional .NET developers and architect will want to appraise themselves of the practical SF techniques that this book provides.

Gunther Lenz is the Program Manager for System Migration & Integration at Siemens Corporate Research in Princeton, NJ and a pioneer in the field of Software Factories. Within Siemens Corporate Technology he leads the global efforts on Software Factories and Microsoft Technologies. His current research is focusing on Model Driven Software Development (MDSD) and Software Factories.

Christoph Wienands joined Siemens Corporate Research in Princeton, NJ, in 2004, with his broad knowledge and experience in important technology fields as the ideal prerequisite. Current research activities are in the field of model-driven approaches for software development, in particular domain-specific languages and software factories.

Market: Intermediate-Advanced Software Architects and Senior Developers
Location in bookstore: Windows

Pro .NET 2.0 Windows Forms and Custom Controls in VB 2005
Matthew MacDonald

This book is the VB 2005 version of the author’s best-selling and highly-reviewed Pro .NET 2.0 Windows Forms and Custom Controls in C# (1-59059-439-8). The author shows VB 2005 programmers how to design flexible, user-friendly Windows interfaces. Although this book is not a reference manual, it contains detailed discussions about user interface elements programmers will use on a regular basis. They will learn to use .NET controls, as well as extend them with your own custom controls.

Matthew MacDonald is an author, educator, and MCSD developer who has a passion for emerging technologies. He is a regular writer for developer journals such as Inside Visual Basic, ASPToday, and Hardcore Visual Studio .NET, and the author of several books about programming with .NET. In a dimly remembered past life he studied English literature and theoretical physics.

Market: Advanced VB 2005 Programmers and .NET Programmers
Location in bookstore: Windows
Workflow in Office 2007

David Mann

Workflow is the next hot area in Office-based technology and enables workers to share data, enforce process and business rules and work more efficiently, both together and individually. The author challenges the reader to look at the Office System in general, and workflow specifically, in a new light and to expand their comfort level developing solutions within the Office System. The book is targeted at the serious Information Worker developer, a growing group in IT, who is interested in learning the inner workings of workflow and Office 12, not just in scratching the surface of this exciting new technology.

David Mann is the Principal Architect for Information Worker solutions for Anexinet, a systems integrator and Microsoft partner headquartered in Philadelphia. He has been working with Microsoft technologies, with a special interest in workflow, content management, Microsoft Office solutions, portals and collaboration, for twelve years. In that time he has worked with many Fortune 500 companies to help define their Information Worker strategy and develop applications to streamline operations, reduce costs and save time.

Market: Intermediate-Advanced Developers looking to create workflow solutions in Office 12
Location in bookstore: Windows

.NET Test Automation
A Problem-Solution Approach

Dr. James McCaffrey

This book presents practical techniques for writing lightweight software test automation in a .NET environment. If you develop, test, or manage .NET software, you should find this book very useful. Before .NET, writing test automation was often as difficult as writing the code for the application under test itself. With .NET, it is possible to write lightweight, custom test automation (small, dedicated test harness programs which are two pages of source code or less in length and take less than two hours to write) in a tiny fraction of the time it used to take. The emphasis of this book is on practical techniques that you can use immediately.

Dr. James McCaffrey holds a doctorate from the University of Southern California, a M.S. in Information Systems from Hawaii Pacific University, a B.A. in Mathematics from California State University at Fullerton, and a B.A. in Psychology from the University of California at Irvine. He was a professor at Hawaii Pacific University, and worked as a lead software engineer at Microsoft on key products such as Internet Explorer and MSN Search.

Market: Intermediate-Advanced Software Testers, and .NET Application Developers
Location in bookstore: Windows
Pro ASP.NET 2.0 Web Form Techniques
Third Edition

Saurabh Nandu and Alex Homer

This book is much more than just a book of ASP.NET 2.0 language tips. It’s a book that helps developers get to grips with ASP.NET 2.0 in their professional lives. Developers moving to .NET 2.0 at the present time are faced with a barrage of new concepts and ideas. First, and by no means least, they have to get to understand all the new coding techniques and standards that have been introduced with ASP.NET 2.0 (such as Master Pages and Generics), then they need to be aware of rising ancillary technologies such as Ajax and “Atlas” which look set to become intrinsically linked to ASP.NET development for now onwards. Finally, the popularity of alternative browsers, such as Firefox, means that now, more than ever, they need to be aware of the XHTML/CSS compliance of their web applications if they want them to be viewed as intended by their customers.

Saurabh Nandu is based in Mumbai, India. He started working on the .NET Platform since the early Beta’s. He’s been actively writing/reviewing books and articles for publishers like Wrox, APress, Prentice Hall and Microsoft Press. He runs a community site dedicated to C# at – www.MasterCSharp.com. He’s currently the CEO of AksTech Solutions, which focus on building solutions on the Microsoft .NET Platform.

Alex Homer is a computer geek and web developer with a passion for ASP.NET. Although he has to spend some time doing real work (a bit of consultancy and training, and the occasional conference session), most of his days are absorbed in playing with the latest Microsoft web technology and then writing about it.

Market: Intermediate to Advanced ASP.NET 1.1 Developers migrating to .NET 2.0
Location in bookstore: Windows

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The Definitive Guide to the Microsoft Enterprise Library

Keenan Newton

The Definitive Guide to the Microsoft Enterprise Library introduces one of the most exciting and popular .NET-oriented initiatives; the Enterprise Application Library, which offers nine classes of reusable code used to solve a variety of common problem spaces. These problems cover a number of topics, including configuration, data access, exception management, caching, application updates, UI separation, asynchronous invocation, logging, security, and XML-based information aggregation. The book begins with an introduction to the challenges faced by today’s developers, explaining the conditions which brought about the creation of this initiative. Following an overview of the Enterprise Application Library, subsequent chapters are devoted to detailed introductions to each block, concluding with an overview of the framework available for creating custom application blocks.

Keenan Newton has over eight years experience designing, architecting, and developing N-tier applications for both the Windows and Web environments, with an emphasis on Web Services, ADO.NET, and SOA. He is a speaker at local .NET user groups, and has been published in CoDe Magazine. Keenan is employed as a Senior Consultant for Magenic Technologies.

Market: Intermediate Microsoft .NET developers
Location in bookstore: Windows
Pro WCF
Practical Microsoft SOA Implementation

Chris Peiris, Amit Bahree, Aftab Chopra, Shawn Cicoria, Dennis Mulder, and Nishith Pathak

Part of Microsoft’s radical new WinFX API is the foundation codenamed Indigo, now more formally known as Windows Communication Foundation. WCF is a technology which allows web service developers to create services that communicate and interoperate with each other and other programs and applications. There are few books on WCF currently in existence, although there are some planned. WCF developers will be a sizeable audience, given their intermediate-advanced level of expertise and tendency to be early adopters. As there is a dearth of information currently available on WCF in book form, and that we plan to be one of the, if not the, first to market in this area, I suspect this book will quickly become both popular and successful.

Market: Intermediate-Advanced .NET Developers looking to use WCF (Indigo) in their Service-oriented Apps
Location in bookstore: Windows

Pro Visual Studio 2005 Team System Application Design

Steve Shrimpton

Visual Studio 2005 Team System is a large and complex product. It is arguably the most sophisticated development environment that Microsoft has ever built. It has enormous potential to improve people’s working lives by allowing them to draw together disparate tasks within a single reporting and testing structure. In order to do this successfully people need a guide. The sheer scale of the product makes it easy to misunderstand and misuse. These mistakes lead to lost productivity. This book provides that guidance. It does not follow the path of other Team System books and focus on explaining the anatomy of the product. Instead it walks readers through a fictional scenario containing all the problems that Team System was built to remedy and shows how the product can be best applied to solve the problems of architects, developers and project managers alike.

Steve Shrimpton was born and educated in the UK and obtained a master’s degree in physics from Southampton University. After a period teaching he worked as a scientist with the Ministry of Defence and quickly became involved in airborne computing systems. He migrated to the USA and worked in defence and automotive systems in California for twelve years as a systems engineer, circuit designer and software developer. Steve considers himself very much a hands-on architect and a programmer’s programmer!

Market: Advanced Architects, Developers, and Testers, Project Managers
Location in bookstore: Windows
Pro SQL Server 2005 Integration Services
Andrew Watt

This is possibly the hottest area in SQL Server 2005, itself a major hot topic because of its improvements over previous editions of the technology. The audience is potentially large, because it consists of all users of SQL Server 2005 who want to extract, transform, and load data. In essence, almost all business users will have a need for the functionality of SSIS. Pro SQL Server 2005 Integration Services is based on the author's unique experience and feedback from real-world users, which gives a clarity of voice and a breadth of coverage that other books cannot match.

Andrew Watt has written SQL Server 2005 for Dummies (Wiley/IDG, January 2006) and Beginning Regular Expressions (Wiley/Wrox, February 2005). He has also co-written a number of other books, including books on XML, XSL, and RSS. Andrew has been an independent consultant and author for six years. He is a SQL Server MVP and has set up www.SQLIAR.com, which reflects the IAR (Integrate, Analyze, Report) paradigm in SQL Server 2005 Business Intelligence.

Market: Intermediate-to-Advanced SQL Server Developers and DBAs
Location in bookstore: Windows

Beginning Role-Playing Games Programming with VB 2005
From Novice to Professional
Chris Williams

The core of Visual Basic .NET has been well covered in many books on the market, which means that more interesting areas can now be explored. This book takes programmers with some basic Visual Basic .NET experience and shows them how to create role-playing games (RPGs). The book focuses more on creating role-playing games with depth than on the graphics. There are already many books that deal solely with graphics libraries such as DirectX or OpenGL. The few existing books that address RPG programming either concentrate on design at the expense of code, or they gloss over what really makes an RPG and focus too much on graphics.

Chris Williams is the creator of the VB.NET role-playing game Heroic Adventure! He is also the author of several articles on .NET and object-oriented game development, as well as a prolific blogger at geekswithblogs.net and blogusmaximus.com. Chris is also the founder and current president of the Greater Charleston .NET User Group (gcnug.org) and founder of the Roanoke Valley .NET User Group (rvnug.org), as well as a regular speaker at .NET user groups and code camps throughout the southeast.

Market: Beginning-to-Intermediate VB.NET Programmers interested in RPG programming, though the concepts can be ported to other languages
Location in bookstore: Windows
Foundation Flash 8 Video

Jordan L. Chilcott and Tom Green

Foundation Flash 8 Video will be one of the first books solely dedicated to Flash 8 Video development, so will go a lot deeper into the subject than other books. It starts off basic, so that even those with little Flash experience will be able to pick up the pace quickly. By the end of the book, the reader will be creating advanced interactive video applications, using video alpha channels, masking, blends and filters, the Camera object, and much more. To add further value to the book—time is spent showing how to manipulate your video using popular video packages such as After Effects, Movie Maker, Final Cut Pro, iMovie, and Premiere Pro, getting them closer to how you’d like them to look before they are imported into Flash.

Tom Green is currently Professor of Interactive Media in the School of Media Studies at Humber College Institute of Technology and Advanced Learning in Toronto, Canada. He has written 4 previous books on Macromedia technologies, and many articles for numerous magazines and web sites, including the MX Developers Journal, Community MX, and Computer arts. Lastly, he has spoken at over 20 conferences internationally, including Flash in the Can, MX North, Digital Design World, TODECON, and SparkEurope.

Jordan L. Chilcott, born and raised in Toronto and now a resident of Guelph, Ontario, graduated from Radio College of Canada’s Electronic Engineering Technology program in 1983, only to discover that he had a passion for computer programming. Jordan co-founded The Computer Software Specialists, now known as Interactivity Unlimited, and eventually left the computer hardware industry to focus on his passion for programming. Today, Jordan has written various web and kiosk applications for various industries including the automotive and airline industry, and programs in various languages, including ActionScript, ColdFusion, Java/J2EE, and C/C++/Objective C.

Market: Beginner-Intermediate Flash Users, and any Web/Interactive Developer who wants to work with video in their applications

Location in bookstore: Web Design
Apress: Recently Announced

General Computing

The Career Programmer
Guerilla Tactics for an Imperfect World
Second Edition
Christopher Duncan

The Career Programmer explains how you can work within the existing system to solve deadline problems and regain control of the development process. The author provides proven, practical, and hands-on solutions designed to work even when confronted with the political and chaotic realities of the business environment. Issues are addressed from the points of view of both the programmer and project manager, and steps are shown in all perspectives, from large-scale teams down to projects with a single developer. For you, the end results will mean less overtime and stress, higher quality software, and a more satisfying career.

Market: Programmers
Bookstore Location: General Computing

Eric Sink on the Business of Software
Erik Sink

Eric Sink on the Business of Software is a selection of the best and most popular essays from the author’s website. The essays cover business concerns that programmers face during the course of their careers, particularly if the programmers are small Independent Software Vendors. Sink covers issues like starting your own business, then performing the hiring, finances, and other matters.

Market: Software Developers of all Levels
Bookstore Location: General Computing

Game Programming

The Game Maker’s Apprentice
Game Design for Beginners
Jacob Habgood, Mark Overmars

The Game Maker’s Apprentice shows you how to create 9 complete, exciting games of different types (action, adventure, puzzle, and more) using the wildly popular Game Maker game creation tool, complete with professional quality sounds and visuals. It also teaches you all you need to know about game design theory (challenges, learning curves, level design etc) and programming to give you a solid grounding in game design.

Market: Beginning to Intermediate Designers
Bookstore Location: Game Programming
Beginning Apache Struts
From Novice to Professional
Arnold Doray

Beginning Apache Struts is ideal if you're a Java programmer with some JSP familiarity, but with little or no prior experience with Servlet technology. This lab-driven, time-tested tutorial takes a step-by-step, hands-on approach to teaching Struts, so you can immediately apply Struts into your work with confidence. By the book’s end, you’ll have acquired a working knowledge of Apache Struts 1.2.

Market: Beginners Java Programmers
Bookstore Location: Java

Pro Java ME MMAPI
Mobile Media API for Java Micro Edition
Vikram Goyal

Pro Java ME MMAPI: Mobile Media API is the first and only Java book that explores the mobile media API in great detail which lets mobile game and other mobile application developers add multimedia attributes for more dynamic multimedia functionality on cell phones, PDA’s and other mobile devices.

Market: Intermediate to Advanced Java Programmers
Bookstore Location: Java

Pro Java EE 5 Performance Management and Optimization
Steven Haines

Pro Java EE 5 Performance Management and Optimization is the definitive resource and companion if you’re tasked with managing a Java EE 5 environment. This book features proven methodology to guarantee top performing Java EE 5 applications, and explains how to measure performance in your specific environment. The book also details performance integration points throughout the development and deployment lifecycles that are paramount for application success.

Market: Advanced Java Programmers
Bookstore Location: Java
**Pro EJB 3.0 Persistence**

Michael Keith, Jason Haley, Merrick Schincariol

This book provides the definitive guide to the EJB 3 persistence technology. The lead author, Mike Keith, is a co-lead on the EJB 3.0 expert group (under JSR 220) and provides unparalleled insight and expertise on this topic. He and his co-authors dissect and explain the new EJB 3 persistence specification in full detail, describing how to use this sophisticated technology to its full potential.

**Market:** Intermediate Enterprise/Open Source Java Developers and Java Architects

**Bookstore Location:** Java

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**Pro Apache Geronimo**

Open Source Lightweight Java EE 5 Container

Kishore Kumar

**Pro Apache Geronimo** addresses the first open source lightweight J2EE or Java EE 5 compatible Web application server/container for deployment and some advanced development. Apache Geronimo now has the plumbing to be Spring compliant as well so that Spring developers can deploy their Web applications using Geronimo.

**Market:** Intermediate to Advanced Java Programmers

**Bookstore Location:** Java

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**Foundations of Java EE 5 and .NET 2 Interoperability**

Beyond Web Services

Adam Neat

This first and only book covers interoperability between both of the new Java EE 5 and .NET 2 platforms. And in light of the Sun-MS vision for a more unified platform in the enterprise, this book takes developers closer to this vision, that enables the majority of developers who work in real-world heterogeneous server-side environments that encompasses Windows, Linux, Unix, etc.

**Market:** Intermediate Java and .NET Programmers

**Bookstore Location:** Java

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**JDBC, MySQL, and Oracle Metadata Recipes**

A Problem-Solution Approach

Mahmoud Parsian

**JDBC, MySQL, and Oracle Metadata Recipes** is essentially part two of the already published **JDBC Recipes** book, which is the only book that focuses on metadata or annotation-based code recipes for JDBC API for use with Oracle and MySQL. This will be a Java EE 5 compliant book for lightweight Java database development.

**Market:** Intermediate to Advanced Java, Oracle, and MySQL Developers.

**Bookstore Location:** Java

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**Foundations of Java for ABAP Programmers**

Alistair Rooney

This book aims to introduce current SAP/ABAP developers to the skills required for Java 5 programming. This is at Java SE 5 and Java EE 5 level and it will cover all the basics required to get ABAP developers and programmers up and running with these. Apart from the introductory topics it covers connecting to a Database, The SAP Java Connector, Servlets, Java Server Pages (JSP), Enterprise JavaBeans and Java Messaging.

**Market:** Beginner-Intermediate SAP/ABAP Programmers

**Bookstore Location:** Java
Java 6 Revealed

John Zukowski

This first book on Java 6 reveals all the latest, emerging new updates, additions, and new API such as JDBC 4, multi-Java scripting language support, annotation refinement, and much more. It's written by highly acclaimed Java industry luminary, John Zukowski.

Market: Intermediate Java Programmers
Bookstore Location: Java

Beginning PHP and PostgreSQL E-Commerce

Mihai Bucica, Cristian Darie

Beginning PHP and PostgreSQL E-Commerce is the first book to show readers how to create a complete e-commerce driven website using two of the most popular open source technologies available today, the PHP scripting language and the PostgreSQL database server. With PHP popularity stronger than ever in light of last year's version 5 release, and PostgreSQL seeing a significant resurgence in interest throughout 2005 due to software enhancements and considerable capital injections through companies such as Pervasive, Greenplum, and EnterpriseDB, it's apparent that the integration of these two technologies will continue to grow, even in light of the already impressive long-standing capabilities available with used in conjunction with one another.

Market: Beginner to Intermediate Application Developers
Bookstore Location: Open Source

Pro PHP-GTK

Scott Mattocks

Pro PHP-GTK is authored by active PHP community member and PHP-GTK project contributor Scott Mattocks. In this book, he presents both a definitive reference and hands-on tutorial to the PHP-GTK extension. The book couples the extension's key topics with practical examples, to guide you through a real-world project that develops a database-driven client-side inventory manager. You’ll also learn how to integrate this feature with other emerging technologies like SOAP and RSS, and learn how to generate XML-based interfaces.

Market: Beginner to Intermediate Developers
Bookstore Location: Open Source

Pro PHP XML and Web Services

Robert Richards

Pro PHP5 XML and Web Services is the authoritative guide to utilizing the XML features of PHP5. No other book covers the topic of XML and Web Services in PHP as deeply as this title. The first four chapters introduce the core concepts of XML that you need for proficiency, and will bring you up to speed quickly on the terminology and key concepts required to proceed with the rest of the book.

Market: Intermediate to Expert PHP Programmers and XML Developers
Bookstore Location: Open Source
Pro Apache XML
Poornachandra Sarang

To streamline these tasks, the Apache XML project provides several APIs for working with XML and Web Services. Pro Apache XML is devoted to a thorough introduction of several subprojects found under this umbrella. Each chapter is devoted to a specific subproject, covering its purpose, API, implementation and practical use through appropriate code examples. Though a beginner may wish to read the book from cover to cover, an advanced reader may jump to any desired subproject for a detailed study of its implementation. All programming examples use the Java programming language.

Market: Beginner to Intermediate Application Developers
Bookstore Location: Open Source

Beginning Ubuntu Linux
From Novice to Professional
Keir Thomas

Beginning Ubuntu Linux: From Novice to Professional is the first comprehensive guide to Ubuntu Linux. Adapted from Keir Thomas’ best-selling Beginning SUSE Linux: From Novice to Professional (Apress, 2005), Keir sets out to guide readers through the most commonly desired yet confusing concepts and tasks confronted by new Linux users. Purposely focused on end users to satisfy the growing interest in migrating away from windows to the increasingly mature Linux desktop platform, Beginning Ubuntu Linux serves as a guide to a rapid and transparent familiarization of those features most treasured by general and power desktop users alike.

Market: Beginners Interested in Experimenting with Ubuntu and System Administrators Seeking to Integrate Ubuntu
Bookstore Location: Open Source

Oracle

Pro Oracle RAC on Linux
Installation, Administration and Performance
Julian Dyke, Steve Shaw

Real Application Clusters and the Grid architecture are Oracle’s strategy for scaling out enterprise systems to cope with higher and higher workloads and more and more users. The premise of Grid is simple: it works just like a utility (e.g. electricity) grid. You don’t care which “station” you get your data from as long as you get it, and if one station goes down then it’s just fetched from somewhere else without the user being any the wiser. As demand grows you just add another cheap 2-CPU Intel machine (running Linux) to the cluster. While the premise is simple, the technology and the reality of its implementation is complex. Therefore many books are limited to talking conceptually and theoretically about the RAC technology. This book, however, will be the first to show how to actually implement and administer an Oracle 10g Real Application Cluster (RAC) system in a Linux environment. Based on extensive real world experience gained with Fortune 500 companies, this book discusses: basic concepts underlying Linux and Oracle RAC, design strategies, hardware procurement and configuration and many more.

Market: All IT Developers and Architects who Administer and Tune Oracle Real Application Clusters Databases in a Linux environment
Bookstore Location: Oracle
Oracle Applications DBA Field Guide
Elke Phelps, Paul Jackson
Oracle Applications DBA Field Guide provides a toolkit of scripts, notes, references, and guidelines to guide the DBA safely through all of the vital day-to-day admin tasks that fall within their remit, including configuration, monitoring, performance tuning, troubleshooting, and patching.

Market: Intermediate Oracle Applications DBA and Oracle Technical Staff
Bookstore Location: Oracle

Cost-Based Oracle Fundamentals Volume I: Fundamentals
Jonathan Lewis
In this book, volume 1 in a series of three, Jonathan covers the fundamentals: the things that everyone who uses the Oracle database needs to know about the CBO. It sheds light on the decisions the CBO makes when parsing a SQL statement and choosing an access plan. It demonstrates how the CBO calculates the cost of a plan and the rules and factors that go into these calculations. It reveals the basic assumptions the optimizer makes about the SQL and the data, explains why things go wrong and how you can fix them when those assumptions are incomplete, inaccurate, or simply false. He also includes a fabulous Upgrade Headaches section that is essential reading for anyone who has ever has, or ever will, upgrade between Oracle versions. Volumes 2 and 3 will track changes to the CBO in subsequent Oracle 10g releases, and will cover the more advanced and complex features of optimization.

Market: Beginner, Intermediate, or Advanced DBA or Developers who use an Oracle database
Bookstore Location: Oracle

Beginning REALbasic From Novice to Professional
Jerry Lee Jr. Ford
REALbasic's success is proven—there are already over 100,000 users, and this number is steadily growing. In a recent promotional effort, 35,000 Visual Basic developers downloaded a free copy of the Windows version of REALbasic, and REAL software has had many requests for decent beginning title on the subject. As far as we know, this is the only up-to-date book planned for the current version, REALbasic 2005, which matches that description.

Market: Beginners in REALbasic and Experienced Programmers Wanting an Alternative to VB
Bookstore Location: Programming

Hanaan Rosenthal

Market: Beginner to Intermediate Mac Designers and Developers
Bookstore Location: Programming
Software Development

Event-Based Programming
Taking Events to the Limit
Ted Faison

Event-based programming is the next logical step in component-based development, making components more reusable due to their decoupled nature. Event-based systems are easier to develop, making them cheaper and more reliable than traditional OOP or CBD systems. This book shows how to develop software based on parts that interact primarily through an event mechanism. The book shows how to use events in all sorts of situations, to solve recurring development problems without incurring coupling. A novel form of software diagram is introduced, called Signal Wiring Diagram. These diagrams are similar to the circuit diagrams used by hardware designers. A series of case studies concludes the book, bringing all the next concepts introduced together.

Market: Intermediate to Advanced Software Developers and Team Programmers
Bookstore Location: Software Development

System Administration

Nagios 2.0 Administration
James Turnbull

Nagios 2.0 Administration explains how to install and administer Nagios, and architect Nagios installations. The book also covers how to deploy agents and plug-ins, and monitor a variety of different assets. These assets include applications across a variety of platforms and operating systems. Additional topics include security, redundancy and failover, integration with other tools (like MRTG and Snort), and plug-in development.

Market: Intermediate Network Administrators
Bookstore Location: System Administration

Web Development

Ajax Patterns and Best Practices
Christian Gross

Ajax Patterns and Best Practices enables you to just pick up the book and then write applications that work properly. This book is not just about the technical, low-level details of the API's, but is about making something happen on both the client and server. For example, the Ajax Widgets chapter outlines a number of canned widgets that perform some functionality. The book explains the widget implementation so you can not only understand what is happening, but copy and paste if necessary.

Market: Intermediate-Advanced Website Developers and Programmers
Bookstore Location: Web Development
**The Definitive Guide to Interwoven TeamSite**

*Brian Hastings, Justin McNeal*

The *Definitive Guide to Interwoven TeamSite* is the first comprehensive book on this enterprise-level content management system, guiding the reader through the product Architecture, key features, and a detailed implementation of the product by way of a case-study involving a hypothetical financial services firm. Along the way, the authors share key development and deployment principles gained throughout their several years of working in enterprise CMS environments.

**Market:** Developers / Business Analysts  
**Bookstore Location:** Web Development

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**Foundations of Atlas**  
*Rapid Ajax Development with ASP.NET 2.0*

*Laurence Moroney*

This book provides an introduction to the technology written by a seasoned .NET professional working closely with the Atlas development team at Microsoft. It is designed to give developers a fast-track introduction to Atlas and explain how they can use the technology to increase the power and functionality of their code while simultaneously saving themselves both time and effort. The book begins with a bare-bones introduction that explains how Atlas relates to Ajax before guiding readers through a series of practical examples that demonstrate the framework and controls that are available within the Atlas technology. By the end of this short book readers will be able to put together seamless Atlas-based applications of their own.

**Market:** Beginner to intermediate Web Developers  
*ASP.NET 2.0 Developers Interested in the Ajax Phenomenon*  
**Bookstore Location:** Web Development

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**Windows Applications**

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**Pro ASP.NET 2.0 Security**

*Russ Basiura*

This book provides an in-depth explanation of all the security and user-management functionality of ASP.NET 2.0. The aim of the book is to provide established professional developers with the tools and concepts that they need in order to create secure ASP.NET 2.0 applications in-line with best practices and taking advantage of new technology features.

**Market:** Intermediate/Advanced ASP.NET 2.0 Developers  
**Bookstore Location:** Windows Applications

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**SQL Server 2005 Reporting Services Custom Controls**

*Andrew Bryan*

This book provides everything you need to know to build effective custom SSRS controls. It covers popular basic image controls (including ‘hot’ regions, clickable sections etc) that any RS user may consider developing, and it also ramps up to developing complex data-driven controls (e.g. using spatial data) that will be of interest to enterprise developers.

**Market:** Intermediate-Advanced .NET Developers who use SSRS, and SQL Server Administrators  
**Bookstore Location:** Windows Applications
Excel PivotTables Recipe Book
A Problem-Solution Approach

Debra Dalgleish

Pivot Tables are a growth area with huge numbers of people beginning to realize the powerful tools they have available on their desktops (as evidenced by the success of our previous Pivot Tables book (A Complete Guide to PivotTables: A Visual Approach, 1-59059-432-0). This book is a complement to that. It provides its readers with an indispensable quick-reference to solve the common problems that beset Excel users venturing into this area for the first time. Its succinct problem-solution style, and willingness to discuss the practical details of Pivot Table use set it apart from the competition.

Market: Beginning-Intermediate MS Office Power Users
Bookstore Location: Windows / MS Office Applications

Pro Visual C++/CLI and the .NET Platform
Second Edition

Stephen R.G. Fraser

This book explains how to write .NET 2.0 applications and services. It will provide you with a clean slate, and erase any need for developing the COM, DCOM, COM+, or ActiveX components that used to be necessary. Instead, you will learn how to write .NET applications using Visual C++ .NET syntax.

By the end of the book, you will be proficient in developing .NET applications for both the Windows desktop and the Web.

Market: Intermediate to Advanced Visual C++ Developers
Bookstore Location: Windows Applications

Creating Client Extranets with SharePoint 2003

Mark Gerow

This book explains how SharePoint programmers can modify networks to create a client extranet. As web-based data-collection continues to grow, enabling real-time movement will be more and more essential.

Market: Intermediate to Advanced Share Point Programmers and IT Managers
Bookstore Location: Windows Applications

Deploying .NET Applications with MSBuild and ClickOnce

Sayed Y. Hashimi

This book discusses the best ways to deploy applications developers are building using these new technologies. Since .NET 2.0 is a large release, significant adoptions of VS 2005 are expected and many people will be eager to learn about MSBuild and ClickOnce—information that this book cleanly and thoroughly provides.

Market: Intermediate to Advanced Software Developers, Testing Specialists, and Deployment Specialists
Bookstore Location: Windows Applications

Expert C# 2005 Business Objects
Second Edition

Rockford Lhotka

When Rocky first presented his incredibly significant CSLA.NET architecture and framework, he helped trigger a sea-change in the mindset of VB enterprise developers that is still at work today. His depth of thinking now influences developers across the language boundaries, and the previous editions of the books were bestsellers.

Market: Experienced Programmers and Business-Level Programmers using .NET Platform
Bookstore Location: Windows Applications
Expert .NET 2.0 IL Assembler
Serge Lidin

Expert .NET 2.0 IL Assembler gives in-depth explanations of the fundamentals of .NET ranging from common structures, functions and rules for designing and improving .NET applications to explanation of how .NET executables compile and how the languages tools (such as the assembler, disassembler and validator) operate.

Market: Advanced Developers Looking for a Deeper Understanding of the .NET 2.0 Framework to improve their Coding

Bookstore Location: Windows Applications

Pro SQL Server 2005 Disaster Recovery
James Luetkehoelter

This book shows you how to implement an effective disaster recovery strategy for SQL Server 2005 databases. With the arrival of SQL Server 2005, you’re exposed to powerful new tools for data backup and disaster recovery. From enhanced existing features, to entirely new functionality like Database Snapshots and Mirroring, the options for handling disaster recovery have increased dramatically. This book explores those options by examining the technical details of disaster recovery features and then applying that knowledge to practical scenarios. Also covered are fundamental changes to disaster recovery capabilities, and common issues to expect when using new features.

Market: Intermediate SQL Server DBAs and System Architects

Bookstore Location: Windows Applications

Beginning ASP.NET 2.0 in VB 2005
From Novice to Professional
Matthew MacDonald

The most up-to-date and comprehensive introductory ASP.NET book you’ll find on any shelf, Beginning ASP.NET 2.0 in VB 2005 guides you through Microsoft’s latest technology for building dynamic websites. You’ll learn to build dynamic web pages on the fly, with only basic prior knowledge of Visual Basic. Included is exhaustive coverage of ASP.NET, to guide you from your first steps, to the most advanced techniques, like querying databases from within a web page and performance-tuning your site.

Market: Beginner to Intermediate Developers and Programmers

Bookstore Location: Windows Applications

Pro ASP.NET 2.0 in VB.NET 2005
From Professional to Expert
Laurence Moroney, Matthew MacDonald

ASP.NET 2.0 is the latest version of Microsoft’s current ASP.NET 1.1 technology, which is fast becoming the accepted technology standard for creating dynamic web pages on the Windows platform. It is now used across the board from start-ups to blue-chip multi-national corporations. ASP.NET 2.0 is building on this solid foundation and adding new improvements. The new technology will be faster to code, offer a more powerful set of tools (for example MasterPages and Generics) and will also run quicker when deployed, so that customers enjoy a significantly better user experience.

Market: .NET Developers with 1-3 Years Experience and Developers Migrating from Old-style ASP/Visual Basic

Bookstore Location: Windows Applications
Pro SQL Server 2005 T-SQL and Stored Procedure Programming

Garth Wells

This book shows you practical stored procedure techniques based on real, successful solutions that the author has implemented. It lays a deep foundation on core T-SQL topics such as proper use of data types, insert/update/delete operations, control-flow statements and so on. It then directly applies this knowledge in building T-SQL stored procedures, triggers, view and functions that solve real business problems. It demonstrates how to smoothly handle XML as part of your enterprise solution, and provides expert advice on how to design and develop CLR-based stored procedures for complex operations in the database that are ill-suited to T-SQL. With SQL Server 2005, the database professional will need to refine their T-SQL skills, and expand their skill-set to encompass .NET and XML technologies – this is the book that will allow them to do it.


Bookstore Location: Windows Applications

Pro Visual C++ 2005 for C# Developers

Dean Wills

This is an ideal book if you’re an experienced developer approaching Visual C++ from a background of C# programming on .NET 1.1 or 1.0. This book includes two distinct sections forming a simple migration path for you to move across to Visual C++ 2005 development. The first section introduces the Visual C++ 2005 technology then overviews the language in eight fast-track chapters. This overview is tightly focused on the mechanics of the language and does not introduce any coding. Five additional chapters then detail the techniques and issues involved in converting C# applications to Visual C++ 2005.

Market: Intermediate Professional Developers and Programmers

Bookstore Location: Windows Applications

Beginning Visual Basic 2005 Express

From Novice to Professional

Peter Wright

Beginning Visual Basic 2005 Express is an affordable, accessible route if you’re a new programmer who wants to learn the .NET programming languages. Peter Wright proved his ability to teach Visual Basic to over 100,000 aspiring programmers during the 1990s with his line of best sellers, including Beginning Visual Basic 6 (1861001053). Now that Microsoft is launching its new Express products, Wright is on the same mission to teach you how to program, relying on his friendly and clear message.

Market: Beginners and Hobbyists

Bookstore Location: Windows Applications
friends of ED: Recently Announced

Foundation ActionScript for Flash 8
Sham Bhangal
This book contains all you need to master ActionScript, and have some fun at the same time. Flash guru Sham Bhangal's acclaimed teaching style is ideal if you’re a non-programmer who wants to learn Flash programming quickly and thoroughly. Bhangal teaches you the basics, and provides you an all-around proficiency in ActionScript and Flash components within Flash 8. You’ll gain the practical skills to build ActionScript projects, including making initial design decisions, structuring code, and testing. By the end of it, you’ll have constructed a cutting-edge Flash/ActionScript site.

Market: Beginners Wanting to Learn ActionScript with the New Version of Flash
Bookstore Location: Graphic Design

CSS Advanced Web Standards Solutions
Andy Budd, Cameron Moll, Simon Collinson
This book covers advanced Cascading Style Sheet techniques, and it is recommended that you have some knowledge of CSS and web design basics before reading this book. Included are all the techniques you need to master CSS and craft modern, standards-compliant web page designs. We don’t bore you with pages of theory; instead, we jump straight into practical solutions, allowing you to get what you need as quickly as possible.

Market: Anyone with intermediate web design experience who wants to master cutting-edge CSS techniques as quickly as possible
Bookstore Location: Web Design

Object-Oriented ActionScript for Flash 8
Peter Elst, Todd Yard
Object-Oriented ActionScript For Flash 8 teaches the theory and practice of OOP with ActionScript. You do not need any extensive prior programming experience; you just need to want to go beyond the usual Flash interfaces. Authors and working Flash developers Peter Elst and Todd Yard take you through the complete development cycle of a series of related applications, using numerous step-by-step instructions. You’ll be able to develop highly reusable applications and services that leverage the dynamic features in Flash.

Market: Intermediate Flash users who want to program OO apps using ActionScript
Bookstore Location: Web Design
Foundation Processing
An Introduction to Creative Code and Computational Art
Ira Greenberg

The book provides a solid foundation in basic programming, so no previous coding experience is necessary, but enough advanced techniques and artistic theory are covered for it to appeal to programmers learning art, as well as more artistic types getting into programming.

Market: Beginning Graphic Designers
Bookstore Location: Graphic Design

Web Accessibility
Web Standards and Regulatory Compliance
Jim Thatcher, Michael R. Burks, Christian Heilemann, Shawn Lawton Henry, Andrew Kirkpatrick, Bruce Lawson, Richard Rutter, Mark Urban, Cynthia Waddell

Web Developers and Designers: This book teaches them how to use their chosen technologies to create and validate accessible content, including XHTML, CSS, JavaScript, PDFs, and Flash. That covers a very large potential Market. Business managers: This book teaches them what impact web accessibility will have on their businesses; also a large potential Market.

Market: Beginner to Intermediate Web Designers and Developers
Bookstore Location: Web Design
The Seven Secrets of How to Think Like a Rocket Scientist

James Longuski, Purdue University, West Lafayette, IN, USA

From the Reviews ▶ “People of Earth… Attention! Jim Longuski’s book takes you on a journey of exploration to that nearly infinite space between the ears and behind the brows of that most mysterious of all creatures - the rocket scientist! Going well beyond the oft-used aphorisms, where no writer has gone before, he shows you how these gifted individuals think, feel, work, play, fantasize, rationalize, laugh and cry. From the glories of their epoch-making achievements to the tragedies of their magnificent failures, it is all here, told with insight, humor, objectivity and personal perspective. Without being preachy, lessons are offered that apply to anyone seeking to make professional or personal life just a little bit more successful and fun. I just couldn’t set this book down!”
▶ Robert Cesarone, Rocket Scientist

This book explains the methods that rocket scientists use, expressed in ways that can be applied in everyday life. The book illustrates the Seven Secrets with anecdotes, quotations and biographical sketches of famous scientists, ideas from sci-fi, personal stories and insights, and an occasional bit of space history. The author reveals that rocket science is just common sense applied to the extraordinarily uncommon environment of outer space and that rocket scientists are people, too.

Location in bookstore: Astronomy/Space

Space Invaders
How Unmanned Spacecraft Have Explored the Universe for Us

Michel Van Pelt, Noordwijk, Netherlands

Manned space programs attract the most media attention, and it is not hard to understand why—the danger, the heroism, the sheer adventure we as earthbound observers can imagine when humans are involved. But robotic missions deserve a respectful and detailed history and analysis of their own, and this book provides it. Focusing on future modern spacecraft, Michel van Pelt explains the exciting life of unmanned space explorers, making the technology, design, development, operation and results of modern space probe missions understandable by lay readers. Instead of describing one specific spacecraft or mission, Michel van Pelt offers a “behind the scenes” look at the life of a space probe: from its first conceptual design to the analysis of the scientific data returned by the spacecraft.

While most popular books on space concentrate on manned spaceflight, this book shows that unmanned space exploration is just as exciting. It demonstrates to the reader just what it takes to send a robotic spacecraft to another planet and what fascinating insight and knowledge we have gained from these probes.

Market: Popular Science Readers and General Space Enthusiasts
Location in bookstore: Astronomy/Space
A Seat on the Aisle, Please!
The Essential Guide to Urinary Tract Problems in Women

Elizabeth Kavaler, M.D.

In the course of a lifetime, more than half of all women will experience some form of debilitating pelvic disease or discomfort, including chronic urinary tract infections, various kinds of incontinence, pelvic floor prolapse, and interstitial cystitis. Surprisingly, until recently there has been only scant attention paid to this very common group of disorders, considering the vast population of sufferers. What's more, doctors have long tended to dismiss many symptoms of urinary tract disorders as an inevitable consequence of the aging process or, worse still, as indicators of underlying psychological disease.

In this concise, clearly written, and sympathetic new book, Elizabeth Kavaler suggests that a new approach to UT disorders is long overdue. One of the surprisingly small number of female urologists practicing in the U.S., Dr. Kavaler explains what these diseases are and what patients can do to get themselves diagnosed and treated properly. But more than that, she extends an expert, sympathetic, and skilled hand to those who've been distressed, isolated, and embarrassed for too long.

Market: Any woman with a UT problem, their loved ones, and primary care physicians

Bookstore Location: Women's Health

Contact with Alien Civilizations
Our Hopes and Fears about Encountering Extraterrestrials

Michael Michaud, International Institute of Space Law, Dulles, VA, USA

This book reviews a wide variety of speculations by many authors about the consequences for humanity of coming into contact with extraterrestrial intelligence. The text examines and analyzes the assumptions underlying these speculations. The book also includes brief background summaries of the history of thinking about extraterrestrial intelligence, searches for life and for signals, contrasting paradigms of how contact might take place, and the paradox that those paradigms allegedly create.

Market: Scientific Researchers, University Teachers, Enthusiasts and University Students

Bookstore Location: Physics/Astronomy
Inside Relational Databases with Examples in Access
Mark Whitehorn, University College of Worcester, UK

Inside Relational Databases with Examples in SQL Server
Mark Whitehorn, University College of Worcester, UK

The first two editions of Inside Relational Databases have both been best sellers. These new editions will also cover the relational database model but will use different engines to illustrate the model. In doing so, readers will be able to apply the model using their preferred database engine. Initially three versions are planned starting with Access, SQL Server and my SQL. The books show just how simple and useful databases can be. No prior knowledge is required i.e. real world examples show how to manage data efficiently. A significant amount of new material is included in the core of the book and particular emphasis is given to showing how to make a database run faster and more efficiently.

Market: Undergraduate students, practitioners, database users

Bookstore Location: Databases

The ABCs of Gene Cloning
Second Edition
Dominic Wong, Western Regional Research Center, Agricultural Research Service, V.S. Department of Agriculture, Albany, CA

Clear and concise, this easy-to-use text offers an introductory course on the language of gene cloning, covering microbial, plant, and animal systems. The essential concepts in biology relevant to the understanding of gene cloning are presented in a well-organized and accessible manner. This updated version of the first edition is an invaluable book for nonscientists as well as scientists with little background knowledge in gene cloning, providing a wealth of information for anyone wishing to gain proficiency in reading and speaking the language of gene cloning.

Market: Students Studying Genetics and Biomedicine and General Science Readers

Bookstore Location: Biomedicine
Celestial Mechanics
The Waltz of the Planets

Alessandra Celletti, Ettore Perozzi, University of Rome, Rome, Italy

In Celestial Mechanics, the author’s cover topics which are on the front line of scientific research and technology in spaceflight for the exploration of our Solar System. The book provides an interdisciplinary cross section of all Celestial Mechanics, to explain the topic without the use of mathematics. The book emphasizes public awareness as a key issue for appreciating and exploiting the wealth of astronomical data and images gathered during the space age.

Pattern Asterisms
A New Way to Chart the Stars

John Chiravalle, Safford, AZ, USA

Since the very beginning of astronomy, people have constructed patterns – the constellations – out of the almost random scattering of stars in the night sky. The fact that the constellations are still used to day reflects not just their historical origins, but their usefulness in identifying bright stars in the rotating dome of the sky. This book applies the same pattern approach, outlining a set of memorable mini-constellations to help amateur astronomers identify and remember stars in typical binocular or low-magnification telescopic fields. This is a new aspect of astronomy that does not involve dry science, but makes it easy to learn about the night sky. Size, stellar magnitudes, and coordinates are provided, along with north direction, star-hopping instructions and Sky Atlas 2000 references.

Nebulae, and How to Observe Them

Steven Coe

Nebulae are the places where the stars are born. For amateur astronomers, the many different kinds of nebulae vary from “easy” targets that can be seen with modest equipment under mediocre skies, to “challenging” objects that require experienced observers, large telescopes and excellent seeing. The concept of the book is to present an up-to-date detailed description and categorization (part one); and then (part two) to consider how best to successfully observe and record the large range of astronomical objects that fall under the general heading of “nebulae”. Nebulae, and How to Observe Them is a mine of information for all levels of amateur observers, from the beginner to the experienced.
**Origins**
*How the Planets, Stars, Galaxies, and the Universe Began*

*Steve Eales, University of Cardiff, UK*

The four big “Origin Questions” have driven modern scientific exploration of earth and space. Now the answers to how the planets, the stars, the galaxies, and the universe itself were formed are coming within our grasp. *Origins* explains, in lucid language, and without advanced math, how we have come to understand these questions, and how science is closing in on the answers.

**Market:** Amateur Astronomers and Popular Science Enthusiasts

**Location in bookstore:** Physics/Astronomy

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**Praxis Manned Spaceflight Log 1961-2006**

*Tim Furniss, David J. Shayler*

*Praxis Manned Spaceflight Log 1961-2006* will open with a section entitled: Quest for Space, which will provide an explanation of the methods employed to get in and out of orbit and brief overviews of the different international space programmes. It will be a complete chronological log of all attempted orbital manned spaceflights, including the X-15 “astroflights” of the 1960s that only achieved an altitude of c. 50 miles and the two 1961 Mercury and Redstone missions which were non-orbital. There will be an image depicting each manned spaceflight, and data boxes containing brief biographies of all the space travellers and basic flight data. The main text will be a narrative of each mission, its highlights and accomplishments, including those strange facts and humorous stories that are connected to every mission.

**Market:** Space Science and Exploration Enthusiasts, Students, and Engineers.

**Location in bookstore:** Physics/Astronomy

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**Practical Scientific Astronomy: an Introduction**
*Observational Activities for Small Telescopes*

*Michael Gainer*

This book is about using an 80mm refractor / 90mm Maksutov (such as a Helios 80 or Meade ETX90) as more than a “quick look” instrument, but rather something capable of use as an introduction to scientific observations. Emphasis is on measurement and discovery activities rather than on casual observing. There are two objectives to these activities: to re-enact the process of discovery and to provide amateur observers with the knowledge and skill that will help them make genuine contributions to the field of astronomy.

**Market:** Amateur Astronomers

**Location in bookstore:** Physics/Astronomy
The First Men on the Moon
The Story of Apollo 11

David Harland, Glasgow, Scotland, UK

The introductory chapters review the motivation to land on the Moon by the end of the 1960s, the development of the Saturn V rocket and the Apollo spacecraft as the means of doing so, the selection of potential landing sites, the precursor missions, and the backgrounds of the three men who were to fly Apollo 11, the book will relate in detail the first moonlanding mission. The final chapters will discuss what was learned of the moonrocks, and review the follow-on missions. In order to bring the story to life, David Harland makes use of the flight plan, mission report, in-flight transcripts, including conversations among the crew in the spacecraft that were not transmitted, as well as the post-flight debriefing. In addition to having many ‘small’ in-line black-and-white illustrations with the text running around them, the book will feature the high-resolution scans recently produced by NASA from the original Hasselblad film, reproduced in a substantial color section.

Market: Space Exploration Enthusiasts, Space Historians, Students and Engineers in the Aviation Industry and Space Agencies.
Location in bookstore: Physics

Space Exploration 2007
Space Launches, Missions and Events

Brian Harvey, Dublin, Ireland

The aim of the Space Exploration 2007 is to provide an annual update on recent space launches, missions and results, to be published every year in September. The annual will cover space exploration from a variety of angles: looking back at past missions, reviewing those currently under way and looking to those planned for the future. The ten invited contributions each year will cover a variety of topics within these areas, to appeal to a wide readership.

Market: Space Enthusiasts from Teens Upwards through to Professionals Working in the Worldwide Space Industry and Journalists Covering Space Issues
Location in bookstore: Physics/Astronomy

The Future of the Universe

A.J. Meadows, Loughborough University, UK

Many books have been written about the Big Bang and how the universe became the way it is today. “Armchair astronomers” have found them endlessly fascinating. But, what about the future of the universe? What will happen to the Earth and solar system? What about our galaxy? Indeed, how long will the universe as we recognize it survive? It is only in recent years that astronomers and cosmologists have come to any kind of consensus about the probable history of the universe, so have been relatively few books speculating about its future evolution. This will be a "must read" for all amateur astronomers, and scientifically inclined general readers.

Market: Amateur Astronomers and Popular Science Readers
Location in bookstore: Physics/Astronomy
A Buyer’s and User’s Guide to Astronomical Telescopes & Binoculars

James Mullaney

Amateur astronomers are always contemplating the “next telescope up” and this will point the way to the most suitable instrument to which they should aspire. Similarly, those who are buying their first telescope – and these days not necessarily a low-cost one – will be able to compare and contrast different types and makes. Both beginning/novice amateur astronomers (at the level of Astronomy and Night Sky magazine readers), as well as more advanced amateur astronomers (level of Sky & Telescope), will find this book invaluable and fascinating.

Market: Amateur Astronomers
Location in bookstore: Physics/Astronomy

State of the Universe 2007
New Images, Discoveries and Events

Martin Ratcliffe, Wichita, KS, USA

The aim of State of the Universe 2007 (and subsequent volumes issued annually) is to provide an annual astronomy review suitable for the popular science level reader to be published every year in September in a format that will be suitable for an appeal to the Christmas market. The book will cover all major astronomical news on topics beyond the Solar System and place them in the context of the longer term goals that astronomers and astrophysicists around the world are aiming for. The target is to capture the excitement and vibrancy of modern astronomical research. The book will present a complete list of the major announcements, discoveries and news items from each year, with the major ones being explained in detail through selected chapters being written by invited contributors who are at the forefront in those fields. The January meeting of the American Astronomical Society each year will be the major source of astronomical news for the following year’s volume, giving access to potential authors and contacts with public information officers of major observatories, space centers, etc.

Market: Amateur Astronomers and Space Enthusiasts
Location in bookstore: Physics/Astronomy

Binocular Astronomy

Stephen Tonkin, Kent, UK

Binoculars—the common kinds—are surprisingly useful for wide-field observing, but “binocular astronomy” is much more than that, including binocular eyepieces that can be fitted to normal astronomical telescopes, and even giant binocular telescopes that are effectively two astronomical telescopes working in tandem. This book takes an in-depth look at the instruments themselves, and offers sections on evaluating and buying binoculars and binocular telescopes, their care, mounting, and accessories. In addition there is a selection of fine objects to be seen with 50mm and 100mm binoculars.

Market: Amateur and Practical Astronomers
Location in bookstore: Physics / Astronomy
Einstein’s Enigma or Black Holes in my Bubblebath

C.V. Vishveshwara

Einstein’s Enigma or Black Holes in My Bubble Bath tells the story of gravitation theory from the early historic origins to the latest developments in astrophysics, focusing on Albert Einstein’s theory of general relativity and black hole physics. Through engaging conversations and napkin-scribbled diagrams come tumbling the rudiments of relativity, spacetime and much of modern physics, narrated with high didactic and literary talent, and each embedded in casual lessons given by a worldly astrophysicist to his friend Alfie, a freelance organizer of proposals. Join the intellectual fun and exalt in the frothy ideas while vicariously taking relaxing baths in this magical bathtub.

Market: All Readers who are Interested in Science in General and Gravitation/Black Holes in Particular. Students of Natural Science and Scientists
Location in bookstore: Physics/Astronomy

Star Clusters and How to Observe Them

Mark Allison, Cheshire, UK

Modern commercially-made telescopes enable amateur astronomers to see a surprising amount of detail, and to record - using CCD cameras, video, webcams and film - some remarkably beautiful and detailed images. Contained here also is detailed information on using refractors, reflectors, and, of course, Meade and Celestron’s ubiquitous range of computer-controlled SCT telescopes. The book features a list of suitable clusters to observe according to the instruments available, from binoculars to large-aperture telescopes.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy

Human Vision and The Night Sky
How to Improve Your Observation Skills

Michael Borgia

This book is intended to take amateur astronomers - typically readers of Sky & Telescope similar astronomy periodicals - to the “next level” in observational astronomy. It begins with teaching astronomers to use their most important astronomy tool, their eyes, and discusses how to select the right telescope, and how to set up and care for the instrument. Readers tour the solar system as they have never viewed it before - through their own eyes. We start close to home with the hidden treasures of the Moon, on to investigate the power of the Sun, incredibly hot Mercury, the subtleties of Venus, the changing surface of Mars, the outer solar system and then on into deep space. Each chapter includes a series of observing challenges that will entertain and push the reader to continually higher levels of achievement.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy
Galaxies and How to Observe Them

Richard Jakiel, USA; Wolfgang Steinicke, Umkirch, Germany

This book provides up-to-date information for amateur astronomers who want to know all about what they are observing, and details more advanced observation techniques for practical astronomers, working with a range of different instruments. The author describes the theory and features of galaxies (including groups and clusters), offers observing techniques and instruments, and lists many objects, with observing hints. The book is written for amateur observers with experience ranging from the novice to the seasoned veteran.

Market: Amateur Astronomers and Scientists/Researchers
Bookstore Location: Physics / Astronomy

November 2006
ISBN 1-85233-752-4
$29.95
Approx. 255 p.
Softcover

Parting the Cosmic Veil

Kenneth R. Lang, Tufts University, Medford, MA, USA

Parting the Cosmic Veil describes our gradual awareness of a vast, previously concealed Universe. It is a story of expanding horizons and the discovery of invisible worlds, made possible with new technology and novel telescopes that have broadened our range of perception and sharpened our vision. The Cosmos is evolving, participating in ongoing processes of creation, destruction, and re-birth. But even though we are pushing the boundaries of knowledge closer to an understanding of the origins and destinies, of either the Universe or Life, the ultimate answers to these grand questions still lie hidden behind the Cosmic Veil.

Market: Astronomy Students and Teachers, Amateur Astronomers, Astronomy and Space Enthusiasts
Bookstore Location: Physics / Astronomy

June 2006
ISBN 0-387-30735-4
$39.95
250 p. 89 illus., 42 in color.
Hardcover

Calibrating the Cosmos
How Cosmology Explains our Big Bang Universe

Frank Levin

Calibrating the Cosmos explains in clear, non-mathematical language the measurements and the interpretation of the resulting data that have led to the current understanding of the origin, evolution and properties of our expanding Big Bang universe. Theoretical concepts are explored, in particular the symmetries of homogeneity and isotropy observed in our universe on the largest scales, how these symmetries lead to only one quantity being needed to describe the growth of the universe from its infancy to the present time, and how the so-called parameters of the universe are the ingredients used to construct the model universes to which ours - the real thing - is compared. Coverage includes background material, a description of the current understanding and how it emerged, and a glimpse of unsolved questions and conjectured solutions.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy

May 2006
ISBN 0-387-30778-8
$29.95
Approx. 210 p. 100 illus., 50 in color.
Softcover

The Urban Astronomer’s Guide

Rod Mollise, Mobile, AL, USA

Most amateur astronomers yearn to observe more frequently. Many of them, however, live in urban and highly developed suburban areas that are heavily light polluted. Due to this light pollution, they are under the impression that deep sky objects - nebulae, galaxies, star clusters - are either invisible or not worth viewing from home. This book covers the "why," "how," and "what" of astronomy under light-polluted skies. The author describes the many objects that can be seen in a bright urban sky, and shows the city or suburban astronomer how to observe object after object, season after season. About 50% of the book is devoted to describing "tours" of the sky, with physical and observational descriptions, at-the-eyepiece drawings, and photographs.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy

May 2006
ISBN 1-84628-216-0
$39.95
Approx. 210 p. 100 illus., 50 in color.
Softcover
Moore on Mercury
The Planet and the Missions

Patrick Moore

Mercury is one of the more difficult objects for amateur astronomers to observe because of its close proximity to the Sun. It is also one of the most fascinating and strange planets. Amateur astronomers can see Mercury and its ever-changing phases all year, and sometimes watch it transit the Sun. Mercury is not much larger that our Moon, but orbits the Sun at an average distance of only 58 million km, compared to the Earth's 150 million km.

On its sunlit side, Mercury's surface temperature can exceed 450°C while the night side freezes at 180°C. In his inimitable, easy-going style, Patrick Moore describes Mercury, the professional astronomers who have observed it over the centuries, amateur observations, and the past, present and future space missions to this extraordinary world. The book includes information on the Mercury Messenger mission.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy

Apollo
The Definitive Sourcebook

Richard Orloff, Oakhurst, NJ, USA; David Harland, Glasgow, Scotland, UK

On 25 May 1961, John F Kennedy announced the goal of landing an American man on the Moon by the end of the decade. This challenge forced NASA to review the planned lunar landing of a three-man spaceship named Apollo in the mid-1970s. In 1962, it was decided that a specialized vehicle would accompany the main spacecraft, to make the lunar landing while the mothership remained in lunar orbit. To send these vehicles to the Moon would require the development of an enormous rocket. Development was protracted, but in December 1968 Apollo 8 was launched on a pioneering mission to perform an initial reconnaissance in lunar orbit. When Apollo 17 lifted off from the Moon in December 1972, the program was concluded. Now, at long last, there is a real prospect of a resumption of human exploration of the Moon. This book provides an overview of the origins of the Apollo program and descriptions of the ground facilities, launch vehicles and spacecraft that will serve as an invaluable single-volume 'sourcebook' for space enthusiasts, space historians, journalists, and program-makers on radio/TV. It supplements other books that have focused on the politics and management of the Apollo program, the astronauts, and their training and exploits.

Market: Space Enthusiasts, Space Historians, and Journalists
Bookstore Location: Physics / Astronomy

Mars and How to Observe It

Daniel M. Troiani, Triton College, IL, USA

Astronomers' Observing Guides provide up-to-date information for amateur astronomers who want to know all about what it is they are observing. This is the basis of the first part of the book. The second part details observing techniques for practical astronomers, working with a range of different instruments.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy
The Invisible Universe
The Story of Radio Astronomy
Second Edition

Gerrit Verschuur, University of Memphis, Memphis, TN

This is the story of radio astronomy, of how radio waves are generated by stars, supernova, quasars, colliding galaxies, and by the very beginnings of the universe itself. In The Invisible Universe, you learn what astronomers are doing with those huge dishes in the New Mexico desert, in a remote valley in Puerto Rico, in the green Pocahontas Valley in West Virginia, as well as dozens of other remote sites around the world. With each of these observatories, the scientists collect and analyze their data, “listening” to the radio signals from space, in order to learn what is out there, and perhaps even if someone else may be listening as well.

Market: General Science Readers, Science and Space Enthusiasts, and Visitors of Radio Observatories
Bookstore Location: Physics / Astronomy

Practical Guide to Lightcurve Photometry and Analysis

Brian Warner, Minor Planet Observer, Colorado Springs, CO, USA

This practical text provides those with access to even a modest telescope and a CCD camera the background and detailed steps to contribute to astronomical research, including joint projects in which they can take part, as well as techniques for gathering, analyzing, and publishing their data. The text helps the reader understand - and avoid - common pitfalls in the process, and offers detailed examples on how to obtain and analyze data. Under “choosing the right software,” the author looks critically at the commercially-available packages, providing screen shots and useful advice. Amateur astronomers who want to go beyond CCD imaging will find everything they need to step into the world of “real” science.

Market: Amateur Astronomers
Bookstore Location: Physics / Astronomy
Knowledge Networks for Business Growth
Andrea Back, Ellen Enkel, Georg von Krogh, University of St. Gallen, Switzerland

The first part of the book contains three case studies which illustrate the idea of knowledge networks for growth. The step-by-step methodology of the second part shows the reader how to build up and maintain these networks. The templates in the last part of the book ease the adaptation of networks for the reader’s own company or his or her specific business needs.

Market: Practitioners
Location in bookstore: Business/Management

Towards an Inclusive Democracy
Consensual Voting Procedures for Use in Parliaments, Councils and Committees
Peter J. Emerson (Ed.)

This book describes the voting procedures by which majority rule may be replaced by a more consensual system of governance. The first part of the book describes three different voting procedures, the Modified Borda Count, the Quota Borda System and the Matrix Vote, and gives a number of hypothetical examples, all clearly depicted in tables. In the second part, the voting mechanisms are discussed against the background of the theory of voting, social choice theory, human rights and mediation practice.

Market: Economists and Political Scientists, Professionals in Politics-related Fields
Location in bookstore: Business/Economics

The Basel II Risk Parameters
Estimation, Validation, and Stress Testing
Bernd Engelmann, Quanteam Dr. Bernd Engelmann und Sören Gerlach GbR, Frankfurt a.M., Germany; Robert Rauhmeier, Dresdner Bank AG, Frankfurt a.M., Germany (Eds.)

The estimation and validation of the Basel II risk parameters PD (default probability), LGD (loss given default), and EAD (exposure at default) is an important problem in banking practice. The book covers the state-of-the-art in designing and validating rating systems and default probability estimations. Furthermore, it presents techniques to estimate LGD and EAD. A chapter on stress testing of the Basel II risk parameters concludes the monograph.

Market: Professionals in the Fields of Credit Risk Management and Controlling as well as Portfolio Modeling, Banking Supervisors
Location in bookstore: Business/Management

Business-to-Business Brand Management
The Success Dimensions of Business Brands
Philip Kotler, Kellogg School of Management, Northwestern University, Evanston, IL, USA and Waldemar Pfoertsch, University of Pfortzheim, Germany

Discover the power of business branding – co-authored by Philip Kotler, the global marketing authority. Consumer companies appreciate its power, and successful business-to-business companies should, too. Branding accelerates good companies to greater success, and creates the foundations for trusted relationships on the basis of solid products and profound communication. This book presents brand management principles for industrial and service companies for the first time, featuring best-practice examples and hands-on advice.

Market: Business Managers and Students
Bookstore Location: Business
## New and Forthcoming

### Start-up

**A Practical Guide to Starting and Running a New Business**

**Tom Harris, Lightwater, UK**

*Start-up* is a user guide for aspiring entrepreneurs and provides expert advice and guidance on every aspect of launching a new business. It will be of particular value if you are an academic wishing to exploit the commercial value of a new technology or business solution through the creation of a new company. Step-by-step, this inspiring and highly readable book covers how to evaluate the strength of your business idea, how to protect your invention, what legal steps and responsibilities are involved in forming a company, how to position your products in the market, how to create a business plan and raise finance.

**Market:** Professionals and Academics who wish to start their own business  
**Location in bookstore:** Business/Management

### Six Sigma+Lean Toolset

**Alexander John, Renata Meran, Olin Roenpage, Christian Staudter, Stephan Lunau, UMS GmbH Consulting, Frankfurt am Main, Germany (Ed.)**

The Six Sigma concept has enjoyed triumphant success throughout the business world for two decades, contributing significantly to net income improvement for companies large and small, public and private, well-known and unknown. For a number of years this successful concept has been supplemented by the tools of Lean Management, a set of strategies for improving product quality and delivery performance and reducing cost. As practiced by the authors of this book the Six Sigma+Lean approach combines the tried-and-tested tools of both worlds, which are linked together systematically in the proven DMAIC process model.

**Market:** Practitioners  
**Location in bookstore:** Business/Management

### ReOrganisation

**Bengt Karlöf, Fredrik Helin Lövingsson, Karlöf Consulting, Stockholm, Sweden**

*ReOrganisation* has been written as a practical guide for anyone faced with organizing a business. Because every organization situation is unique, the reader should be familiar with a number of conceptual models and tools which can be of help when creating a theory for a particular situation. As consultants and businessmen, as well as through the elaboration of certain methods, the authors have developed a sense of what is important in the work of shaping or redesigning an organization. This book will therefore be of interest to anyone on the point of realizing a development in their organization and wishing to know how this can best be accomplished most effectively and successfully.

**Market:** Managers and Entrepreneurs  
**Location in bookstore:** Business/Management

### Evolutionary Microeconomics

**Jacques Lesourne, CNAM, Paris, France; André Orléan, CNRS, Paris, France; Bernard Walliser, École Nationale des Ponts et Chaussées, Paris, France**

*Evolutionary Microeconomics* is aimed at bypassing the limitations of classical microeconomics by considering a dynamic approach, however not biologically oriented. Agents have local information and bounded rationality, they are involved in explicit processes of interactions through time, and various institutions sustain the market or substitute to it. It explains then some phenomena hardly explained by classical microeconomics: dispersion of prices, variety of industrial structures, financial bubbles.

**Market:** Researchers and Graduate Students in Economics, Cognitive Science and Sociology  
**Location in bookstore:** Business/Economics
Service Productivity Management
Improving Service Performance using Data Envelopment Analysis (DEA)

H. David Sherman, Northeastern University, Boston, MA, USA; Joe Zhu, Worcester Polytechnic Institute, MA, USA

Service Productivity Management is an in-depth guide to using the most powerful available benchmarking technique for improving service organization performance—Data Envelopment Analysis (DEA). Throughout the book step-by-step guidance is provided to enable any reader to apply DEA with Excel to their organization. The book provides a roadmap for managers to understanding DEA. It demonstrates how these methods can be used to improve productivity and how to evaluate its value to an organization. Finally, the book applies and analyzes the results to identify specific ways to improve organizational performance and profitability. The book comes packaged with a ready-to-use DEA software CD for Microsoft Excel Add-in to run DEA analyses on any set of organizations of interest to the reader.

Market: Business and Industry Service Managers, Academics and MBA Students
Location in bookstore: Business/Economics

Integrated Information Management
Applying Successful Industrial Concepts in IT

Ruediger Zarnekow, Walter Brenner, University of St. Gallen, Switzerland; Uwe Pilgram, T-Systems CDS, Bonn, Germany

This book addresses the current challenges facing information management (IM) and presents practical solution propositions. It is divided into three parts. The first section describes six current trends and challenges. The individual components of the model are introduced and explicated. Using six practical examples, the third section describes how selected concepts of IIM can be implemented. This book is built upon the fundamental premise of transferring successful management concepts from industrial production to IT management.

Market: Practitioners
Location in bookstore: Business/Management

Chemistry

Esterification of Polysaccharides

Thomas T. Heinze, T. Liebert, A. Koschella, University of Jena, Germany

Polysaccharide esters (cellulose and starch) are among the first polymeric materials applied commercially. The way of producing these technically relevant derivatives has changed little during the entire history of their manufacture. In the last decade, investigation of new acylation methods and strategies of analysis was revived by the search for tailored, biocompatible, material for specific fields of application, e.g., biotechnology, sensor techniques and medicine. This book provides the first practical, comprehensive summary of modern acylation methods.

Market: Laboratory Scientists including Industrial Researchers and Academic Personnel (Graduate Students and Postdoctoral Researchers) Working on Lab Floor Level; also for Managers
Location in bookstore: Chemistry
**Stereochemistry-Workbook**

191 problems and solutions

Karl-Heinz Hellwich, Altenstadt; Carsten Siebert, Frankfurt

This workbook in stereochemistry is designed for students, lecturers and scientists in chemistry, pharmacy, biology and medicine who deal with chiral chemical compounds and their properties. It serves as a supplement to textbooks and seminars and thus provides practice for students using the convention and terminology of the exact 3D-description of chemical compounds in selected examples. The book coverage spans: physiological and pharmacological relevant compounds; inorganic molecules for the determination of configuration; conformation and point groups; as well as the stereoselective synthesis of organic molecules. The 191 problems with extended solutions contain many examples of compounds which are of practical use and have been gathered by the authors during their lectures and scientific work.

**Market:** Students and Lecturers in Organic and Inorganic Chemistry, Biochemistry and Pharmacology, Polymer Chemistry and Medicine

**Location in bookstore:** Chemistry

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**Basic Methods for the Biochemical Lab**

Martin Holtzhauer, Berlin, Germany

Basic Methods for the Biochemical Lab elucidates proven lab procedures and stresses practical hints for research in analytical and preparative biochemistry, as well as summarizing key data in numerous tables. Further emphasizing the practical aspects and to minimize the text, theoretical introductions into the methods are mostly omitted. This first English-language edition of a successful German-language manual will be a valuable resource for students and experts in biochemistry, biotechnology and biomedical laboratories.

**Market:** Advanced Undergraduate and Graduate Students in Biochemistry and Biotechnology as well as Clinical Chemistry and Laboratory Medicine.

**Location in bookstore:** Chemistry

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**Communicating Science**

A Practical Guide

Pierre Laszlo, University of Liege, Belgium

Have you new and interesting, or even outstanding, scientific results that you want to be recognized by your scientific colleagues, or be understood by the public? Or do you want to address decision makers to change their minds? If so, Laszlo’s Communicating Science is the book to consult.

**Market:** Scientists, Practitioners and Graduate Students in Natural Sciences, Medical and Life Sciences

**Location in bookstore:** General Science

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**Plasmonics**

Fundamentals and Applications

Stefan Alexander Maier, University of Bath, UK

Considered one of the major fields of photonics of the beginning 21st century, plasmonics offers the potential to confine and guide light below the diffraction limit and promises a new generation of highly miniaturized photonic devices. Offering both a comprehensive introduction to the field and an extensive overview of the current state of the art, Plasmonics: Fundamentals and Applications should be of great value to the newcomer and to the experienced researcher.

**Market:** Researchers in the Field of Nano-Optics, Graduate and Undergraduate Students in Physics and Engineering

**Location in bookstore:** Chemistry
Physical Properties of Foods

Serpil Sahin, Servet Gulum Sumnu, Middle East Technical University, Ankara, Turkey

Understanding the physical properties of foods is important as they are used in process design, product and process optimization, product development, food quality control and food process modeling. This book provides a fundamental understanding of physical properties of foods. Basic definitions and principles of physical properties are discussed as well as the importance of physical properties in food industry and measurement methods. In addition, recent studies in physical properties area are summarized.

Market: Advanced Undergraduates and Graduate Food Science Students, People Working in the Field of Food Science, Food Technology, Biological Systems Engineering, Food Process Engineering, and Agricultural Engineering
Location in bookstore: Chemistry

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Data Streams

Models and Algorithms

Charu C. Aggarwal, IBM, T.J. Watson Research Center, Yorktown Heights, NY (Ed.)

Recent progress in computing and data storage technology makes it possible for organizations to record and store large streams of transactional data. For example, even simple daily transactions, such as using a credit card or telephone result in automated storage of data. This capacity gives rise to the new research field of data streams. This book explores new topics in analysis—sometimes known as mining—of data streams; each contributed chapter surveys a different facet of the field, reviews key ideas and current research, and suggests future directions for inquiry.

Market: Researchers and Practitioners in Industry
Location in bookstore: Computer Science

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Java Methods for Financial Engineering

Philip Barker, Roslin, UK

In order to build a successful, Java-based, business application using investment and financial techniques it is important to have a clear understanding of all the necessary methods required to create software implementations of the calculations and data manipulations commonly used. This book describes all the numerical methods and shows how to implement them as Java classes, before going on to develop application classes covering a range of key areas in finance and investment computation.

Market: Software Developers, Software Engineers, Programmers, Postgraduates in Financial Engineering, and MBA Students
Location in bookstore: Computer Science
Experimental Research in Evolutionary Computation

The New Experimentalism

Thomas Bartz-Beielstein

The new experimentalism, a development in the modern philosophy of science, considers that an experiment can have a life of its own. This book introduces the new experimentalism in evolutionary computation, providing tools to understand algorithms and programs and their interaction with optimization problems. The book bridges the gap between theory and experiment by providing a self-contained experimental methodology and many examples.

Summarizing results from the author’s consulting to industry and his experience teaching university courses and conducting tutorials at international conferences, it is suitable for practitioners and researchers and also for lecturers and students. The text is supplemented online with downloads and exercises.

Market: Lecturers, Students, and Researchers
Location in bookstore: Computer Science

Data Quality

Concepts, Methodologies and Techniques

Carlo Batini, U Milano Bicocca, Italy; Monica Scannapieco, U Roma La Sapienza, Italy

Batini and Scannapieco present a comprehensive and systematic introduction to the wide set of issues related to data quality. They start with a detailed description of different data quality dimensions, like accuracy, completeness, and consistency, and their importance in different types of data, like federated data, web data, or time-dependent data, and in different data categories classified according to frequency of change, like stable, long-term, and frequently changing data. The book’s extensive description of techniques and methodologies from core data quality research as well as from related fields like data mining, probability theory, statistical data analysis, and machine learning gives an excellent overview of the current state of the art. The presentation is completed by a short description and critical comparison of tools and practical methodologies, which will help readers to resolve their own quality problems.

Market: Graduate Students, Lecturers, and Professionals
Location in bookstore: Computer Science

Computational Learning for Adaptive Computer Vision

Bir Bhanu, Subhodev Das, University of California, Riverside, CA, USA.

Computer vision (CV) research seeks to provide computers with human-like perception capabilities so that they can sense the environment, understand the sensed data, take appropriate actions, and enhance future performance by learning from experience. Technology is pushing for computer vision systems to address “real-world” applications, such as navigation, target recognition, manufacturing, photointerpretation and remote sensing. This book shows how machine learning can help create robust, flexible vision techniques for optimal functioning in real-world scenarios.

Market: Engineers, Computer Scientists in Industry and Academia Interested in Machine Vision an Artificial Intelligence
Location in bookstore: Computer Science

Pattern Recognition and Machine Learning

Christopher M. Bishop, Microsoft Research Ltd., Cambridge, United Kingdom

This book was originally intended as a second edition of Neural Networks for Pattern Recognition (Bishop, 1995, Oxford University Press) which is regarded by many as the leading book in its field. This book features Bayesian methods for pattern recognition, and new topics such as kernel methods and temporal models. Data sets are used to provide running examples illustrating the application of many of the algorithms discussed. It is aimed at advanced undergraduates or first year PhD students, as well as researchers and practitioners, and assumes no previous knowledge of pattern recognition or machine learning concepts.

Market: Students and Researchers
Location in bookstore: Computer Science
Linear Genetic Programming

Markus Brameier, University of Aarhus, Denmark; Wolfgang Banzhaf, Memorial University of Newfoundland, Canada

This book presents a variant of Genetic Programming that evolves imperative computer programs as linear sequences of instructions, in contrast to the more traditional functional expressions or syntax trees. It is one of the few books that deals solely with Linear GP and contains many concrete, experimental results. The book serves as a reference for researchers, but also contains sufficient introduction for students and those who are new to the field.

Market: Researchers in Genetic Programming, Evolutionary Algorithms, and Machine Learning
Location in bookstore: Computer Science

Digital Image Processing in Java

Wilhelm Burger, Mark Burge, National Science Foundation, Arlington, VA, USA

Written as an introduction for undergraduate students, this textbook covers the most important methods in digital image processing. Formal and mathematical aspects are discussed at a fundamental level and various practical examples and exercises supplement the text. The book is uses the image processing environment ImageJ, freely distributed by the National Institute of Health. A comprehensive website supports the book, and contains full source code for all examples in the book, a question & answer forum, slides for instructors, etc. Digital Image Processing in Java is the definitive textbook for computer science students studying image processing and digital processing.

Market: Undergraduates and Lecturers
Location in bookstore: Computer Science

Counting Networks

Konstantin Busch, Rensselaer Polytechnic Institute, Troy, NY, USA; Marios Mavronicolas, University of Cyprus, Nicosia, Cyprus

This volume provides a comprehensive presentation of counting networks—a fundamental class of distributed data structures providing efficient solutions to important problems in distributed systems. The main purpose of the book is to make the most important results on counting networks accessible to a wide audience and to stimulate new research on this fascinating topic.

Market: Industry Practitioners Working in Distributed System Applications and Researchers in Distributed Computing and Theoretical computer Science, Discrete Mathematicians Interested in the Mathematical Theory of Networks
Location in bookstore: Computer Science

Information Visualization

Beyond the Horizon
Second Edition

Chaomei Chen, Drexel University, Philadelphia, PA, USA

The first book to examine information visualization in a broader context, this is a comprehensive introduction to visualization and virtual reality. This new edition has been thoroughly updated to include the latest advances in information visualization, including applications within knowledge domain visualization, knowledge diffusion, visual data mining, software visualization, bioinformatics and social networks. Each chapter begins with a “visualization of the chapter” and a citation visualization of the contemporary literature on relevant subjects as a roadmap for the chapter; and ends with a comprehensive bibliography for further reading. This book will be a valuable source of information for practitioners, as well as researchers and graduate students.

Market: Postgraduates and Advanced Undergraduates
Location in bookstore: Computer Science
Logical and Relational Learning
From ILP to MRDM
Luc De Raedt, University of Freiburg, Germany

This is the first textbook on inductive logic programming (ILP) and multi-relational data mining (MRDM). These subfields of data mining and machine learning are concerned with analyzing structured data that arise in numerous applications, such as bioinformatics, Web mining, natural language processing, etc. The author explains some important techniques in detail by using case studies centered around well-known ILP or MRDM systems. These studies are among the "classics" in the field and they also provide a good starting point for a more general discussion. Related systems and techniques are covered in detailed bibliographies in each chapter.

Market: Lecturers, Graduates, and Scientists

Multivariate Public Key Cryptosystems
Jintai Ding, Jason E. Gower, Dieter Schmidt, University of Cincinnati, OH, USA

Multivariate public key cryptosystems (MPKC) is a fast-developing new area in cryptography. In the past 10 years, MPKC schemes have increasingly been seen as a possible alternative to number theoretic-based cryptosystems, as they are generally more efficient. As quantum computers are developed, MPKC will become a necessary alternative. This book offers a guide for adapting and implementing these cryptosystems for practical applications. Written more from a computational perspective, the book provides the necessary mathematical theory behind MPKC. Researchers in both computer science and mathematics will find it a useful starting point for exploring this new field.

Market: Researchers and Advanced-Level Students in Computer Science and Mathematics

Protein Modeling with Bioinformatics and Biophysics
Ron Elber, Cornell University, Ithaca, NY, USA

This book discusses the interface between the different disciplines and illuminates the mixed sets of theoretical and computational methods used by each to study proteins. Tools range from machine learning and statistical methods, to text matching and identification of homologous proteins, to statistical physics formulation of random energies and protein folding, and on to molecular dynamic simulations of proteins in action. This book will benefit advanced-level students who are interested in modern computational biology, and scientists who are interested in learning more about this interdisciplinary field.

Market: Research Scientists

Software Verification and Validation
An Engineering and Scientific Approach
Marcus S. Fisher, University of West Virginia, USA

The world needs an in-depth technical book describing the methods and techniques used to provide confidence in our system software. In today's market, not only are governments more focused on software safety, but private industry and academia are as well. The methods and techniques used to provide such confidence is commonly called software verification and validation.

Market: Research Scientists and Industry Practitioners
Information Systems Reengineering and Integration

Second Edition

Joseph Fong, City University of Hong Kong, China

Information and data are crucial elements of our daily life. As our society increasingly becomes more knowledge-based, knowledge engineering becomes more essential to society. The detailed descriptions of database conversion techniques, reverse and forward engineering, and the coverage of a re-engineering methodology for information systems, make this book an essential tool for information systems students and database practitioners.

Market: Undergraduates/Graduates of Information Systems and Knowledge Engineering

Location in bookstore: Computer Science

(Replaces 981-3083-15-8)

Model Driven Architecture and Ontology Development

Dragan Gasevic, Simon Fraser University, Surrey, BC, Canada; Dragan Djuric, Vladan Devedzic, University of Belgrade, Serbia and Montenegro

Defining a formal domain ontology is generally considered a useful step in almost every software project. However, this development is step seldom done, as software engineers are largely unfamiliar with semantically powerful AI concepts such as description logics or rule-based systems. This book fills the gap by thoroughly exploring Model Driven Architecture (MDA) application for ontology development on the Semantic Web.

Market: Graduate Students, Researchers, and Advanced Professionals

Location in bookstore: Computer Science

Ontological Engineering

With examples from the areas of Knowledge Management, e-Commerce and the Semantic Web

Second Edition

Asunción Gómez-Pérez, Mariano Fernández-López, Oscar Corcho, Universidad Politécnica de Madrid, Spain

This is a comprehensive survey of ontologies with practical guidance on selection and applications in Knowledge Management and e-commerce. Ontologies provide a common vocabulary of an area and define, with different levels of formality, the meaning of the terms and the relationships between them. The book presents the major issues of ontological engineering and describes the most outstanding ontologies currently available. It covers the practical aspects of selecting and applying methodologies, languages, and tools for building ontologies. **Ontological Engineering** will be of great value to students and researchers, and to developers who want to integrate ontologies in their information systems.

Market: Researchers, Postgraduates, Practitioners, Institutions, Industry, Scientists, and Students

Location in bookstore: Computer Science

An Introduction to Network Programming with Java

Jan Graba, Sheffield Hallam University, Sheffield, UK

The ability to construct reliable network software is a vital skill for many of today’s programmers and at the same time, Java’s comprehensive libraries of readily-accessible network programming features ensure that Java remains at the forefront of network software development. The 1st edition of this book provided a streamlined work that could serve as the core text on an undergraduate module & as the quick, clear, no-nonsense guide required by an IT professional. Notable amongst its features were its many code examples, screenshots and exercises.

Market: Undergraduates, Programmers, and Software Engineers

Location in bookstore: Computer Science
**Enabling Technologies for Wireless E-Business**

Weidong Kou, IBM Greater China Group; Yelena Yesha, University of Maryland, Baltimore, MD, USA (Eds.)

Advances in wireless technologies promise to reshape the way we conduct business. Yet to make wireless e-business work effectively, a variety of enabling technologies are needed. Kou and Yesha and their contributors provide comprehensive information on these technologies, including, for example, wireless security, mobile payment, location-based services, mobile data management, and RFID technologies. The presentation is targeted at students, lecturers, e-business developers, consultants, and business managers, and this book is an ideal introduction for both self-study and taught e-business classes or commercial training courses.

**Market:** Professionals, Graduate and Undergraduate Students  
**Location in bookstore:** Computer Science

**October 2006**  
**ISBN 1-84628-381-7**  
**Approx. $79.95**  
**Approx. 300 p.**  
**Softcover**

**Peer-to-Peer Computing**

**Building Supercomputers with Web Technologies**

Alfred Wai-Sing Loo, Lingnan University, Hong Kong, China

An organization usually has many microcomputers and workstations, which may be connected by a local network. However, many of these microcomputers and workstations are not used at all after office hours. Even when they are used, most of them are doing word processing, web browsing, etc., which take up less than 5% of the CPU power. By incorporating methods presented in this book, a peer-to-peer system can be built quickly. The CPU power of all computers can be shared by users who need more CPU power. Such a system may exceed the performance of supercomputers in some applications.

**Market:** Graduates, Advanced Undergraduates, and Researchers  
**Location in bookstore:** Computer Science

**Mobile 3D Graphics**

Alessio Malizia, University of Roma, Italy

While advanced 3D graphics techniques are well understood and supported by industry standards, this is less true in the emerging mobile applications and games market. This book redresses this imbalance, providing an in-depth look at the new OpenGL ES (The Standard for Embedded Accelerated 3D Graphics), and shows what these new embedded systems graphics libraries can provide for 3D graphics and games developers.

**Market:** Graduates, Postgraduates and Researchers  
**Location in bookstore:** Computer Science

**Adaptive Business Intelligence**

Zbigniew Michalewicz, Martin Schmidt, Matthew Michalewicz, Constantin Chiriac, Adelaide, Australia

In the modern information era, managers must recognize the competitive opportunities represented by decision-support tools. Adaptive business intelligence systems combine prediction and optimization tools to assist decision makers in complex, rapidly changing environments. Such systems address the fundamental questions: What will happen next? What should I do about that? This book will be suitable for nonspecialists such as managers who use tools based on soft computing in complex industrial and service environments and for researchers from other domains who need a quick introduction to this field.

**Market:** Business Managers, Engineers, and Scientists  
**Location in bookstore:** Management
Since Extensible Markup Language (XML) emerged as a new standard for information representation and exchange on the Internet, the problem of storing, indexing and querying XML documents has been in the forefront of database research issues. As the relationships between elements in an XML document are defined by nested structures, XML documents are often modeled as trees whose nodes are labeled with tags. Queries are typically formulated to retrieve documents by specifying both their structures and values in the XPath and XQuery languages.

XML Indexing and Pattern Matching

Bongki Moon, University of Arizona, USA

Since Extensible Markup Language (XML) emerged as a new standard for information representation and exchange on the Internet, the problem of storing, indexing and querying XML documents has been in the forefront of database research issues. As the relationships between elements in an XML document are defined by nested structures, XML documents are often modeled as trees whose nodes are labeled with tags. Queries are typically formulated to retrieve documents by specifying both their structures and values in the XPath and XQuery languages. XML Indexing and Pattern Matching introduces and discusses issues and challenges in XML indexing and pattern matching. The book describes state of the art techniques in indexing, and offers solutions to problems that arise in the real-world applications. The book is structured for research scientists and practitioners in industry. This book is also suitable for graduate-level students in computer science.

Market: Research Scientists, and Advanced-Level Students in Computer Science
Location in bookstore: Computer Science

Distributed Event-Based Systems

Gero Mühl, TU Berlin, Germany; Ludger Fiege, Siemens AG, Munich, Germany; Peter R. Pietzuch, Harvard University, Cambridge, MA, USA

This book provides the reader with an in-depth description of event-based systems. Covered are a complete spectrum of topics, ranging from a treatment of local event matching and distributed event forwarding algorithms, through a more practical discussion of software engineering issues raised by the event-based style, to a presentation of state-of-the-art research topics in event-based systems, such as composite event detection and security. The presentation gives researchers a comprehensive overview of the area and lots of hints for future research. The power of event-based architectures in modern system design is also shown, thus encouraging professionals to exploit this technique in next generation large-scale distributed applications like information dissemination, network monitoring, enterprise application integration, or mobile systems.

Market: Researchers, Graduate Students, and Professionals
Location in bookstore: Computer Science

Artificial Life Fundamentals

The Simulation and Synthesis of Living Systems

Christyeher Nehaniv, Kerstin Dautenhahn, University of Hertfordshire, Hatfield, UK

The book gives a comprehensive overview of the research field in terms of theory and techniques, so that students can acquire skills necessary to apply techniques of AL. The field Artificial Life is strongly interdisciplinary. Although the book is focused on realizations of Artificial Life in Computer Science and Artificial Intelligence and Adaptive Systems, when necessary, background from relevant fields like biology and robotics will be provided. This book is written to be used as a textbook by university students for courses in Artificial Intelligence, Artificial Life, Evolutionary Computation, Cognitive Science, Biology, and other courses which address issues of modeling and synthesizing life-like agents.

Market: Researchers, Graduate Students, and Professionals
Location in bookstore: Computer Science
Adaptive Learning of Polynomial Networks
Genetic Programming, Backpropagation and Bayesian Methods

Nikolay Nikolaev, Goldsmiths College, London, UK; Hitoshi Iba, University of Tokyo, Japan

This book delivers theoretical and practical knowledge for developing algorithms that infer linear and non-linear multivariate models, providing a methodology for inductive learning of polynomial neural network models (PNN) from data. The text emphasizes an organized identification process by which to discover models that generalize and predict well. The investigations detailed here demonstrate that PNN models evolved by genetic programming and improved by backpropagation are successful when solving real-world tasks. Here is an essential reference for researchers and practitioners in the fields of evolutionary computation, artificial neural networks and Bayesian inference, as well for advanced-level students of genetic programming.

Market: Researchers and Professionals in Genetic Programming and Statistical Learning
Location in bookstore: Computer Science
Conceptual Modeling for Traditional and Spatio-Temporal Applications
The MADS Approach
Christine Parent, University Lausanne, Switzerland; Stefano Spaccapietra, EPFL, Lausanne, Switzerland; Esteban Zimányi, University Brussels, Belgium

This book shows that a conceptual design approach for spatio-temporal databases is both feasible and easy to apprehend. The authors provide a detailed and comprehensive description of an approach that fills the gap between application conceptual requirements and system capabilities, covering both data modeling and data manipulation features. The ideas presented summarize several years of research on the characteristics and description of space, time, and perception. In addition to the authors’ own data modeling approach, MADS (Modeling of Application Data with Spatio-temporal features), the book also surveys alternative data models and approaches that target support of spatio-temporal modeling.

Market: Database and Application Designers, Students, and Researchers
Location in bookstore: Computer Science

Networked Neighbourhoods
The Connected Community in Context
Patrick Purcell, Imperial College London, UK (Ed.)

The setting for this book is the networked community. The treatment of the subject matter is broad and interdisciplinary, with contributions from computer science, sociology, design, human factors and communication technology. The chapter contributors, drawn from across Europe and North America, offer a varied prospectus of commentary, critique, sociological enquiry, technological development and research findings, which provides a rounded account of the progressive intermingling of social and electronic networks.

Market: Researchers and Lecturers
Location in bookstore: Computer Science

Transformations and Projections in Computer Graphics
David Salomon, California State University, Northridge, CA, USA

This book provides a thorough background in these two important topics in graphics. The book introduces perspective in an original way & discusses the mathematics of perspective in detail, in an accessible way. It treats nonlinear projections in depth, including the popular fisheye, panorama, & map projections.

Market: Computer Professionals
Location in bookstore: Computer Science

Forensic Computing
A Practitioner’s Guide
Second Edition
Anthony J. Sammes, Cranfield University, Swindon, UK; Brian Jenkinson, Over, UK

In this book, the authors show how information held in computer systems can be recovered and how it may be deliberately hidden or subverted for criminal purposes. Forensic Computing: A Practitioner’s Guide is illustrated by plenty of case studies and worked examples, and will help practitioners and students gain a clear understanding of: how to recover information from computer systems in such a way as to ensure that its integrity cannot be challenged and that it will be accepted as admissible evidence in court, the principles involved in password protection and data encryption, the evaluation procedures used in circumventing these safeguards, the particular legal issues associated with computer-generated evidence and how to ensure admissibility of such evidence.

Market: Practitioners, Final Year Undergraduates and Postgraduates, Forensic Scientists, and Legal Practitioners
Location in bookstore: Computer Science
## Essential Renderman

**Second Edition**

*Ian Stephenson*, University of Bournemouth, UK

RenderMan has long been associated with top-end film production and is an essential tool for creating many of the effects and images in recent animated films (such as Monsters, Inc., Finding Nemo and The Incredibles). RenderMan is widely available and, with the demand for higher quality images, is now used by computer-based artists at all levels of the graphics industry. Intended to provide a straightforward and easy introduction to the basic techniques involved, this book provides an excellent grounding, enabling readers to confidently move to more advanced texts.

**Market:** 2nd/3rd Year Undergraduates, and Novice Programmers

**Location in bookstore:** Computer Science

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## Hypercomputation

**Computing Beyond the Church-Turing Barrier**

*Apostolos Syropoulos*, Democritus University of Thrace, Xanthi, Greece

Hypercomputation is a relatively new theory of computation that is about computing methods and devices that transcend the so-called Church-Turing thesis. This book will provide a thorough description of the field of hypercomputation, covering all attempts at devising conceptual hypermachines and all new promising computational paradigms that may eventually lead to the construction of a hypermachine. Readers of this book will get a deeper understanding of what computability is and why the Church-Turing thesis poses an arbitrary limit to what actually can be computed. Hypercomputing is in and of itself quite a novel idea and as such the book will be interesting in its own right. The most important features of the book, however, will be the thorough description of the various attempts of hypercomputation: from trial-and-error machines to the exploration of the human mind, if we treat it as a computing device.

**Market:** Researchers, Engineers, and Professionals in Computer Science, Mathematics and Physics

**Location in bookstore:** Computer Science

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## SmartKom: Foundations of Multimodal Dialogue Systems

*Wolfgang Wahlster*, DFKI, Saarbrücken, Germany (Ed.)

The result of four years of intensive research in a large multimodal dialogue project involving 12 partners from academia and industry, SmartKom is one of the most advanced multimodal dialogue systems worldwide and is a landmark project in the history of intelligent user interfaces. The system provides symmetric multimodality in a mixed-initiative dialogue system with an embodied conversational agent. The same software architecture and components are used in three fully operational application scenarios. The theoretical and practical foundations of SmartKom represent a new generation of multimodal dialogue systems that deal not only with simple modality integration and synchronization, but cover the full spectrum of multimodal dialogue. With contributions by leading scientists in the field, this book gives the first comprehensive overview of the results of this seminal project.

**Market:** Researchers, Engineers, and Professionals in Computer Science

**Location in bookstore:** Computer Science
Harry Wechsler, George Mason University, Fairfax, VA, USA

Reliable Face Recognition Methods is a state-of-the-art survey text that examines the evolution of face-recognition systems as they drive for superior reliability and describes methods being considered and tested for enhancing system design and implementation. Providing the required background and motivation, the book explores new directions in the field and offers specific guidance on the most promising venues for future R&D, as well as realistic performance evaluation. With its well-focused approach and clarity of presentation, this new text/reference is an excellent resource for computer scientists, computer engineers, and other professionals and researchers who need to learn about face recognition. In addition, it is ideally suited to students studying biometrics, pattern recognition, and human-computer interaction.

Market: Academic and Industry Research Scientists and Practitioners
Location in bookstore: Computer Science

Computer Simulations with Mathematica and Java
Second Edition
Paul Wellin, California State University, Sonoma, CA, USA; Todd Gayley

The first edition of Computer Simulations with Mathematica drew on the capabilities of Mathematica to prototype algorithms and to write code in a variety of programming styles, choosing the appropriate style for the problem at hand. Today, running very large simulations in Mathematics is quite feasible, within an order of magnitude of compiled C and Fortran code. The new edition is updated and revised to accommodate all recent advances, including Mathematica 6, and use of Java programs. This is one of the first books to describe and take advantage of Mathematica 6, which contains a fantastic array of new visualization functions and dynamic interactive graphics machinery. The text is enriched by links to several web sites devoted to the topic.

Market: Undergraduates, Graduates, and Researchers
Location in bookstore: Computer Science

General Science

Academic Scientists at Work
Navigating the Biomedical Research Career
Second Edition
Jeremy Boss, Susan Eckert, Emory University, Atlanta, GA, USA

Academic Scientists at Work, Second Edition guides the scientist on the journey from the end of a postdoctoral career to the point of promotion to Associate Professor. This book focuses on the three aspects of promotion in an academic setting: Scholarship, Teaching, and Service. Valuable advice is provided on the following topics: Choosing and landing your ideal academic job, Setting up and effectively managing the lab, Obtaining funds, Organizing, writing, and publishing your research, Teaching and mentoring, Organizing and performing academic service, and The promotion and tenure process. Templates and worksheets designed to help you navigate your career with point-by-point instructions on how to complete them are provided. All downloadable blank worksheets are contained on the accompanying CD-ROM. Included are six database program files that can be used to help the reader organize his or her laboratory specific reagents. In addition to updating the contents of the previous version, this second edition includes a dozen articles written by the authors on managing your career that first appeared in Science’s Next Wave.

Market: Career Scientists, Those Involved in Life Sciences
Location in bookstore: Education
A Roadmap for Formal Property Verification

Pallab Dasgupta, Indian Institute of Technology, Kharagpur, India

Integrating formal property verification (FPV) into an existing design process raises critical questions: Have I written enough properties? Have I written a consistent set of properties? What should I do when the FPV tool runs into capacity issues? This book develops the answers to these questions and fits them into a roadmap for formal property verification—a roadmap that shows how to glue FPV technology into the traditional validation flow.

Market: Design Verification Engineers Responsible for Complex Chip and System Designs: CPRs, DSPs, Network Processors, Graphic Processors and the SoCs that use them and Electronic Design Automation (EDA)

Location in bookstore: Engineering

Broadband Fixed Wireless Access

Marc Engels, Flanders’ Mechatronics Technology Centre, Leuven, Belgium; Frederik Petre, IMEC, Leuven, Belgium

Broadband Fixed Wireless Access provides a systematic overview of the emerging WiMAX technology, and much of the material is based on the practical experiences of the authors in building new systems. This material will be of significant interest to network architects and developers of broadband fixed wireless access products. With the advent of the IEEE 802.16 standard and next generation equipment, this technology has been growing in interest. The authors discuss applications at microwave frequencies between 2 and 11 GHz that could be attractive options for operators without an existing access infrastructure for reaching end users. This introductory volume demystifies the technology and provides technical exposure to the various system trade-offs.

Market: Researchers and Professionals in the Field of Wireless Communication.

Location in bookstore: Engineering

Cooperation in Wireless Networks: Principles and Applications

Frank H.P. Fitzek, Aalborg University, Denmark; Marcos Katz, Samsung Electronics Co. Ltd., Korea (Eds.)

Cooperation in Wireless Networks: Principles and Applications covers the underlying principles of cooperative techniques as well as several applications demonstrating the use of such techniques in practical systems. The work is written in a collaborative manner by several authors from Asia, America, and Europe. Twenty chapters introduce and discuss in detail the main cooperative strategies for the whole communication protocol stack from the application layer down to the physical layer. Furthermore power saving strategies, security, hardware realization, and user scenarios for cooperative communication systems are introduced and discussed. The book also summarizes the strength of cooperation for upcoming generation of wireless communication systems, clearly motivating the use of cooperative techniques and pointing out that cooperation will become one of the key technologies enabling 4G and beyond. This book puts into one volume a comprehensive and technically rich view of the wireless communications scene from a cooperation point of view.

Market: Telecommunication Engineers, Professionals and Lecturers, Researchers in Social and Engineering Domain, Developers in Industry, Network Engineers, and Graduate Students

Location in bookstore: Engineering
Computation Engineering
Applied Automata Theory and Logic
Ganesh Gopalakrishnan, University of Utah, Salt Lake City, UT, USA
Although it is critical in today's world that students who take automata theory and logic courses retain what they have learned and understand how to use their knowledge, many textbooks typically emphasize automata theory only, not logic, thus losing a valuable opportunity to tie these subjects together and reinforce learning. This textbook uses interactive tools throughout, such as simple BDD and SAT tools. By providing a blend of theory and practical applications the material is presented as both inviting and current. Key concepts are illustrated in multiple domains so that information is reinforced and students can begin to tie theory and logic together.

Market: Junior and Senior Level Undergraduate Students in Automata Theory, Formal Methods, and Related Courses; Well-Suited for Broad Coverage of Applications of Automata and Logic for Grad Classes; Desk-Reference for Practicing Formal Verification Engineers
Location in bookstore: Engineering

Transistor Level Modeling for Analog/RF IC Design
Wladyslaw Grabinski, Geneva Modeling Center, Freescale, Switzerland; Bart Nauwelaers, Dominique Schreurs, K.U. Leuven, Belgium (Eds.)
This comprehensive volume presents a wealth of practical knowledge in the field of MOS transistor modeling. Coverage includes the 2/3D process and device simulations with a focus on high-voltage MOSFET devices, the development of both PSP and EKV models, and comparisons of physics-based MOSFET models with measurement-based models. The variety of subjects and the high quality content of this volume make it a preferred reference for researchers and users of MOSFET devices and models. The book is recommended for everyone involved in compact model developments, numerical TCAD modeling, parameter extraction, space-level simulation or model standardization.

Market: Professionals (IC Designers and Device Physics Researchers), Tutors and Senior PhD Students
Location in bookstore: Engineering

Acoustic MIMO Signal Processing
Yiteng (Arden) Huang, Lucent Technologies, Murray Hill, NJ, USA; Jacob Benesty, Université de Québec, Montréal, QC, Canada; Jingdong Chen, Lucent Technologies, Murray Hill, NJ, USA
Acoustic MIMO Signal Processing is divided into two major parts - the theoretical and the practical. The authors begin by introducing an acoustic MIMO paradigm, establishing the fundamental of the field, and linking acoustic MIMO signal processing with the concepts of classical signal processing and communication theories in terms of system identification, equalization, and adaptive algorithms. In the second part of the book, a novel and penetrating analysis of aforementioned acoustic applications is carried out in the paradigm to reinforce the fundamental concepts of acoustic MIMO signal processing. Acoustic MIMO Signal Processing is a timely and important professional reference for researchers and practitioners from universities and a wide range of industries. It is also an excellent text for graduate students who are interested in this exciting field.

Market: Reference work for Graduate Students, Practitioners, and Researchers
Location in bookstore: Engineering
Radio Design in Nanometer Technologies

Mohammed Ismail, The Ohio State University, Columbus, OH, USA; Delia Rodríguez de Llera González, The Royal Institute of Technology, Stockholm, Sweden (Eds.)

Radio Design in Nanometer Technologies addresses current trends and future directions in radio design for wireless applications. As radio transceivers constitute the major bottleneck in a wireless chipset in terms of power consumption and die size, the radio must be designed in the context of the entire system, end to end. Therefore the book will address wireless systems as well as the DSP parts before it gets into coverage of radio design issues. To that end, the book contains three parts:

Market: RFIC and Mixed Signal Designers, Product Managers, and Graduate Students in Electrical and Computer Engineering, Physics and Computer Science
Location in bookstore: Engineering

Ultra-Low Voltage Nanoscale Memories

Kiyoo Itoh, Masashi Horiguchi, Hitachi, Tokyo, Japan; Hitoshi Tanaka, Renesas Technology Corp., Tokyo, Japan

Ultra-Low Voltage Nano-Scale Memories, based on the authors’ extensive experience in memory and low-voltage designs in industry, bridges the different necessary technologies between memory, digital, and analog technologies, and even between DRAMs and SRAMs. Knowledge that authors have acquired to date, and circuits that authors regard as important, are covered from the basics to the state-of-the-art. Thus, the book is beneficial to students and engineers interested in ultra-low voltage nano-scale LSIs. Moreover, it is instructive not only for memory designers, but also for all digital and analog LSI designers who are the front edge of such LSI developments, since it is full of insight to develop such LSIs.

Market: Circuit Designers; Practitioners, Scientists, and Researchers
Location in bookstore: Engineering

Wireless Ad Hoc and Sensor Networks

A Cross-Layer Optimization Approach

Raja Jurdak, University of California-Irvine, USA

This book covers timely topics related to the design as well as the performance analysis and evaluation of wireless ad hoc and sensor networks. It addresses the state-of-the-art architectures, algorithms, and challenges, in this vigorous area of research and development. A wide range of topics, such as multiple access, unicast routing, multicasting, broadcasting, mobility management, and energy efficiency, to mention a few, are examined. This book also encompasses advanced topics pertaining to cross-layer design, connection admission control (CAC), quality of service (QoS), security, and A-Cell networks. The focus on two hot wireless research and applications areas (ad hoc and sensor networks) makes it extremely timely.

Market: Researchers and Graduate Students in Wireless Networks.
Location in bookstore: Engineering

Digital Timing Measurements

From Scopes and Probes to Timing and Jitter

Wolfgang Maichen, Terradyne Inc, Agoura Hills, CA, USA

As many circuits and applications now enter the Gigahertz frequency range, accurate digital timing measurements have become crucial in the design, verification, characterization, and application of electronic circuits. To be successful in this endeavour, an engineer needs a knowledge base covering instrumentation, measurement techniques, signal integrity, jitter and timing concepts, and statistics. Very often even the most experienced digital test engineers, while mastering some of those subjects, lack systematic knowledge or experience in the high speed signal area.

Market: IC Characterization Engineers, IC Designers, Digital Systems Designers, Analog Systems Designers, Electronic Test Engineers, Semiconductor Test Engineers, Test Program Developers, Application Engineers, and Product Engineers
Location in bookstore: Engineering
Data Converters
Franco Maloberti, Pavia University, Italy; UT Dallas, USA
This is the first graduate-level textbook presenting a comprehensive treatment of Data Converters. The text explores specification, conversion methods and architectures, circuit design and testing through the use of many examples, most in the form of computer behavioral simulations. The book assumes a solid background in analog and digital circuits as well as a working knowledge of simulation tools for circuit and behavioral analysis. A background on statistical analysis is helpful, though not strictly necessary.

Market: Scientists, Practitioners, Students, and Integrated Circuit Design Engineers
Location in bookstore: Engineering

Verification with TEAL
Michael Mintz
This book takes a street-smart look at verification of large designs. It describes Object Oriented Programming using C++ from a verification perspective. The book includes numerous examples of C++ classes and techniques. In addition, it describes TEAL, a C/C++ Test Environment Abstraction Layer. Because TEAL is a C/C++ library, algorithms can be developed that both validate the hardware design and can be re-used in the production software. The program is provided on the enclosed CD. The book distills lessons learned down to a toolbox of techniques and guidelines.

Market: Professional Circuit Verification and Design Engineers
Location in bookstore: Engineering

Design for Manufacturability and Statistical Design
A Comprehensive Approach
Michael Orshansky, University of Texas at Austin, Austin, Texas, USA; Sani Nassif, IBM, Austin, Texas, USA; Duane Boning, MIT, Cambridge, MA, USA
This book will present a comprehensive overview of methods that need to be mastered in understanding state-of-the-art design for manufacturability and statistical design methodologies. Broadly, design for manufacturability is a set of techniques that attempt to fix the systematic sources of variability, such as those due to photolithography and CMP. Statistical design, on the other hand, deals with the random sources of variability. Both paradigms operate within a common framework, and their joint comprehensive treatment is one of the objectives of this book and an important differentiation.

Market: Circuit Designers, CAD engineers, Researchers, and Graduate Students
Location in bookstore: Engineering

Ultra-Low Power Wireless Technologies for Sensor Networks
Brian Otis, University of Washington, Seattle, WA, USA; Jan Rabaey, University of California - Berkeley, Berkeley, CA, USA
The ubiquity of wireless links in our everyday life is increasing dramatically. One example of this is the emerging field of wireless sensor networks. This new field presents many opportunities and just as many challenges. One particularly difficult aspect of wireless sensing is the implementation of the radio link. This book will describe important transceiver characteristics that are unique to sensor network communication. Then, various novel solutions to these problems are presented. For example, to enable energy scavenging, a technique that harvests ambient energy to power the sensor node indefinitely, very low power levels (around 1mW) are necessary for the receiver. A vanishingly small form factor is also necessary, necessitating extremely high levels of integration and small antenna dimensions. For low-overhead communication in a bursty network environment, the transceiver turn-on and turnaround time must be extremely short.

Market: Students and Engineers who are Designing Communication Systems for Pervasive and Low Power Applications
Location in bookstore: Engineering
Cryptographic Algorithms on Reconfigurable Hardware
Francisco Rodríguez-Henríquez, N.A. Saqib, Arturo Díaz Pérez, Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV), Col. San Pedro Zacatenco, Mexico D.F., Mexico; Cetin Kaya Koc, Oregon State University, USA

This book will cover the study of computational methods, computer arithmetic algorithms, and design improvement techniques needed to implement efficient cryptographic algorithms in FPGA reconfigurable hardware platforms. The concepts and techniques to be reviewed in this book will make special emphasis on the practical aspects of reconfigurable hardware design, explaining the basic mathematics related and giving a comprehensive description of state-of-the-art implementation techniques. Thus, the main goal of this monograph is to show how high-speed cryptographic algorithms implementations can be achieved on reconfigurable hardware devices without posing prohibited high requirements for hardware resources.

Market: Professionals in Technical areas Related to Computer Engineering and Networks in Network Security. Graduate Students in Computer Engineering and Communications

Location in bookstore: Engineering

SystemVerilog for Design
A Guide to Using SystemVerilog for Hardware Design and Modeling
Second Edition
Stuart Sutherland, Sutherland-HDL, Tualatin, OR, USA; Simon Davidmann, Peter Flake, Imperas, UK

SystemVerilog for Design, Second Edition has been extensively revised on a chapter by chapter basis to include the many text and example updates needed to reflect changes that were made between the first edition of this book was written and the finalization of the new standard. It is important that the book reflect these syntax and semantic changes to the SystemVerilog language. In addition, the second edition features a new chapter that explains the SystemVerilog “packages”, a new appendix that summarizes the synthesis guidelines presented throughout the book, and all of the code examples have been updated to the final syntax and rerun using the latest version of the Synopsys, Mentor, and Cadance tools.

Market: Professional Designers who use Verilog, and Hardware Description Language Academics who teach Digital Design

Location in bookstore: Engineering

Abstraction Refinement for Large Scale Model Checking
Chao Wang, NEC Labs, USA; Gary D. Hachtel, Fabio Somenzi, University of Colorado, USA

The techniques proposed in this book are fully automatic and are crucial at improving the performance of abstraction refinement. Their application to model checking can significantly increase the model checker's ability to handle large designs. Our experimental studies on some real-world benchmark circuits indicate that these automatic abstraction refinement techniques are the key to applying model checking to industrial-scale systems.

Market: EDA Researchers, Practitioners, and Software Developers

Location in bookstore: Engineering

High Throughput Iterative Decoders:
Towards Shannon Bound in VLSI
Engling Yeo, Borivoje Nikolic, Electrical Engineering & Computer Science, University of California at Berkeley, USA

High Throughput Iterative Decoders: Towards Shannon Bound in VLSI addresses the algorithms and implementations of iterative decoders for error control in communication applications. The authors present the architectural and implementation issues related to the VLSI implementation of high-throughput iterative decoders. The computational hardware and memory requirements of different competing architectures are discussed. This monograph also introduces reduced complexity modifications of algorithms that provide efficient mapping into architectures and VLSI implementations.

Market: Researchers and Professionals

Location in bookstore: Engineering
A Linear Systems Primer

Panos J. Antsaklis, Anthony N. Michel, University of Notre Dame, IN, USA

Based on a streamlined presentation of the authors’ successful work *Linear Systems* (0-8176-4434-2), this textbook provides an introduction to systems theory with an emphasis on control. The material presented is broad enough to give the reader a clear picture of the dynamical behavior of linear systems as well as their advantages and limitations. The emphasis throughout is on time-invariant systems, both continuous—and discrete—time. For full coverage of time-variant systems, the reader is encouraged to see the companion book *Linear Systems* (0-8176-4434-2), which contains more detailed descriptions and additional material, including all the proofs of the results presented here.

**Market:** Senior Undergrads and First-Year Grad Students in Engineering; Electrical, Mechanical, Chemical, and Aerospace Engineers; Applied Mathematicians and Researchers Working in Control, Communications, and Signal Processing

**Location in bookstore:** Engineering

November 2006
ISBN 0-8176-4460-1
Approx. $59.95
Approx. 416 pp., 50 illus.
Softcover

Lead-free Soldering

Jasbir Singh Bath, Solectron Corporation, Milpitas, CA, U.S.A. (Ed.)

*Lead-free Soldering* is written as a practical reference guide for engineers scrambling to meet the requirements of and push toward lead-free components and in turn lead-free soldering in computers, cell phones and other electronic assemblies. This task has taken on greater urgency worldwide but especially in the European Union with the implementation of the Requirements of Hazardous Substances (RoHS), that will go into effect on July 1, 2006 and with pending implementation of laws in China and California.

**Market:** Process Engineers, Manufacturing Engineers, Quality Assurance Engineers, Electronics Engineers and Material Scientists.

**Location in bookstore:** Engineering

October 2006
ISBN 0-387-32466-6
Approx. $99.00
Approx. 280 p.
Hardcover

Immersive Audio Signal Processing

Sunil Bharitkar, Chris Kyriakakis, Audessey Laboratories Inc., Los Angeles, CA, USA

This is one of the first graduate texts on Immersive Audio Signal Processing. It provides an introduction to Digital Signal Processing and Psychoacoustics, as well as a wealth of state-of-the-art applications in Audio Signal Processing, a popular and timely aspect of all Signal Processing courses within Electrical Engineering curricula. The text lays out the foundation of DSP for audio and the fundamentals of auditory perception, then goes on to discuss immersive audio rendering and synthesis, the digital equalization of room acoustics, and various DSP implementations. Accessible and relevant, and enriched with real-life examples and the most up-to-date set of references published, it is a must-have for all Electrical Engineering instructors and students investigating Digital Signal Processing.

**Market:** Advanced Students, Educators and Researchers Working in Audio Signal Processing, Acoustics and Psychoacoustics

**Location in bookstore:** Engineering

May 2006
$79.95
Approx. 218 pgs. 175 illus.
Hardcover
Despite being in the spotlight for a very long time; there is no such book that is dedicated to the Tribology and applications of DLC films. Both scientifically and industrially, interest in these films has grown rapidly in recent years and this trend is expected to grow even further with increasing industrial applications. This book contains some of the most relevant and fundamental information on the Tribology and applications of DLC films. It also provides reliable and up-to-date information on different DLC coatings and their tribological properties which are available for use in various industrial applications. Written by leading specialists in their respective fields, this book presents various examples of these applications, with an emphasis on both mathematical properties and their physical meaning. The book is an excellent self-study reference. It may also be used in a course or seminar on selected topics in transport phenomena or applications of the Boltzmann equation to many-particle transport.

Market: Researchers and Engineers Working in Microelectronics, Manufacturing/Transportation, and Medical Fields; Professors and Students at Universities, and Libraries.

Location in bookstore: Engineering
Neural Networks in a Softcomputing Framework

Ke-Lin Du, M. N. S. Swamy, Concordia University, Montreal, QC, Canada

Conventional model-based data processing methods are computationally expensive and require experts' knowledge for the modelling of a system. Neural networks are a model-free, adaptive, parallel-processing solution. This textbook provides a powerful and universal paradigm for information processing; it reviews the most popular neural-network methods and their associated techniques. Each chapter has a systematic survey of each neural-network model. Computational intelligence topics like fuzzy logic and genetic algorithms (tools for neural-network learning) are introduced. Array signal processing problems are used to show the applications of each model.

Market: Advanced Undergraduate Students, Postgraduate Students, and Researchers
Location in bookstore: Engineering

Microfluidics

Jens J. Ducrée, Roland Zengerle, University of Freiburg, Germany

This book provides a coherent avenue into the rapidly evolving discipline of microfluidics and its multiple facets - inkjet printers, micropumps, analytical chips and many other technologies. The comprehensive first part presents a systematic overview of the basic set of principles underlying microfluidic systems, i.e. it explains the full scope of principles underlying microfluidic technologies in a coherent context. It extracts only these contributions from a variety of disciplines such as fluid dynamics, physics and chemistry which are of relevance to microfluidics. These inputs then are refined and streamlined to make the subsequent connection to related microfluidic technologies transparent to the reader.

Market: Researchers and Graduate Students as well as Practicing Engineers Dealing with Micro- and Nanotechnology
Location in bookstore: Engineering

Engineering Mechanics

Part 1: Equilibrium

C. Hartsuijer, Delft University of Technology, Delft, The Netherlands; J. W. Welleman

This work treats structural and continuum mechanics in a unified and consistent manner. Analytical and graphical methods are given equal emphasis to account for the contemporary requirements of computer applications on one hand, and visualization and insight on the other hand. Therefore, all theoretical developments are presented both in the text and by means of an extensive set of figures. Text and figures complement each other, and this twofold presentation is also used in the examples. In the same spirit, both formal and intuitive (engineering) arguments are used in parallel to derive the principles used for instance in Bending Moment diagrams and Shear Stress diagrams. Importantly, sign conventions for member forces are related to the stress definitions of continuum mechanics and then applied consistently throughout the series.

Market: Major Graduate and Undergraduate Structural Mechanics Courses for Civil, Mechanical, Naval, Aerospace Engineers and Architectural and Industrial Designers
Location in bookstore: Engineering

Part 2: Stresses, Strains, Displacements

C. Hartsuijer, Delft University of Technology, Delft, The Netherlands; J.W. Welleman

Market: Major Graduate and Undergraduate Structural Mechanics Courses for Civil, Mechanical, Naval, Aerospace Engineers and Architectural and Industrial Designers
Location in bookstore: Engineering
Supercharging of the Internal Combustion Engine

Hermann Hiereth, Esslingen; Peter Prenninger, AVL List GmbH, Graz

The book focuses on all aspects of supercharging internal combustion engines. Charging systems and components, the theoretical basic relations between engines and charging systems as well as layout and evaluation criteria for best interaction are addressed in detail. Recent experiences in design and development of supercharging systems, improved graphical presentations and most advanced calculation and simulation tools are described. The book is prepared for students enrolled in mechanical engineering courses on the one hand, and for research-development—and application—engineers, specialized in the field of supercharging systems for combustion engines, on the other leading to improved knowledge about benefits and problems of supercharging and providing help and tips for application engineers to design, optimize and develop supercharged internal combustion engines.

Market: Researchers and Students
Location in bookstore: Engineering

Surface Engineered Surgical Tools and Medical Devices

Mark Jackson, Purdue University, Lafayette, IN, USA; Waqar Ahmed, Manchester Metropolitan University, Manchester, UK (Eds.)

Medical devices and tools that contain nano and micro technologies allow surgeons to perform familiar tasks with greater precision and safety as well as monitor physiological and biomechanical parameters more accurately. While surgeons have started to master the use of nano tools in the operating room, the impact and interaction of nano tools with nano materials has yet to be addressed in a comprehensive manner. Surface Engineered Surgical Tools and Medical Devices is the first book written that looks at the interaction between nano tools and nano materials and explains the use of appropriate tools in surgery for a variety of applications.

Market: Materials Scientists, Nanotechnologists, Chemists, Mechanical Engineers, Dentists, Surgeons, and Clinical Practitioners.
Location in bookstore: Engineering

Meshless Methods in Solid Mechanics

James Lee, Youping Chen, Azim Eskandarian, George Washington University, Washington, DC, USA

This book is dedicated to the understanding of physical and mathematical characteristics of computational solid mechanics by meshless methods. The book reviews and introduces theories, principles, procedures, and formulations that lead to meshless or mesh free methods. The book includes a complete bibliography, ten chapters with several numerical examples, figures, and plots describing computational results, end of chapter exercises/problems in selected sections, and Appendices which provide some fundamental and relevant mathematics required for the reader.

Market: Graduate and Advanced Undergraduate Students in Mechanical Engineering, Aerospace Engineering, Civil Engineering, Engineering Mechanics, Engineering Science, Applied Physics, Engineering, Physics, Computational Sciences, Numerical Methods, and Applied Mathematics; Engineers and Applied Scientists
Location in bookstore: Engineering

Theory of Applied Robotics

Gholamreza Nakhaie Jazar, North Dakota State University, Fargo, North Dakota, USA

Theory of Applied Robotics: Kinematics, Dynamics, and Control is appropriate for a senior level or first year graduate level course in robotics. The author applies a sound pedagogical format that breaks down theoretical material into an easy-to-follow, four-step process—presentation, statement, proof and examples. The topics and materials selected for inclusion are cutting-edge and will be of interest to graduate-level students of applied robotics, kinematics, dynamics and control, and researchers in the field.

Market: First-Year Graduate Courses in Mechanical, Electrical, or Industrial Engineering. In Courses Entitled Robotics Dynamics and Control.
Location in bookstore: Engineering
One of the biggest challenges facing engineers involved in MEMs research, development and manufacturing is identifying a structured MEMs design methodology. Existing MEMs design literature has placed a significant emphasis on the modeling aspect of design. There is a need for a body of literature that describes a design "methodology" for MEMs. This book builds on the extensive body of literature that already exists on analytical and numerical multi-Physics "modeling" and provides a structured approach to microsystem design. Micro Electro Mechanical Systems (MEMs): A Design Approach focuses on the development of a standard methodology for MEMs using Six Sigma techniques.


Location in bookstore: Engineering
Experimental Characterization Techniques for Micro/Nanoscale Devices

Kimberly L. Turner, University of California, Santa Barbara, CA, USA; Peter G. Hartwell, Hewlett Packard Laboratories, Palo Alto, CA, USA

Experimental Characterization Techniques for Micro/Nanoscale Devices introduces commonly utilized and important techniques for the dynamic measurement and characterization of MEMS and NEMS devices. After reading this book, MEMS Designers and researchers will be able to determine the best test technique for his/her application, put together a viable experimental setup, complete the measurements, and do appropriate error and/or fatigue analysis on the collected data.

Market: MEMS Designers and Researchers
Location in bookstore: Engineering

Computational Contact Mechanics

Second Edition

Peter Wriggers, University of Hannover, Germany

This is the second edition of a valuable reference source for numerical simulations of contact mechanics useful in fields like civil engineering, car design, aeronautics, metal forming, or biomechanics. Boundary value problems involving contact are of great importance in industrial applications in engineering such as bearings, metal forming processes, rubber seals, drilling problems, crash analysis of cars, rolling contact between car tires and the road, cooling of electronic devices. Other applications are related to biomechanical engineering design where human joints and implants of teeth are of consideration.

Market: Researchers and Graduate Students in Mechanical and Civil Engineering, Applied Mathematics
Location in bookstore: Engineering

Environmental Sciences

Urban Forest Acoustics

Voichita Bucur, INRA, Champenoux, France

Trees can reduce noise by sound reflection and absorption. Investigating noise control in urban environments, Voichita Bucur’s new book Urban Forest Acoustics covers the following topics: dendrological characteristics of trees, factors affecting sound propagation in forest belts, equipment for in situ noise measurements, acoustical sensors for the measurement of tree characteristics, noise attenuation in situ due to the ground and scattering by trees, trunks, foliage, branches, protection against traffic noise from highways, railways, aircraft, relations between urban noise and trees, birds, and insects, fire control, economic aspects related to the value of urban trees. The book is of particular interest to those concerned with environmental management, noise control, and urban forestry.

Market: Environmental Managers, Foresters, Scientists, and Advanced Students
Location in bookstore: Environment
**Exercises in Environmental Physics**

Valerio Faraoni, Valerio Faraoni, Bishop's University, Lennoxville, Canada

This book presents a collection of problems and exercises in environmental science. It can be used in many courses in environmental studies especially environmental physics, energy and the environment, and atmospheric physics. The mathematical background is given in an introductory chapter.

This book may be used individually for the above mentioned courses or can accompany any text book.

**Market:** Lecturers, Teachers, Graduates, Undergraduates and Researchers in Environmental Sciences.

**Location in bookstore:** Environment

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**Stable Isotope Ecology**

Brian Fry, Louisiana State University, Baton Rouge, LA, USA

Stable Isotope Ecology provides a solid introduction to this advanced subject, and can also be used as an instructive review for more experienced researchers and professionals. The book approaches the use of isotopes from the perspective of ecological and biological research, but its concepts can be applied within other disciplines as well. In order to enable scientists to establish source-sink connections in ecological settings, Stable Isotope Ecology begins by reviewing fundamental topics of tracer fractionation and mixing. Several mini-reviews profile problems and successes encountered with isotope tracing in particular focus areas, while emphasizing the role that humans increasingly play in changing our planetary ecosphere. A novel, step-by-step spreadsheet modeling approach is also presented for circulating tracers in any ecological system, including any favorite system an ecologist might dream up while sitting at a computer. Just type in values and watch the isotope action unfold in the dynamic models.

**Market:** Environmental Scientists, Graduate Students, Upper-Level Undergraduates, Researchers, and Practicing Ecologists

**Location in bookstore:** Environment

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**Land-Use and Land-Cover Change**

Local Processes and Global Impacts

Eric F. Lambin, Catholic University of Louvain, Belgium; Helmut J. Geist, University of Aberdeen, UK (Eds.)

Among the causative mechanisms behind land change, synergetic factor combinations are found to be more common than single key factor explanations. Aggregated globally, multiple impacts of local land changes are shown to significantly affect central aspects of earth-system functioning. This book presents innovative developments and applications in the fields of modeling and scenario construction.

**Market:** World Community of Global Environmental Change Scientists, both Natural and Social Scientists; Researchers, Researchers and Students at University Departments dealing with Land-Related Issues of Global Environmental Change

**Location in bookstore:** Environment
3-D Structural Geology
A Practical Guide to Quantitative Surface and Subsurface Map Interpretation
Second Edition
Richard H. Groshong, University of Alabama, Northport, AL, USA

This practical handbook teaches techniques for making the best possible interpretation of geological structures at the map scale and for extracting the maximum amount of information from surface and subsurface maps. The book is designed for the professional who is concerned about both the accuracy of an interpretation and the speed with which it can be obtained from incomplete data. Numerous analytical solutions are given that can be easily implemented with a pocket calculator or spreadsheet. Interpretation strategies are defined for GIS or CAD users, yet are simple enough to be done by hand. Users of this book will learn to produce better maps and cross sections, judge the quality of existing maps, and catch and correct mapping errors. The reorganized second edition incorporates much new material, including 3-D models and techniques for using kinematic models to predict fault and ramp-anticline geometry. Includes CD-ROM with color graphs and models, plus exercises.

Market: Students and Professional Geologists in Structural Geology, Sedimentology, Petroleum Geology and Engineering Geology
Location in bookstore: Geosciences

Human Mitochondrial DNA and the Evolution of Homo sapiens
Hans-Jürgen Bandelt, University of Hamburg, Germany; Martin Richards, University of Leeds, UK; Vincent Macaulay, University of Glasgow, UK (Eds.)

The mitochondrial DNA is one of the genetic systems most explored because of what it can tell us about the human past. This volume takes a unique perspective, presenting the disparate strands that must be tied together to exploit this system. From molecular biology to anthropology, statistics to ancient DNA, this first volume of three presents the global picture of human mitochondrial DNA variation. It takes a critical look at the field, flagging the problems, as well as the successes, and always placing the mitochondrial phylogeny at centre stage.

Market: Scientists and Researchers
Location in bookstore: Life Sciences

Conceptual Ecology and Invasions Biology: Reciprocal Approaches to Nature
Marc William Cadotte, Sean M. McMahon, University of Tennessee, Knoxville, TN, USA; Tadashi Fukami, Department of Zoology, University of Hawaii at Manoa, Honolulu, USA (Eds.)

In this edited volume, global experts in ecology and evolutionary biology explore how theories in ecology elucidate the invasion processes while also examining how specific invasions inform ecological theory. This reciprocal benefit is highlighted in a number of scales of organization: population, community and biogeographic, while employing example invaders in all major groups of organisms and from a number of regions around the globe. The chapters in this volume utilize many of the cutting edge observational, experimental, analytical and computational methods used in modern ecology. Through merging conceptual ecology and invasion biology we can obtain a better understanding of the invasion process while also developing a better understanding of how ecological systems function.

Market: Scientist, Researchers and Graduate Students Working/Studying Ecology, Evolutionary Biology, Conservation or Invasion Biology.
Location in bookstore: Life Sciences
## The Epidemiology of Plant Diseases

**Second Edition**  
B.M. Cooke, University College Dublin, Dublin, Ireland;  
D.G. Jones, B. Kaye, University College Dublin, Dublin, Ireland (Eds.)

Plant disease epidemiology is a dynamic science that forms an essential part of the study of plant pathology. This new edition details the considerable progress since the 1998 first edition, particularly molecular diagnostics, modeling, fungicide resistance and information technology. The book will serve as an invaluable reference work for those involved in this vital aspect of crop plant science.

**Market:** Advanced Undergraduates, Post-Graduate University Researchers, Lecturers in Universities and Colleges, and Workers in Research Institutes  
**Location in bookstore:** Life Sciences

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## The Air Spora

A manual for catching and identifying airborne biological particles  
Maureen E. Lacey, Jonathan S. West, Plant Pathogen Interactions, Harpenden, UK

*The Air Spora* is an illustrated guide to trapping, identifying and quantifying airborne biological particles such as fungus and plant spores and pollen. This book will be of use to anyone interested in aerobiology or studying applied aspects such as dispersal and effect of allergens, or human, animal and plant pathogens. Including a comprehensive review of what is in the air and detailing the historical development of theories leading to modern aerobiology, the book explains the fundamental processes behind airborne dispersal and techniques used to sample, identify and quantify biological particles. Methods are explained in a step-by-step guide for the use of standard air sampling devices. Although formats applicable to modern molecular and immunological techniques are described, the emphasis of the book is on simple visual identification of particles in air samples using traditional microscopy. Consequently a chapter on setting-up and using a light microscope is included, although experienced researchers can skip to chapters showing photographs of examples of the Air Spora and nine color plates of paintings of airborne particles at a magnification of x1000.

**Market:** University and Institute Research Scientists, and Plant Pathologists  
**Location in bookstore:** Life Sciences

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## Cognitive Development in Chimpanzees

Tetsuro Matsuzawa, Masaki Tomonaga, Masayuki Tanaka, Kyoto University, Aichi, Japan (Eds.)

From an evolutionary perspective, understanding chimpanzees offers a way of understanding the basis of human nature. This book on cognitive development in chimpanzees is the first of its kind to focus on infants reared by their own mothers within a natural setting, illustrating various aspects of chimpanzee cognition and the developmental changes that accompany them. The subjects of this book are chimpanzees of three generations inhabiting an enriched environment as well as a wild community in West Africa; and phenomena such as face recognition, concept formation, object manipulation, tool manufacture and use, decision making, learning, communication, self-awareness, intentionality, understanding others’ minds, cooperation, deception, altruism, and reciprocity observed within these groups are reported herein. Unique approaches both in the field and in the laboratory go hand in hand to illustrate the cognitive world of our closest living evolutionary relatives.

**Market:** Scientists, Graduate and Undergraduate Students in Primatology, Animal Behaviour, Psychology, Cognitive Science, Animal Ecology, and Anthropology  
**Location in bookstore:** Life Sciences
Wood and Tree Fungi
Biology, Damage, Protection, and Use
Olaf Schmidt, University of Hamburg, Germany

Wood and Tree Fungi provides an up-to-date overview of the various wood and tree fungi that damage trees, lumber, and timber, with special focus given to identification, prevention, and remediation techniques. First, the fundamentals of cytology and morphology, growth and reproduction, formal genetics, and enzymatic wood decay are addressed. Causative factors are then analyzed, followed by descriptions of interactions like antagonism, succession, and mycorrhiza. The more practical section describes damages by viruses on trees and care provider to separate the dangerous from the fatal. The New York Botanical Garden Handbook of Poisonous and Injurious Plants discusses the interaction of humans with potentially poisonous plants that are found in either the home or garden.

Market: Advanced students, Teachers and Scientists; Professionals Working in Wood Protection and Prevention of Wood Decay, Foresters, and Architects
Location in bookstore: Life Sciences

Handbook of Poisonous and Injurious Plants
Second Edition
Richard Shih, Morristown Memorial Hospital, Morristown, NJ, USA; Lewis S. Nelson, New York University School of Medicine, New York, NY USA; Michael Balick, NY Botanical Gardens, Bronx, New York, USA

Plant poisoning is an important problem in the United States, and exposures to plants accounts for approximately 10% of the annual calls to the nation’s Poison Control Centers. Fortunately, few life-threatening poisonings occur, but paradoxically this increases the need for accurate information, like that contained in this book, to allow the health care provider to separate the dangerous from the fatal. The New York Botanical Garden Handbook of Poisonous and Injurious Plants discusses the interaction of humans with potentially poisonous plants that are found in either the home or garden.

Market: Researchers and Scientists in the areas of Botany and Plant Sciences, Clinicians, Emergency Medicine Practitioners, Emergency Medicine Departments at Universities, and Poison Control Centers
Location in bookstore: Life Sciences

Growing Food
A Guide to Food Production
Anthony Winch, Hereford, UK

This specialist handbook is intended as a quick and easy reference guide to be used by individuals and organizations that are involved with the production of food, from both agriculture and horticulture. It is designed to be used as a reference book that answers basic questions about how food is produced from plants, and aims to demystify the subject of growing food as far as possible. The focus is firmly on the technical aspects of food crops; topics such as animal husbandry, agrochemicals and genetic engineering are only briefly mentioned. There is a strong international flavor to the book, with a view to making it user friendly throughout the English speaking community. In fact the manual is designed to be also used by those who normally speak or read English as their second language, using simple English terminology and phrasing, with explanations and cross references of the terminology, acronyms and terms used.

Market: Development and Aid Agencies Both in Private and Public Sector (United Nations Agencies, NGOs, etc)
Location in bookstore: Life Sciences
Scaling and Uncertainty Analysis in Ecology

Methods and Applications

Jiangguo Wu, Arizona State University, Tempe, USA; K. Bruce Jones, US Environmental Protection Agency, Las Vegas, USA; Harbin Li, USDA Forest Service Southern Research Station, Charleston, USA; Orie L. Loucks, Miami University, Oxford, USA (Eds.)

Presenting the current state of the art in scaling and uncertainty in ecology, Scaling and Uncertainty Analysis in Ecology is the first book of its kind—explicitly considering uncertainty and error analysis as an integral part of scaling. Primarily, the book draws together a series of important case studies to provide a comprehensive review and synthesis of the most recent concepts, theories and methods in scaling and uncertainty analysis. It compares current definitions and ideas concerning scale within a coherent framework, and examines two key scaling approaches: similarity-based scaling, which is rooted in the idea of similitude or self-similarity; and dynamic model-based scaling, which emphasizes processes and mechanisms.

Market: Graduate students, Academic Professionals, and Applied Researchers and Specialists in Ecology, Environmental science, Resource Management, Global Change Science and Earth Sciences

Location in bookstore: Life Sciences

Analysis II

Herbert Amann, Universität Zürich, Switzerland; Joachim Escher, Universität Hannover, Germany

The second of three volumes in this introduction to analysis continues the clear development of Analysis I (3-7643-7153-6), creating a basis which allows exploration considerably beyond the material represented in traditional textbooks. The book covers the integration theory of functions of one variable, the multidimensional differential calculus and the theory of curves and line integrals.

Market: Advanced Undergraduate and Graduate Students, Advisors, and Teachers

Location in bookstore: Mathematics

Mathematical Problems in Image Processing

Partial Differential Equations and the Calculus of Variations

Second Edition

Gilles Aubert, University of Nice-Sophia Antipolis, Nice, France; Pierre Kornprobst, INRIA, Odyssee Lab, Sophia Antipolis, France

This book describes some mathematical problems arising in image analysis and computer vision. The authors consider both variational and pde approaches. The description focuses on theoretical-mathematical aspects of the problems, as well as on their applications and numerical descretizations. The book is intended to be a reference and a basis for advanced courses in the fields of applied mathematics and computer vision.

Market: Researchers and Graduate Students

Location in bookstore: Mathematics
Mathematicians already aware of real algebraic geometry will find relevant information about the algorithmic aspects. Researchers in computer science and engineering will find the required mathematical background. This self-contained book is accessible to graduate and undergraduate students.

**Market**: Graduate Students in Mathematics and Lecturers

**Location in bookstore**: Mathematics

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**November 2006**


Approx. $84.95

Approx. 568 pp., 50 illus.

Hardcover

**Second Edition**

(Replaces 0-8176-3641-2)

Originally published in 2 volumes

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**Computing the Continuous Discretely**

*Integer-point Enumeration in Polyhedra*

**Matthias Beck**, San Francisco State University, San Francisco, CA, USA; **Sinai Robins**, Temple University, Philadelphia, PA, USA

This much-anticipated textbook illuminates the field of discrete mathematics with examples, theory, and applications of the discrete volume of a polytope. The authors have woven a unifying thread through basic yet deep ideas in discrete geometry, combinatorics, and number theory. Because there is no other book that puts together all of these ideas in one place, this text is truly a service to the mathematical community.

**Market**: Undergraduate/Graduate Mathematic Students

**Location in bookstore**: Mathematics

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**Algorithms in Real Algebraic Geometry**

*Second Edition*

**Saugata Basu**, Georgia Institute of Technology, Atlanta, GA, USA; **Richard Pollack**, Courant Institute of Mathematical Sciences, New York, NY, USA; **Marie-Françoise Roy**, Université de Rennes I, France

The algorithmic problems of real algebraic geometry occur in many contexts. In this first-ever graduate textbook on the algorithmic aspects of real algebraic geometry, the main ideas and techniques presented form a coherent and rich body of knowledge, linked to many areas of mathematics and computing.

**Market**: Graduate Students in Mathematics and Lecturers

**Location in bookstore**: Mathematics

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**Representation and Control of Infinite-Dimensional Systems**

*Second Edition*

**Alain Bensoussan**, University of Texas at Dallas, Richardson, TX, USA; **Giuseppe Da Prato**, Scuola Normale Superiore, Pisa, Italy; **Michel C. Delfour**, Université de Montréal, Montréal, Canada; **Sanjoy K. Mitter**, Massachusetts Institute of Technology, Cambridge, MA, USA

This unified revised edition of a two-volume set is a self-contained account of quadratic cost optimal control for a large class of infinite-dimensional systems; a topic with a wide range of challenging applications. This book is a key reference for anyone working with these applications, which arise from new phenomenal studies or technological developments, and more stringent design requirements. It will be useful for mathematicians, researchers, graduate students, and engineers interested in the field of control.

**Market**: Pure and Applied Mathematicians, Graduate Students, and Control Engineers

**Location in bookstore**: Mathematics

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**Comparison Principles for Nonsmooth Variational Problems**

Siegfried Carl, Institut für Analysis, D-06099 Halle, Germany; Vy K. Le, University of Missouri-Rolla, Rolla, MO, USA; Dumitru Motreanu, Université de Perpignan, France

This is the first research monograph to focus on variational inequalities as part of nonsmooth variational systems research. The authors discuss partial differential equations, variational equations, variational and hemivariational inequalities, and related topics. With a wealth of problems and techniques from nonlinear and nonsmooth analysis, this versatile text is an important reference for mathematicians working in analysis, partial differential equations, elasticity, materials science and mechanics applications, as well as for physicists and engineers. It can serve as a main or supplemental text for a variety of specialized nonlinear analysis courses.

**Market:** Researchers and Graduate Students in Mathematics Investigating Partial Differential Equations, Elasticity, Materials and Mechanics Applications, as well as Researchers in Physics and Engineering

**Location in bookstore:** Mathematics

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**Ordinary Differential Equations with Applications**

Second Edition

Carmen Chicone, University of Missouri, Columbia, MO

This book is developed primarily from the author’s 20 years of teaching the course at his own university. It addresses both theory and applications, interweaving application with theory throughout the text. The author links ordinary differential equations with advanced mathematical topics such as differential geometry, Lie group theory, analysis in infinite-dimensional spaces and even abstract algebra. The revised edition includes considerable new material; the impressive array of exercises has been more than doubled in size and enhanced in scope.

**Market:** Graduate Students and Professional Scientists

**Location in bookstore:** Mathematics

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**Cyclotomic Fields and Zeta Values**

John Coates, University of Cambridge, Cambridge, UK; R. Sujatha, Tata Institute of Fundamental Research, Mumbai, India

Cyclotomic fields have always occupied a central place in number theory, and the so called “main conjecture” on cyclotomic fields is arguably the deepest and most beautiful theorem known about them. It is also the simplest example of a vast array of subsequent, unproven “main conjectures” in modern arithmetic geometry involving the arithmetic behavior of motives over p-adic Lie extensions of number fields. These main conjectures are concerned with what one might loosely call the exact formulae of number theory which conjecturally link the special values of zeta and L-functions to purely arithmetic expressions.

**Market:** Students and Researchers

**Location in bookstore:** Mathematics

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**Symmetry**

György Darvas, Hungarian Academy of Sciences, Budapest, Hungary

The first comprehensive book on the topic in half a century explores recent symmetry—and symmetry breaking—related discoveries, and discusses the questions and answers they raise in diverse disciplines: particle and high-energy physics, structural chemistry and the biochemistry of proteins, in genetic code study, in brain research, and also in architectural structures, and business decision making, to mention only a few examples.

**Market:** University Teachers, Engineers and Designers, Practitioners with a Degree, Secondary School Teachers, Science and Art Historians, and Students at Different Levels

**Location in bookstore:** Mathematics
Computing in Algebraic Geometry
A quick start using SINGULAR
Wolfram Decker, Universität des Saarlandes, Saarbrücken, Germany; Christoph Lossen, University of Kaiserslautern, Germany

This book provides a quick access to computational tools for algebraic geometry, the mathematical discipline which handles solution sets of polynomial equations. Originating from a number of intense one week schools taught by the authors, the text is designed so as to provide a step by step introduction which enables the reader to get started with his own computational experiments right away. The authors present the basic concepts and ideas in a compact way, omitting proofs and detours, and they give references for further reading on some of the more advanced topics. In examples and exercises, the main emphasis is on explicit computations using the computer algebra system SINGULAR.

Market: Undergraduate and Graduate Students in Mathematics and Computer Science
Location in bookstore: Mathematics

Mathematical Methods in Robust Control of Linear Stochastic Systems
Vasile Dragan, Toader Morozan, Institute of Mathematics at the Romanian Academy, Bucharest, Romania; Adrian-Mihail Stoica, University “Politechnica” of Bucharest, Bucharest, Romania

Linear stochastic systems are successfully used to provide mathematical models for real processes in aerospace engineering, communications, manufacturing, finance and economy and so on. This monograph presents a useful methodology for the control of such stochastic systems, with both multiplicative white noise and Markovian jumping. An important feature is the inclusion of the necessary pre-requisites from probability theory, stochastic processes, stochastic integrals and stochastic differential equations. The systematic style of presentation leads the reader in a natural way to the original results.

Market: Graduate Students and Researchers in Advanced Control Engineering, Mathematical Systems Theory and Finance, and Numerical Analysis
Location in bookstore: Mathematics

Qualitative Theory of Planar Differential Systems
Freddy Dumortier, Limburgs Universitair Centrum, Diepenbeek, Belgium; Jaume Llibre, Joan C. Artés, Universitat Autònoma de Barcelona, Bellaterra, Spain

The book deals essentially with systems of polynomial autonomous ordinary differential equations in two real variables. The emphasis is mainly qualitative, although attention is also given to more algebraic aspects as a thorough study of the center/focus problem and recent results on integrability. In the last two chapters the performant software tool P4 is introduced. From the start, differential systems are represented by vector fields enabling, in full strength, a dynamical systems approach. All essential notions, including invariant manifolds, normal forms, desingularization of singularities, index theory and limit cycles, are introduced and the main results are proved for smooth systems with the necessary specifications for analytic and polynomial systems.

Market: Lecturers and Graduate Students in Mathematics and Engineering
Location in bookstore: Mathematics

Understanding and Using Linear Programming
Bernd Gärtner, ETH, Zürich; Jiri Matousek, Charles University, Prague

The book is an introductory textbook mainly for students of computer science and mathematics. The authors’ guiding phrase is “what every theoretical computer scientist should know about linear programming”. A major focus is on applications of linear programming, both in practice and in theory. The book is concise, but at the same time, the main results are covered with complete proofs and in sufficient detail, ready for presentation in class. The book does not require more prerequisites than basic linear algebra (which is summarized in an appendix). One of its main goals is to help the reader to see linear programming “behind the scenes”.

Market: Students and Researchers in Computer Science, Mathematics, Engineering Disciplines and Mathematical Economy
Location in bookstore: Mathematics
**Shift-invariant Uniform Algebras on Groups**

Suren A. Grigoryan, Kazan State University, Russia; Thomas V. Tonev, University of Montana, Missoula, MT, USA

The central subject of this book—the theory of shift-invariant algebras—is an outgrowth of the established theory of generalized analytic functions. This general framework carries along associated subalgebras of almost periodic functions of real variables and of bounded analytic functions on the unit disc. The text describes Bourgain algebras, orthogonal measures, and primary ideals of big disc algebras. The notion of a harmonic function is extended on compact abelian groups, and corresponding Fatou-type theorems are proven. Finally, the book introduces and studies classes of inductive limits of standard uniform algebras, including Blaschke algebras. This is the first monograph devoted entirely to the topic.

**Market:** Mathematicians Interested in Analytic Functions and Commutative Banach Algebras; Researchers, and Graduate and Post-Graduate Students

**Location in bookstore:** Mathematics

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**Extreme Value Theory**

Laurens de Haan, Erasmus Universiteit Rotterdam, The Netherlands; Ana Ferreira, Instituto Superior de Agronomia, Lisboa, Portugal

This treatment of extreme value theory is unique in book literature in that it focuses on some beautiful theoretical results along with applications. All the main topics covering the heart of the subject are introduced to the reader in a systematic fashion. Key to the presentation is the concentration on the probabilistic and statistical aspects of extreme values. The work is an excellent introduction to extreme value theory at the graduate level, requiring only some mathematical maturity.

**Market:** Graduate Students, Theoretical and Applied Mathematicians, Math Physicists, Engineers, Economists and Finance Professionals

**Location in bookstore:** Mathematics

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**Advances in Discrete Tomography and its Applications**

Gabor T. Herman, City University of New York, NY, USA; Attila Kuba, University of Szeged, Hungary (Eds.)

This book is a unified presentation of new methods, algorithms, and select applications that are the foundations of multidimensional image construction and reconstruction. The self-contained survey chapters, written by leading mathematicians, engineers, and computer scientists, present cutting-edge research and results in the field. Three main areas are covered: theoretical results, algorithms, and practical applications. Following an historical and introductory overview of the field, the book explores the various mathematical and computational problems of discrete tomography with an emphasis on new applications.

**Market:** Professionals, Researchers, Practitioners, and Students

**Location in bookstore:** Mathematics

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**MESH**

Beau Janzen, Los Angeles, CA, USA; Konrad Polthier, Zuse Institute Berlin, Germany

MESH is a mathematical video on polyhedral meshes and their role in geometry, numerics and computer graphics. The film is completely computer-generated using the latest technology and spans the range from ancient Greek mathematics to the area of geometric modeling of today. MESH was the topic of an invited talk at ICIAM 2003 in Sydney by Konrad Polthier. His coauthor, Beau Janzen, is a professional film director. The film is an excellent teaching tool for courses on geometry, visualization, scientific computing and geometric modeling at universities and centers for computational science, and can be used in schools, too.

**Market:** Students in all Categories, Lecturers in Mathematics and Computer Science

**Location in bookstore:** Mathematics

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## Mathematical Masterpieces

### Further Chronicles by the Explorers

Art Knoebel, Vanderbilt University, Nashville, TN, USA; Reinhard Laubenbacher, Virginia Bioinformatics Institute, Blacksburg, VA, USA; Jerry Lodder, David Pengelley, New Mexico State University, Las Cruces, NM, USA

Via primary historical sources, the authors introduce advanced undergraduates to the excitement of mathematical discovery. Each chapter contains a story anchored around primary sources showcasing a masterpiece of mathematical achievement. Topics include curvature, Bernoulli numbers, numerical solution of equations, and the quadratic reciprocity law.

**Market:** Undergraduate Mathematics Students, Mathematics Teachers, and Mathematicians

**Location in bookstore:** Mathematics

### Mathematical Masterpieces

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## Probability Theory, Random Processes, Random Fields

### Second Edition

Leonid Koralov, Ya. G. Sinai, Princeton University, NJ, USA

The first part of this book explores the classical probability theory. It contains a detailed analysis of Markov chains, Limit theorems, and their relation to Renormalization Group theory. It also describes several applications of probability theory, which are not discussed in most other text-books. The second part covers the theory of stationary random processes, martingales, stochastic integrals and stochastic differential equations, and a chapter devoted to the theory of Gibbs random fields. The book contains essential material for an undergraduate or a graduate course in Probability theory and the theory of Random Processes. It may also serve as a reference for scientists who use modern probability theory in their research.

**Market:** Undergraduate and graduate students, lecturers in probability theory and random processes

**Location in bookstore:** Mathematics

### Probability Theory, Random Processes, Random Fields

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Second Edition

Replaces (3-540-53348-6)
The 1st edition was originally published as Springer Textbook entitled “Probability Theory. An Introductory Course”

## Introductory Lectures on Fluctuations of Lévy Processes with Applications

### Andreas Kyprianou

Andreas Kyprianou, Heriot-Watt University, Edinburgh, UK

Lévy processes are the natural continuous-time analogue of random walks; they form a rich class of stochastic processes around which a robust mathematical theory exists. Their mathematical significance is evident in their application in many areas of classical and modern stochastic models, including storage models, renewal processes, insurance risk models, optimal stopping problems, mathematical finance and continuous-state branching processes. This book aims to be mathematically rigorous while still providing an intuitive feel for underlying principles. The results and applications often focus on the case of Lévy processes with jumps in only one direction, for which recent theoretical advances have yielded a higher degree of mathematical transparency and explicitness. Each chapter includes a comprehensive set of exercises with complete solutions.

**Market:** Graduate Students in Probability Theory, Stochastic Processes, and Potential Analysis

**Location in bookstore:** Mathematics

### Introductory Lectures on Fluctuations of Lévy Processes with Applications

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Fractal Geometry, Complex Dimensions and Zeta Functions

Michel L. Lapidus, University of California, Riverside, CA, USA; Machiel Van Frankenhuysen, Rutgers University, Piscataway, NJ, USA

Number theory, spectral geometry, and fractal geometry are interlinked in this in-depth study of the vibrations of fractal strings, that is, one-dimensional drums with fractal boundary. The Riemann hypothesis is given a natural geometric formulation in the context of vibrating fractal strings. This excellent exposition contains numerous new results, theorems, remarks and illustrations which enrich the text. The significant studies and problems illuminated in this work may be used in a classroom setting at the graduate level. Fractal Geometry, Complex Dimensions and Zeta Functions will appeal to students and researchers in number theory, fractal geometry, dynamical systems, spectral geometry, and mathematical physics.

Market: Graduate Students, Geometers, Math Physicists, and Number Theorists
Location in bookstore: Mathematics

Applied Probability and Statistics

Mario Lefebvre, Ecole Polytechnique de Montreal, QC, Canada

This textbook offers succinct, comprehensive coverage of Probability and Statistics. The text covers both probability and statistics in equal depth. Interesting historical notes, along with numerous exercises and solutions, and a useful bibliography and index add value to this text. Whether in a classroom setting or for self-study, this textbook will benefit students in applied mathematics, engineering, computer science and in the applied sciences in general.

Market: Second or Third Year Undergraduate Students in Applied Mathematics, Computer Science and Engineering
Location in bookstore: Mathematics

Aspects of Brownian Motion

Roger Mansuy, Marc Yor, Université Paris VI, Paris, France

Stochastic calculus and excursion theory are very efficient tools for obtaining either exact or asymptotic results about Brownian motion and related processes. This book focuses on special classes of Brownian functionals including Gaussian subspaces of the Gaussian space of Brownian motion; Brownian quadratic functionals; Brownian local times; Exponential functionals of Brownian motion with drift; Winding number of one or several Brownian motions around one or several points or a straight line, or curves; Time spent by Brownian motion below a multiple of its one-sided supremum. Besides students and lecturers the book addresses the interests of researchers from core probability theory out to applied fields such as polymer physics and mathematical finance.

Market: Students and Lecturers of Probability, Stochastic Calculus, and Distributional Computations
Location in bookstore: Mathematics

Applied Partial Differential Equations

A Photographic Approach

Peter A. Markowich

This book presents topics of science and engineering occurring in nature and/or is part of our daily lives. The described natural/engineering phenomena are modeled by partial differential equations, which relate physical variables like mass, velocity, energy, etc. to their spatial and temporal variations. Typically these equations are highly nonlinear, in many cases they are also vectorial systems, and they represent a challenge even for the most modern and sophisticated mathematical-analytical and mathematical-numerical techniques. The topics chosen in the book, which reflect the longtime scientific interests of the author are briefly presented in their scientific or engineering context and then the mathematical models in the form of partial differential equations are introduced and their basic mathematical properties are discussed. The author illustrates each chapter by a series of high quality photographs demonstrating that partial differential equations can be used for a large variety of phenomena.

Market: Students and Researchers in Mathematics, Students and Researchers in Science and Engineering with a Mathematical Background
Location in bookstore: Mathematics
An Introduction to Sequential Dynamical Systems

Henning S. Mortveit, Christian M. Reidys, Los Alamos Labs, Santa Fe, NM, USA

This graduate textbook provides a comprehensive introduction to Sequential Dynamical Systems (SDS), a new approach to a general theory of discrete computer simulations. The authors begin with an overview of finite discrete dynamical systems, then introduce SDS and discuss most recent results, SDS equivalents and morphisms, and relevant SDS applications in computer science. With a wealth of real-life problems and applications, numerous examples, a section on research directions, and a comprehensive bibliography and index, this is an ideal text for mathematics and computer science courses in dynamical systems, computer simulation and network theory on the graduate level.

Market: Graduate Students and Researchers in Discrete Mathematics, Dynamical Systems Theory, Theoretical Computer Science, Specifically Computer Simulation and Network Theory and Phenomena

Location in bookstore: Mathematics

Metric Spaces

Mícheál Ó Searcoid, University College Dublin, Ireland

Because the abstract concepts of metric spaces are often perceived as difficult, this book offers a unique approach to the abstract concepts of metric spaces which gives readers the advantage of a new perspective on ideas familiar from the analysis of a real line. The book provides a thorough exposition of all the standard necessary results of the theory and, in addition, includes selected topics not normally found in introductory books, such as: the Tietze Extension Theorem; the Hausdorff metric and its completeness; and the existence of curves of minimum length. With its many examples, careful illustrations, and full solutions to selected exercises, this book provides a gentle introduction that is ideal for self-study and an excellent preparation for applications.

Market: 3rd and 4th Year Undergraduate Students and Beginning Graduate Students

Location in bookstore: Mathematics

Production Planning by Mixed Integer Programming

Yves Pochet, Laurence A. Wolsey, Universite Catholique de Louvain, Belgium

This textbook provides a comprehensive modeling, reformulation and optimization approach for solving production planning and supply chain planning problems, covering topics from a basic introduction to planning systems, mixed integer programming (MIP) models and algorithms through the advanced description of mathematical results in polyhedral combinatorics required to solve these problems. The book provides an introduction to MIP modeling and to planning systems, a unique collection of reformulation results, and an easy to use problem-solving library. This approach is demonstrated through a series of real life case studies, exercises and detailed illustrations. Reading this book will allow the reader to improve formulations of non-standard MIP models much more effectively and produce state-of-the-art models and algorithms.

Market: Undergraduate Students, Graduate Students, and Practitioners

Location in bookstore: Mathematics

Scientific Computing with MATLAB

Second Edition

Alfio Quarteroni, Ecole Polytechnique Fédérale de Lausanne, Switzerland; Fausto Saleri, Politecnico di Milano, Italy

This textbook is an introduction to Scientific Computing, in which several numerical methods for the computer solution of certain classes of mathematical problems are illustrated. The authors show how to compute the zeros or the integrals of continuous functions, solve linear systems, approximate functions by polynomials and construct accurate approximations for the solution of differential equations. To make the presentation concrete and appealing, the programming environment Matlab is adopted as a faithful companion.

Market: Undergraduate and Graduate Students in Computational Science, Mathematics, and Sciences

Location in bookstore: Mathematics
Foundations of Hyperbolic Manifolds
Second Edition
John Ratcliffe, Vanderbilt University, Nashville, TN, USA
This book is an exposition of the theoretical foundations of hyperbolic manifolds. It is intended to be used both as a textbook and as a reference. The reader is assumed to have a basic knowledge of algebra and topology at the first year graduate level of an American university. The second edition includes hundreds of changes and corrections, and new additions including: a more thorough discussion of polytopes; discussion of Simplex Reflection groups has been expanded to give a complete classification of the Gram matrices of spherical, Euclidean and hyperbolic n-simplices; A new section on the volume of a simplex, in which a derivation of Schlafli's differential formula is presented; and a new section with a proof of the n-dimensional Gauss-Bonnet theorem. The exercises have been thoroughly reworked, pruned, and upgraded, with more than 100 new exercises added. The author has also prepared a solutions manual which is available to professors who choose to adopt this text for their course.

Market: Graduate Students, Mathematicians, and Researchers
Location in bookstore: Mathematics

Heavy Tail Phenomena
Probabilistic and Statistical Modeling
Sidney I. Resnick, Cornell University, Ithaca, NY, USA
This book surveys in a rather self-contained manner the mathematical, probabilistic and statistical tools in heavy tail analysis. Heavy tailed analysis deals with the study of such phenomena where the probability of a huge value is relatively big, financial-log returns, record breaking insurance losses, transmission rates of the files to name a few. The book emphasizes on both probability modeling and statistical methods for fitting parameters in a model and follows an interdisciplinary approach, highlighting the broad applicability to various fields. It also presents a detailed mathematical study of the properties of the methodologies as well as implementation of the methodologies in either Splus or R statistical languages.

Location in bookstore: Mathematics

The Theory of Evidence and Uncertainty in Measurement
Simona Salicone, Politecnico di Milano, Italy
This unique textbook guide's graduate students, researchers and practitioners in the construction of random-fuzzy variables from experimental information, and it instructs how to use these variables to overcome the limitations of the current uncertainty measurement standards in practical laboratory work. Helpful wherever instrumentation is an issue, this text is invaluable for applied mathematicians, engineers, computer scientists and physicists alike. The book is enriched with a number of worked-out examples, exercises and a comprehensive bibliography and index.

Market: Graduate Students and Instructors in Applied Mathematics, Engineering and Physics; Researchers and Practitioners Concerned with Instrumentation and Measurement
Location in bookstore: Mathematics

Customer-Oriented Optimization in Public Transportation
Stop Location, Delay Management and Tariff Zone Design in a Public Transportation Network
Anita Schöbel, Georg-August Universität Göttingen, Germany
Customer-Oriented Optimization in Public Transportation develops models, results and algorithms for optimizing public transportation from a customer-oriented viewpoint. The methods used are based on graph-theoretic approaches and integer programming. The specific topics are all motivated by real-world examples which occurred in practical projects: Location of Stops, Management of Delay, and Tariff Zone design. An appendix summarizes some of the basics of optimization needed to interpret the material in the book.

Location in bookstore: Mathematics
Optimal Stopping and Free-Boundary Problems

Albert Shiryaev, Steklov Mathematical Institute, Moscow, Russia; Goran Peskir, The University of Manchester, UK

This book aims at disclosing a fascinating connection between optimal stopping problems in probability and free-boundary problems in analysis using minimal tools and focusing on key examples. The general theory of optimal stopping is exposed at the level of basic principles in both discrete and continuous time covering martingale and Markovian methods. Methods of solution explained range from classic ones (such as change of time, change of space, change of measure) to more recent ones (such as local time-space calculus and nonlinear integral equations). A detailed chapter on stochastic processes is included making the material more accessible to a wider cross-disciplinary audience. The book may be viewed as an ideal compendium for an interested reader who wishes to master stochastic calculus via fundamental examples.

Market: Graduate and Postgraduate Students, Researchers, and Practitioners
Location in bookstore: Mathematics

Applied Linear Algebra and Matrix Analysis

Thomas S. Shores, University of Nebraska, Lincoln, NE

This text is intended for a one or two semester sophomore level course in linear algebra. It is designed to provide a balance of applications, theory and computation, and to emphasize their interdependence. The text has a strong orientation towards numerical computation and the linear algebra needed in applied mathematics. At the same time, it contains a rigorous and self-contained development of most of the traditional topics in a linear algebra course. It provides background for numerous projects, which frequently require computational tools, but is not tied to any one computational platform. A comprehensive set of exercises and projects is included.

Market: Undergraduate Mathematics Students
Location in bookstore: Mathematics

Numerical Approximation Methods for Elliptic Boundary Value Problems

Finite and Boundary Elements

Olaf Steinbach, Technische Universitat Graz, Austria

This book presents a unified theory of the Finite Element Method and the Boundary Element Method for a numerical solution of second order elliptic boundary value problems. This includes the solvability, stability, and error analysis as well as efficient methods to solve the resulting linear systems. Applications are the potential equation, the system of linear elastostatics and the Stokes system. While there are textbooks on the finite element method, this is one of the first books on Theory of Boundary Element Methods.

Market: Graduate Students and Researchers
Location in bookstore: Mathematics

Game Theory

James Webb, Formerly Nottingham Trent University, UK

This book offers an informal introduction to game theory intended as a first course for undergraduate students of mathematics. Uniquely, it covers optimal decisions, classical games and evolutionary game theory in one volume. Optimal decisions are treated as a special case of game theory in which the game is played against nature. For evolutionary game theory, a subject which is often presented as a minor adjustment to the classical theory, this book aims to provide a better understanding by emphasizing the differences between the two types of game theory, in particular the population context in which evolutionary games are embedded.

Market: Undergraduate and Beginning Graduate Students in Mathematics and Economics
Location in bookstore: Mathematics
Tsunamis and Hurricanes
A Mathematical Approach
Ferdinand Cap, Universität Innsbruck

Tsunamis and hurricanes have had a devastating impact on the population living near the coast during the year 2005. The calculation of the power and intensity of tsunamis and hurricanes are of great importance not only for engineers and meteorologists but also for governments and insurance companies. This book presents new research on the mathematical description of tsunamis and hurricanes. A combination of old and new approaches allows us to derive a nonlinear partial differential equation of fifth order describing the steepening up and the propagation of tsunamis. The description includes dissipative terms and does not contain singularities or two valued functions. The equivalence principle of solutions of nonlinear large gas dynamic waves and of solutions of water wave equations will be used. An extension of the continuity equation by a source term due to evaporation rates of salt seawater will help to understand hurricanes. Detailed formula, tables and results of the calculations are given.

Market: Researchers, Engineers, and Students
Location in bookstore: Physics

Weak Links
Stabilizers of Complex Systems from Proteins to Social Networks
Peter Csermely, Semmelweis University, Budapest, Hungary

Why can we enjoy and understand Shakespeare? Why are fruitflies uniform? Why is Mona Lisa's smile beautiful?–Is there any answer to these questions? This book shows that the statement: "weak links stabilize complex systems" holds the answers to all of the surprising questions above. The distinguished author uses weak (low affinity, low probability) interactions as a thread to introduce a vast variety of networks from proteins to ecosystems. This unique book and the ideas it develops will have a significant impact on many, seemingly diverse, fields of study.

Market: Students, Teachers, Scientists (all disciplines), and Interested Laypersons
Location in bookstore: Physics

Group Theory
Application to the Physics of Condensed Matter
Mildred S. Dresselhaus, Gene Dresselhaus, MIT, Cambridge, MA, USA; Ado Jorio, Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil

Every process in physics is governed by selection rules that are the consequence of symmetry requirements. The beauty and strength of group theory resides in the transformation of many complex symmetry operations into a very simple linear algebra. This concise and class-tested book has been pedagogically tailored over the authors' 30 years as instructors at such institutions as MIT and the University Federal of Minas Gerais (UFMG) in Brazil. The approach centers on the conviction that teaching group theory in close connection with applications helps students to learn, understand and use it.

Market: Advanced Students
Location in bookstore: Physics
Quantum mechanics is a beautiful, strange and very successful theory that originated in the 1920s. The theory, which Niels Bohr and his school once regarded as finished and complete has, in the last few decades, rapidly developed in unexpected directions. An intense new focus on the stranger aspects of the theory, including entanglement and nonlocality, has resulted in significant new work on the foundations of quantum mechanics, as well as new ideas for practical exploitation of quantum mechanical phenomena. Historians and philosophers of science have turned new attention to quantum mechanics as well, opening up its human dimensions and asking searching questions about its meaning, and about its past as well as its future.

Market: Scientists, and Philosophers of Science
Location in bookstore: Physics

Fundamentals of Magnetism
Mathias Getzlaff, University Düsseldorf, Germany
In the last decade a tremendous progress has been taken place for magnetism, especially in reduced dimensions. In the first part, the fundamentals of magnetism are conveyed for atoms and bulk-like solid state systems providing a basis for the understanding of new phenomena which exclusively occur in low dimensional systems as the giant magneto resistance. This wide field is discussed in the second part and illustrated by a lot of examples. Various experimental techniques are additionally expadiated. This textbook is particularly suitable for graduate students in physical and materials sciences. It includes numerous examples, exercises, and references.

Market: Undergraduate and Graduate Students
Location in bookstore: Physics

Astrophysical Concepts
Fourth Edition
Martin Harwit, Cornell University, Ithaca, NY, USA
From the reviews of the Third edition: “a clear, solid introduction to astrophysics…that shows how physics can be applied to astronomical objects…One of the strong points is the problems (that) give students a real feel for the sorts of calculations astronomers must do …were I teaching a junior/senior astrophysics course, this is the book I would use.”

Market: Undergraduate and Graduates in Physics and Astronomy
Location in bookstore: Physics

Spinning Flight
Dynamics of Frisbees, Boomerangs, Samaras, and Skipping Stones
Ralph D. Lorenz, University of Arizona, Tucson, AZ, USA
More Frisbees are sold each year than baseballs, basketballs and footballs combined, but these familiar flying objects have subtle and clever aerodynamic and gyrodynamic properties which are only recently being documented by wind tunnel and other scientific studies. This book describes the aerodynamics behind Frisbees, boomerangs and skipping stones, and samaras, the winged seeds of many tree species, with the aim of informing and entertaining the reader. The author provides information and guidance on home experiments in aerodynamics using some of these popularly known items. Also discussed are several exotic manned aircraft with disc planforms, including an unsuccessful Nazi ‘secret weapon,’ and the De Havilland Avrocar.

Market: General Aerospace Enthusiasts, Undergraduates and Professionals in Aerospace and Related Fields
Bookstore Location: Physics
Extragalactic Astronomy and Cosmology
An Introduction
Peter Schneider, Universität Bonn, Germany
Starting with the description of our Milky Way, this cogently written textbook introduces the reader to the astronomy of galaxies, their structure, their active galactic nuclei, their evolution and their large scale distribution. From the introduction of modern observational and theoretical cosmology this book turns to the formation of structures and astronomical objects in the early universe.

Market: Students of Physics and Mathematics
Location in bookstore: Physics

Mathematical Methods for Engineers and Scientists I
Complex Analysis, Determinates and Matrices
Kwong-Tin Tang, Pacific Lutheran University, Tacoma, WA, USA
Pedagogical insights gained through 30 years of teaching applied mathematics led the author to write this set of student-oriented books. Topics such as complex analysis, matrix theory, vector and tensor analysis, Fourier analysis, integral transforms, ordinary and partial differential equations are presented in a discursive style that is readable and easy to follow. Numerous clearly stated, completely worked out examples together with carefully selected problem sets with answers are used to enhance students' understanding and manipulative skill. The goal is to help students feel comfortable and confident in using advanced mathematical tools in junior, senior, and beginning graduate courses.

Market: Advanced Students
Location in bookstore: Physics

Mathematical Methods for Engineers and Scientists II
Vector Analysis, Ordinary Differential Equations and Laplace Transforms
Kwong-Tin Tang, Pacific Lutheran University, Tacoma, WA, USA

Market: Advanced Students
Location in bookstore: Physics

Fundamentals of Nanocomposites
Shijie Zhu, Fukuoka Institute of Technology, Japan (Ed.)
The book is aimed to present fundamentals of design, processing, characterization, properties and applications of nanocomposites. The knowledge is useful for production managers and engineers who will make the transition from academic research into industrial mass production. This book provides an overview of this emerging technology and the future potential applications. It is intended to be a basic reference handbook on the science and the fundamental engineering principles that lead to the fabrication and property evaluation of nanocomposite materials in different areas of materials science and technology. A few available books on nanocomposites are limited to one type of nanocomposites, e.g., polymer matrix nanocomposites, and recent research results. This book will introduce new concepts and fundamentals of nanocomposites.

Market: Graduate Students, Researchers and Engineers Searching for a Practical Reference on the Current Technology
Location in bookstore: Physics
Psychology

Severe Attachment Disorder in Childhood
A Guide to Practical Therapy
Niels P. Rygaard, Aarhus, Denmark

Based on his more than 20 years of theory and personal practice in the field of Attachment disorder, Dr. Rygaard’s handbook of therapy provides the reader with a theoretical understanding as well as a wealth of suggestions for daily practice. Step by step, the reader is guided through a cross-scientific theoretical overview, the classic symptoms of disturbed attachment, and treatment at different stages of development, from preventive measures to ensure a healthy attachment early in life to treatment at different stages of personality development to adulthood. The book is equally useful to the professional practitioner as well as the adoptive parent or foster family.

Market: Psychologists, Pediatricians, Social Workers, Therapists, Psychiatrists, Foster Parents, Child institutions, and Teachers
Location in bookstore: Psychology

Public Health

The Health of Sexual Minorities
Public Health Perspectives on Lesbian, Gay, Bisexual and Transgender Populations
Ilan H. Meyer, Mary E. Northridge, Columbia University, New York, NY, USA (Eds.)

The first book of its kind, this resource offers a multidimensional picture of lesbian, gay, bisexual and transgender (LGBT) health across clinical and social disciplines to give readers a full and nuanced understanding of these diverse populations. Here are real-world matters of definition and self-definition (including sexual identity, gender identity, and anti-identity), meticulous analyses of stressor and health outcomes, a extensive coverage of research methodology concerns, and critical insights into the sociopolitical context of LGBT individuals’ health and lives.

Market: Social and Behavioral Scientists and Students in Public Health and Health-related Fields, Public Health Professionals, and Health Practitioners
Location in bookstore: Public Health

Handbook of Cancer Survivorship
Michael Feuerstein, University of Health Sciences, Bethesda, MD, USA (Ed.)

This handbook targets health professionals and researchers who need a single, authoritative source that tackles the major issues of cancer survivorship, risk factors, intervention, and prevention approaches. Handbook of Cancer Survivorship will include sections that examine the problems of survivors from the perspectives of epidemiology, prevention, health systems and policy.

Market: Researchers in Cancer Survivorship, including Epidemiologists, Health Policy Professionals, Health Systems Researchers
Location in bookstore: Public Health
Handbook of the Sociology of Mental Health
Carol S. Aneshensel, University of California School of Public Health, Los Angeles, USA; Jo C. Phelan, Columbia University School of Public Health, NY, USA (Eds.)
This book explores the social origins of mental health, covering both the social conditions that lead to behaviors defined as mental illness, and the ways in which the concept of mental illness is socially constructed around those behaviors. The book also reviews body of research that examines socially conditioned responses to mental illness on the part of individuals and institutions, and ways in which these responses affect the lives of persons with mental illness.

Market: Researchers and Scientists  
Location in bookstore: Social Sciences

Handbook of the Sociology of the Military
Giuseppe Caffo, Italian Interuniversity Centre of Historical and Military Studies, Pisa, Italy (Ed.)
This accessible handbook is the first of its kind to examine the sociological approach to the study of the military. The scope of coverage extends to civic-military relations, including issues surrounding democratic control of the armed forces; military culture; professional training; conditions and problems of minorities in the armed forces; an examination of structural change within the military over the years including new duties and functions following the Cold War.

Market: Scholars of the Subject, Those Coming to the Sociology or the Military for the First Time  
Location in bookstore: Social Sciences

Handbook of Social Psychology
John Delamater, University of Wisconsin, Madison, WI, USA (Ed.)
This book, a successor to Social Psychology: Social Perspectives and Sociological Perspectives in Social Psychology, expands on previous handbooks in social psychology by including recent developments in theory and research and comprehensive coverage of significant theoretical perspectives. A major reference work and a seminal text, it is essential reading for sociologists and psychologists involved with the study of social psychology and those studying this field of research.

Market: Researchers and Scientists  
Location in bookstore: Social Sciences

Handbook of the Sociology of Education
Maureen T. Hallinan, University of Notre Dame, IN, USA (Ed.)
This wide-ranging handbook provides a comprehensive overview of the field of education as viewed from a sociological perspective. Experts in the area present theoretical and empirical research on major educational issues and analyze the social processes that govern schooling, and the role of schools in and their impact on contemporary society.

Market: Social Scientists, Graduate Students, and Educators  
Location in bookstore: Social Sciences
Handbook of the Life Course

Jeylan T. Mortimer, University of Minnesota, Minneapolis, MN, USA; Michael J. Shanahan, University of North Carolina, Chapel Hill, NC (Eds.)

This comprehensive handbook provides an overview of key theoretical perspectives, concepts, and methodological approaches that, while applied to diverse phenomena, are united in their general approach to the study of lives across age phases. In surveying the wide terrain of life course studies with dual emphases on theory and empirical research, this important reference work presents probative concepts and methods and identifies promising avenues for future research. The book includes sections on history and cross-national variability, normative structuring, movement through the life course, transitions in the life course, turning points, connections between life phases, methodology, and the future of the life course.

Market: Social Scientists, Social Psychologists, Demographers and Academics, and Students
Location in bookstore: Social Sciences

Handbook of Drug Abuse Prevention

Theory, Science, and Practice

Zili Sloboda, University of Akron, OH, USA; William J. Bukoski, National Institute on Drug Abuse, Bethesda, MD, USA (Eds.)

This wide-ranging handbook brings together experts in the sociology of drug abuse prevention. Providing a comprehensive overview of the accumulated knowledge on prevention theory, intervention design, and development and prevention research methodology, this work also promotes prevention science as an evolving field in the practice and policy of drug abuse prevention. Included are sections on Theoretical and Empirical Foundations, Social Contexts of Prevention, Prevention as Social Control, Special Populations, Research Design and a Look at the Future. It will be of interest to social scientists, researchers, practitioners, policy makers, and academics in the field of drug abuse prevention.

Market: Social Scientists, Researchers, Practitioners, Policy Makers, and Academics in the Field of Drug Abuse Prevention
Location in bookstore: Social Sciences

Handbook of Sociological Theory

Jonathan H. Turner, University of California, Riverside, CA, USA (Ed.)

This wide-ranging handbook presents in-depth discussions on the array of subspecialties that comprise the field of sociological theory. Prominent theorists working in a variety of traditions discuss methodologies and strategies; the cultural turn in sociological theorizing; interaction processes; theorizing from the systemic and macro level; new directions in evolutionary theorizing; power, conflict, and change; and theorizing from assumptions of rationality.

Market: Academics, Students, and Researchers
Location in bookstore: Social Sciences
Statistics in Criminal Justice

Third Edition

David Weisburd, University of Maryland, USA and The Hebrew University of Jerusalem, Israel; Chester Britt, Arizona State University West, Glendale, AZ, USA

This text is written specifically for the advanced criminal justice student and for student comprehension. Filled with examples and exercises pertinent for criminal justice students, the text assumes no previous exposure to statistics. It takes a research-oriented approach by focusing on teaching the student how to interpret, critique, research, and conduct basic statistical analyses. Statistics is the students’ tool to answering questions.

Market: Advanced Undergraduate and Graduate Students in Criminal Justice
Location in bookstore: Social Sciences

Measure Theory and Probability Theory with Applications

Krishna B. Athreya, Cornell University, Ithaca, NY, USA; Soumen N. Lahiri, Iowa State University, Ames, IA, USA

This is a graduate level textbook on measure theory and probability theory. It also includes a modest coverage of important topics of current research interest such as Markov chain Monte Carlo (MCMC) methods and bootstrap methods. The book can be used as a text for a two semester sequence of courses in measure theory and probability theory, with an option to include supplemental material on stochastic processes and special topics. It is intended primarily for first year Ph.D. students in mathematics and statistics although mathematically advanced students from engineering and economics would also find the book useful. Prerequisites are kept to the minimal level of an understanding of basic real analysis concepts such as limits, continuity, differentiability, Riemann integration, and convergence of sequences and series. A review of this material is included in the appendix.

Market: Graduate Students and Researchers
Location in bookstore: Statistics

Finite Mixture and Markov Switching Models

Sylvia Frühwirth-Schnatter, Johannes Kepler Universität, Linz, Austria

The aim of this book is to impart the finite mixture and Markov switching approach to statistical modeling to a wide-ranging community. This includes not only statisticians, but also biologists, economists, engineers, financial agents, market researcher, medical researchers or any other frequent user of statistical models. This book should help newcomers to the field to understand how finite mixture and Markov switching models are formulated, what structures they imply on the data, what they could be used for, and how they are estimated. Researchers familiar with the subject also will profit from reading this book. The presentation is rather informal without abandoning mathematical correctness. Previous notions of Bayesian inference and Monte Carlo simulation are useful but not needed.

Market: Researchers
Location in bookstore: Statistics
An Introduction to Bayesian Analysis
Theory and Methods

Jayanta K. Ghosh, Indian Statistical Institute, Kolkata, India; Mohan Delampady, Indian Statistical Institute, Bangalore, India; Tapas Samanta, Indian Statistical Institute, Calcutta, India

This book is a contemporary introduction to theory, methods and computation in Bayesian Analysis. It focuses on topics that have stood the test of time and emerging areas such as reference priors, objective Bayes testing, Bayesian model selection and wavelets. No other such book is available in the market.

Market: Researchers and Graduate Students
Location in bookstore: Statistics

Statistical Reasoning in Medicine
The Intuitive P-Value Primer
Second Edition

Lemuel A. Moyé, University of Texas, Houston, TX, USA

This volume recognizes the inevitable tension between the mathematics of hypothesis testing and the ethical requirements in medical research and concentrates on the resolution of these issues in p value interpretation. A conversational format and conscious de-emphasizing of computational devices allows the focus to be on the features of experimental design, making statistical reasoning extremely accessible to the uninitiated.

Market: Physicians, and Health Professionals
Location in bookstore: Statistics

Analysis of Phylogenetics and Evolution with R

Emmanuel Paradis, Universite Montpellier II, Montpellier, France

This book integrates a wide variety of data analysis methods into a single and flexible interface: the R language, an open source language is available for a wide range of computer systems and has been adopted as a computational environment by many authors of statistical software. Adopting R as a main tool for phylogenetic analyses eases the workflow in biologists’ data analyses, ensures greater scientific repeatability, and enhances the exchange of ideas and methodological developments.

Market: Biologists, and Researchers
Location in bookstore: Statistics

Reliability, Life Testing and the Prediction of Service Lives
For Engineers and Scientists

Sam C. Saunders

This book is intended for students and practitioners who have had a calculus-based statistics course and who have an interest in safety considerations such as reliability, strength, and duration-of-load or service life. Many persons studying statistical science will be employed professionally where the problems encountered are obscure, what should be analyzed is not clear, the appropriate assumptions are equivocal, and data are scant. Yet tutorial problems of this nature are virtually never encountered in coursework. In this book there is no disclosure with many of the data sets what type of investigation should be made or what assumptions are to be used. Most reliability practitioners will be employed where personal interaction between disciplines is a necessity. A section is included on communication skills to facilitate model selection and formulation based on verifiable assumptions, rather than favorable conclusions. However, whether the answer is “right” can never be ascertained.

Market: Engineers, Scientists, and Graduate Students
Location in bookstore: Statistics
The Statistical Analysis of Interval-Censored Failure Time Data

Jianguo Sun, University of Missouri, Columbia, MO, USA
Survival analysis, the analysis of failure time data, is a rapid developing area and a number of books on the topic have been published in last twenty-five years. However, all of these books deal with right-censored failure time data, not the analysis of interval-censored failure time data. Interval-censored data include right-censored data as a special case and occur in many fields. The analysis of interval-censored data is much more difficult than that of right-censored data because the censoring mechanism that yields interval censoring is more complicated than that for right censoring.

Market: Researchers and Graduate Students
Location in bookstore: Statistics

Semiparametric Theory and Missing Data

Anastasios A. Tsiatis, North Carolina State University, Raleigh, NC, USA
This book combines much of what is known in regard to the theory of estimation for semiparametric models with missing data in an organized and comprehensive manner. It starts with the study of semiparametric methods when there are no missing data. The description of the theory of estimation for semiparametric models is at a level that is both rigorous and intuitive, relying on geometric ideas to reinforce the intuition and understanding of the theory. These methods are then applied to problems with missing, censored, and coarsened data with the goal of deriving estimators that are as robust and efficient as possible.

Market: Researchers
Location in bookstore: Statistics

Graphics of Large Data Sets
Visualizing a Million

Antony Unwin, Martin Theus, University of Augsburg, Augsburg, Germany; Heike Hofmann, Iowa State University, Ames, IA, USA
Graphics are great for exploring data, but how can they be used for looking at the large datasets that are commonplace today? This book shows how to look at ways of visualizing large datasets, whether large in numbers of cases or large in numbers of variables or large in both. Data visualization is useful for data cleaning, exploring data, identifying trends and clusters, spotting local patterns, evaluating modeling output, and presenting results. It is essential for exploratory data analysis and data mining. Data analysts, statisticians, computer scientists—indeed anyone who has to explore a large dataset of their own—should benefit from reading this book.

Market: Researchers and Graduate Students
Location in bookstore: Statistics

Statistical Methods in Counterterrorism:
Game Theory, Modeling, Syndromic Surveillance, and Biometric Authentication

Alyson Wilson, Gregory Wilson, Los Alamos National Laboratory, Los Alamos, NM, USA; David H. Olwell, Naval Postgraduate School, Monterey, CA, USA (Eds.)
“All the data was out there to warn us of this impending attack, why didn’t we see it?” This was a frequently asked question in the weeks and months after the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001. In the wake of the attacks, statisticians moved quickly to become part of the national response to the global war on terror. This book is an overview of the emerging research program at the intersection of national security and statistical sciences. This book includes technical treatments of statistical issues that will be of use to quantitative researchers as well as more general examinations of quantitative approaches to counterterrorism that will be accessible to decision makers with stronger policy backgrounds.

Market: Researchers
Location in bookstore: Statistics
Pro DNS and BIND
Ronald G.F. Aitchison
Pro DNS and BIND guides readers through the often challenging array of features surrounding DNS with a special focus on the World’s most diffuse DNS implementation, BIND (Berkeley Internet Name Domain). Readers will learn not only about key DNS concepts, but also how to effectively install, configure, deploy and manage BIND in enterprise environments.

Foundations of AJAX
Ryan Asleson and Nathaniel T. Schutta
Ajax is hot news for developers! With examples like Google Maps, Google Suggest, Gmail, and Tada List, we have highly dynamic web applications that are nearly as feature rich as their thick client brethren. Using the Ajax techniques in this book, you can provide your customers with the rich user experience they have come to expect while still enjoying the ease of deployment you’ve come to expect of web applications.

PHP 5 Recipes
A Problem-Solution Approach
Lee Babin, Nathan A. Good, Frank M. Kromann, Jon Stephens
This book saves developers vast amounts of time by providing them with the complete code for all of the common coding problems they are likely to face when using PHP in their day-to-day work. Over 200 recipes will be included for topics such as math, date and time, arrays, regular expressions, variables and functions, web basics, HTML forms, database access, automation, security, graphics, internationalization and localization, and much more. As an added bonus, the book starts with an in-depth discussion of PHP 5 object-oriented techniques and methodology, to get you up to speed on OOP with PHP—where to use it, where not to use it, how to use it. OOP is revisited continually throughout the book, providing the reader with the most modern techniques available.

Running IPv6
Iljitsch van Beijnum
As IPv6 is being gradually adopted globally, Running IPv6 offers network administrators a chance to keep abreast of this phenomenon. Eventually, EVERY network administrator is going to have to learn how to run IPv6. Running IPv6 explains how to install and operate it in heterogeneous environments, including Windows XP, MacOS X, FreeBSD, Red Hat Linux. The book also covers Cisco routers, DNS and BIND, Zebra, Apache 2 and Sendmail.
Beginning Open Source Enterprise Java  
Spring, Hibernate, JBoss and Tapestry  
Brian Sam-Bodden  
*Beginning Open Source Enterprise Java* takes you through the construction of a medium, complex enterprise Java application centered around JBoss, Spring, Hibernate, Tapestry and many other supporting tools for development and testing. This book is ideal if you’re new to Open Source Java, and want to build enterprise Java applications using the full range of available open source tools and frameworks from scratch.

The Definitive Guide to Apache mod_rewrite  
Rich Bowen  
The Apache module mod_rewrite has long inspired fits of joy because it offers an unparalleled toolset for manipulating URLs. *The Definitive Guide to Apache mod_rewrite* is the first book to tackle the many nuances of this powerful module. It guides readers through configuration and use for a wide variety of purposes, including basic and conditional rewrites, access control, maintaining virtual hosts, and proxying.

Pro JSP 2  
Simon Brown, Sam Dalton, Dalton Jepp, Dave Johnson, Sing Li, Matt Raible, Kevin Mukhar (Eds.)  
*Pro JSP 2*, Fourth Edition is the only comprehensive guide and reference to cover JSP 2 and 2.1 yet. It equips readers with the tools, techniques, and understanding they need to develop web applications with JSP and Java servlets. The new features of the JSP 2.0, 2.1 and Servlet 2.4 specifications make developing web applications easier than ever before. With 2.1, readers can integrate and use the latest JavaServer Faces (JSF) 1.2 in J2EE 5 with JSP. Also, the JSP Expression Language (EL) provides a simple language for creating JSP pages and tags. In addition, by also using the JSP Standard Tag Library (JSTL), readers should never have to use a Java scriptlet or write spaghetti code again. Beyond covering the JSP and Servlet APIs, this book shows how to choose and implement the best persistence option for your web applications; how to secure web sites against malicious attack and accidental misuse; how to improve the performance and scalability of JSP pages; and how to architect and design applications to be reliable, stable, and maintainable through the use of design patterns and best practices. Finally, no JSP book would be complete today without looking at the role that open source projects such as Ant, Struts, XDoclet, JUnit, and Cactus can play in making web development even easier.

Beginning Object-Oriented Programming with VB 2005  
From Novice to Professional  
Dan Clark  
You can learn at least three important things in *Beginning Object-Oriented Programming with VB 2005*: how to analyze the business requirements of an application, model the objects and relationships involved in the solution design, and implement the solution using Visual Basic .NET. Along the way you’ll also learn the fundamentals of software design, the Unified Modeling Language (UML), object-oriented programming, and Visual Basic .NET 2.0.

Beginning Excel What-If Data Analysis Tools  
Getting Started with Goal Seek, Data Tables, Scenarios, and Solver  
Paul Cornell  
Excel’s “what-if” data analysis tools allow you to experiment with your data to project future results, which can in turn lead to better decision-making. For example, you could take a set of sales data and forecast how lowering price per unit while increasing projected unit sales might affect your profit margins. *Beginning Excel What-If Data Analysis Tools* explores how to use Goal Seek, Data Tables, Scenarios, and Solver to help you gain insights into your data.
Pro SQL Server 2005 Assemblies
Robin Dewson and Julian Skinner
The book provides an in-depth tutorial on building and using assemblies. It will focus on building assemblies in C# code, but will provide the equivalent VB.NET code in the code download. Alongside this tutorial comes a detailed examination of exactly when assemblies should and should not be used. Assemblies are not a complete replacement for T-SQL stored procedures and triggers, but are enhancements, to be used at the right place at the right time. After reading this book, the reader will be able to build robust, useful and intelligent assemblies that are safe to execute and secure to the organization.

Beginning SQL Server 2005 Express Database Applications With Visual Basic Express and Visual Web Developer Express
Rick Dobson
This book provides all of the installation, configuration, administration and development techniques that you need to build these types of application quickly and effectively. It focuses on solution techniques that are easy to learn, fast to implement, and transparent in the ways they address real-world problems. It covers: SQL Server Express tools and techniques, including use of Express Manager, and T-SQL programming. Using Visual Basic Express with SSE to build Windows Forms applications, Using Visual Web Developer with SSE for rapid but effective development of ASP.NET Web applications. The book includes two full example case studies showing how to build a paypal-based eCommerce site and a Church administration application.

Building Online Communities with Drupal, phpBB, and Wordpress
Robert T. Douglass, Mike Little, Jared W. Smith
Building Online Communities with Drupal, phpBB, and Wordpress is authored by a team of experts, including Jared Smith, a long time support team member of the phpBBHacks.com web site who has been building sites with phpBB since the first beta releases, and Mike Little, the founder and a contributing developer of the WordPress project.

Beginning ASP.NET 2.0 Databases From Novice to Professional
Damien Foggon
Beginning ASP.NET 2.0 Databases: From Novice to Professional is a comprehensive introduction on how you can connect a Web site to many different data sources — not just databases — and use the data to create dynamic page content. They also show how to build a relational database, use SQL to communicate with it, and understand how they differ from each other. You’ll also learn about the new features of ADO.NET and ASP.NET in .NET 2.0.

Pro Perl Parsing
Christopher Frenz
Pro Perl Parsing begins with several chapters devoted to key parsing principles, discussing topics pertinent to regular expressions, parsing grammars, and parsing techniques. This material sets the stage for later chapters, in which numerous powerful CPAN parsing modules are introduced, accompanied by an ample number of example applications.
### Beginning Python

**From Novice to Professional**

Magnus L. Hetland

Beginning Python: From Novice to Professional introduces readers to a wide swath of Python-related programming topics. Intended as both thorough introduction and practical reference, Hetland touches upon topics including language internals, database integration, network programming, Web services, and more. Advanced topics such as extending Python and packaging/distributing Python applications are also covered. The book concludes with 15 practical projects which serve to formalize concepts introduced throughout the book. Readers will learn how to create a simple P2P file-sharing application, a Web-based bulletin board, remotely edit Web-based documents, and create games as they work through the details of this fascinating set of real-world sample applications.

**October 2005**

ISBN 1-59059-519-X

$44.99

640 p.

Softcover

### Microsoft SharePoint

**Building Office 2003 Solutions**

Scot P. Hillier

The new edition emphasizes Visual Studio Tools for Office 2005 and covers new workflow solutions for SharePoint and BizTalk as well as new approaches to using SharePoint to improve business efficiency. The goal of the author remains true to the first edition however: to provide intermediate-level guidance for SharePoint programmers who want to design and deploy business solutions based on Microsoft SharePoint technologies.

**December 2005**

ISBN 1-59059-575-0

$59.99

416 p.

Softcover

Second Edition

### Mobile Enterprise Development with Visual Studio 2005

Derek Hodgkins

Mobile Business Application Development with Visual Studio 2005 is written with the needs of enterprise-class Windows Mobile applications in mind. This book covers all aspects of effective Windows Mobile application development, including user interface usability, developing for differing devices, connecting applications to enterprise systems and deployment strategies.

**November 2006**

ISBN 1-59059-583-1

Approx. $49.99

Approx. 375 p.

Softcover

### Pro .NET 2.0 Code and Design Standards in C#

Mark Horner

This book is special because for the first time the reader gets an easy-to-follow set of code and design standards written especially to deal with all of the basic needs of a team of .NET developers and application architects. It is presented in a “what, why, where, and how” format, so that it is easy to understand a given topic and apply the solution. The format facilitates fast understanding and quick reference—just what you need when you are under pressure! This book has done the research for you and the more common options have been identified and discussed. Where there is a choice, there is analysis to guide you. Techniques are re-usable across all versions of .NET and beyond.

**November 2005**

ISBN 1-59059-560-2

$39.99

360 p.

Softcover

### Pro JSF

**Building Rich Internet Components**

Jonas Jacobi and John Fallows

Written by JSF experts and verified by established community figures—including Adam Winer (member of JSF Expert Group) and Kito Mann (JSFCentral.com and JSF in Action)—this book provides reliable and groundbreaking JSF components for developers who are looking to fully exploit the power of JSF in their Java Web applications.

**February 2006**

ISBN 1-59059-580-7

$49.99

Approx. 400 p.

Softcover
Visual C# 2005 Recipes
A Problem-Solution Approach
Allen Jones and Matt MacDonald

To master .NET development is as much about understanding the functionality of the .NET Framework as it is about the syntax and grammar of your chosen language. Visual C# 2005 Recipes was written specifically for the .NET 2.0 platform. It draws on its heritage in Microsoft Press’ successful C# Programmers Cookbook and builds on it to create an up-to-date reference for .NET 2.0 programmers. When you have a problem on the job, reach for this book, because it contains a recipe that provides the solution — or at least point you in the right direction. Even if you are simply looking to broaden your knowledge of the .NET Framework class library, Visual C# 2005 Recipes is the perfect resource to assist you.

Pro Eclipse JST
Plug-ins for J2EE Development
Christopher Judd and Hakeem Shittu

Up until this point, an enterprise developer using Eclipse had to spend a large amount of time locating and evaluating plug-ins to build a suite of enterprise tools. The Eclipse Web Tools project has changed that by providing a comprehensive tool kit for developing enterprise applications called the J2EE Standard Tools (JST). JST along with WST (Web Standard Tools) will make Eclipse a much more complete application development framework for Java developers.

eDirectory Field Guide
Rick Killpack

Apress’ eDirectory Field Guide is a handy reference for configuring, troubleshooting, and optimizing Novell’s eDirectory on NetWare, Linux, UNIX, and Windows. Along with Sun ONE Directory Server and Microsoft Active Directory, Novell’s eDirectory is a leader in directory server software, the specialized database that enterprises employ to store user identities. Tips are provided on migrating from one operating system to another. iMonitor, troubleshooting and Administration tools, such as Novell’s iManager and ConsoleOne, are discussed in detail. Written and tech reviewed by Novell employees, this book is key for anyone working with eDirectory.

Beginning MapServer
Open Source GIS Development
Bil Kropla

Beginning MapServer is a comprehensive introduction to MapServer, an Open Source geographic information systems (GIS) development platform used for integrating mapping technology into Internet applications. After a thorough dissertation on installation and configuration, readers are guided through basic MapServer topics and examples, culminating with the creation of a mapping application. Next, an overview of advanced MapServer features are offered, showing readers how to query and incorporate dynamic data into the application, and use popular Open Source languages such as PHP, Perl and Python to extend their MapServer-driven applications.

Expert Spring MVC and Web Flows
Seth Ladd and Keith Donald

Expert Spring MVC and Web Flows shows the reader how to use the Spring Web application development framework found in the extremely popular, open source Spring Framework. Picking up where the best selling Pro Spring left off, Expert Spring MVC and Web Flows covers Spring’s Model-View-Controller (MVC) code packages, HTTP, best practices for Web application development, and integration with popular third-party utilities. This book also features the new Spring Web Flow system, a cutting edge workflow system being introduced in Spring 1.3. The Web Flow system provides the perfect compliment to the existing MVC system, rounding out Spring’s robust and powerful Web development framework.
Beginning ASP.NET 2.0 in C# From Novice to Professional
Matthew MacDonald and Julian Templeman

Beginning ASP.NET 2.0 in C# From Novice to Professional provides exhaustive coverage of ASP.NET, guiding you from your first steps right up to the most advanced techniques, such as querying databases from within a web page and performance-tuning your site. You’ll find tips for “best practices” and comprehensive discussions of key database and XML principles you need to know in order to be effective with ASP.NET. The book also emphasizes the invaluable coding techniques of object orientation and code behind, which will start you off on the track to build real-world websites right from the beginning — rather than just faking it with simplified coding practices.

Pro Drools
Declarative Programming with Java
Jan Machacek

Pro Drools is a Java-focused expert guide to declarative programming. This book is ideal if you want to learn rule-based programming languages to implement complex and constantly-changing business rules. The book presents a unique mix of theory that explains the inner workings of rule engines, allowing you to solve problems easily. The latter part of the book thoroughly covers the Drools engine, including its syntax and integration in plain Java applications. After reading this book, you will become proficient with the various parts that compose a rule, which may be extended to lend domain-specific sense to the rule.

Practical Mono
Mark Mamone

The Mono project is an open source implementation of the groundbreaking Microsoft .NET platform, backed by Novell and supported by thousands of contributors from around the world. Practical Mono offers readers a detailed examination of Mono and its many facets, such as building GUI-based applications with Gtk#, database interaction ADO.NET, and creating powerful applications with XML and Web Services. By embracing this implementation, users are able to take advantage of the powerful development paradigm, building Internet-enabled cross-platform applications based on freely available, open source technologies. It includes a briefing on the C# language, so even novice .NET programmers stand to gain plenty from this practical guide.

Pro Apache Ant
Matthew Moodie

Pro Apache Ant is a professional-level tutorial for Java and XML developers who want to learn the open source Apache Java-based build tool, Ant. Pro Apache Ant shows you how to be productive with Ant right from the start. Instead of writing shell commands, the configuration files are XML-based. Each task is run by an object that implements a particular Task interface. And, if you really need to execute a shell command, Ant has an <exec>; task that allows different commands based on the OS. The example application covers the entire set-up of the application, from calling database scripts to unit testing. Practical examples are used at every stage. Each task will have a concrete example. The author shows you how with other, complimentary tools like Apache Jakarta Tomcat. This book is organized around chronological tasks instead of alphabetical functions, using a sample application throughout the set-up, from calling database scripts to unit testing.

Foundations of AOP for J2EE Development
Renaud Pawlak, Jean-Philippe Retaille, Lionel Seinturier

Foundations of AOP for J2EE Development covers a relatively new programming paradigm: aspect oriented programming (AOP). The concept of an aspect was originally defined in 1996 by Gregor Kiczales and his team at the Palo Alto Research Center (PARC), a subsidiary of Xerox in California. The last part of the book is dedicated to the development of J2EE applications with AOP. J2EE is well-known for being a rich and somewhat complicated framework. The authors show how AOP can ease this task and how AOP benefits J2EE.
The Definitive Guide to Mambo
Mitch Pirtle
The Definitive Guide to Mambo offers a complete resource for installing, deploying, and managing the PHP-driven Mambo content management system. Beginning with detailed instructions on installation and configuration for the Windows and Linux operating systems, you are guided through Mambo administration, templating, security, and dynamic content generation. Authored by core Mambo team member Mitchell Pirtle, you will benefit from Mitch’s considerable experience not only participating in Mambo’s development, but also from his work as a Mambo consultant. He shares his knowledge regarding extending and customizing Mambo, showing you how to create custom modules, macros, and even how to modify the Mambo core. Capable of interfacing with open source and proprietary databases, Mambo is geared to suit the technology requirements of most organizations.

November 2005
ISBN 1-59059-556-4
$49.99
440 p.
Hardcover

The Definitive Guide to Building Java Robots
Scott Preston
The Definitive Guide to Building Java Robots is for educators, students, hobbyists, and start-ups looking for Java / hardware interaction. It shows readers how to use their PCs to build robots. Unless you had a lot of money, robotics was limited to what you could fit inside a 1k microcontroller. This book shows readers how to interface with a microcontroller to do the basics; then teaches readers how to design their robots to navigate, see, recognize your face, listen to you, speak, and build maps.

August 2005
ISBN 1-59059-592-0
$69.99
1016 p.
With CD-ROM.
Hardcover
Second Edition

SQL Server 2000 Fast Answers for DBAs and Developers
Signature Edition
Joseph Sack
This is a book that many SQL Server developers turn to when they are in the field and need quick, effective solutions. This special signature edition contains a searchable PDF of the book, making it ideal for use as both a desktop reference, and a client-site field guide. It provides junior, part-time, and advanced DBAs and developers with a quick and effective reference to the specifics of every SQL Server command or process. It addresses content and topics that are useful to all SQL Server professionals, and it provides hundreds of practical recipes that describe and demonstrate the utility of a feature or function, with the minimum necessary background theory.

December 2005
ISBN 1-59059-570-X
$59.99
768 p.
Softcover

SQL Server 2005 T-SQL Recipes
A Problem-Solution Approach
Joseph Sack
This book provides ‘How To’ answers to common SQL Server T-SQL questions, conceptual overviews, and highlights of new features introduced in SQL Server 2005 as well as useful and concise Transact-SQL syntax examples. You can even use it in preparation for a SQL Server job interview or for a SQL Server certification test.

June 2006
ISBN 1-59059-602-1
$34.99
Approx. 400 p.
Softcover

Practical and Experimental Robotics with Kits
Ferat Sahin and Pushkin Kachroo
This hands-on book teaches advanced robotic building techniques using robotic kits. This is the first book to focus on robot building using a multitude of different kits, which can provide an inexpensive and convenient way to learn advanced concepts. The construction, theory, and experiments are explained in detail for different types of robots. Experimental Robotics with Kits is an independent and thorough resource for knowledge and understanding of robotics for both the hobbyist and student.
Practical .NET for Financial Markets
Yogesh Shetty and Samir Jayaswal

This book provides fascinating insight into the nature and operation of Financial (Equity) markets and the singular demands and challenges placed on technology solutions in this environment. It then takes an in-depth look at how these challenges can be addressed using Microsoft .NET technology. Each chapter starts with a detailed explanation of a specific and ubiquitous business requirement in Equity market applications, and then the particular features of the .NET framework that can be used to meet that requirement.

Pro PHP 5 Content Manipulation
Multimedia, PDF, and Office Documents
Mitja Slenc

Pro PHP 5 Content Manipulation will show you how to do more than just create HTML content with PHP. The book begins with in-depth coverage of creating a variety of business data, including Excel spreadsheets, Word files, PowerPoint presentations, charts, and graphs. The reader is then immersed into the world of graphical output while learning to create images using the GD library, Scalable Vector Graphics (SVG), Flash, and PDF files. For a finale, importing data from Excel, PDF and Word is explored in order to make those documents full text searchable from your web applications.

Pro Open Source Mail
Building An Enterprise Mail Solution
Curtis Smith

In organizations of all sizes, 24/7 access to email has become an indispensable part of the enterprise. Yet providing the myriad of mail-related services expected by users these days can be a confusing, often daunting process. Pro Open Source Mail: Building An Enterprise Mail Solution removes the cloak of secrecy often surrounding mail administration by presenting a comprehensive guide to managing the most important services, including user administration, mail transfer agents, virus protection, spam filtering, mail filtering, Web-based mail, and mailing list maintenance. Beginning with installation and configuration of one of the most popular server-based operating systems, the Fedora Core, readers are presented with a detailed overview of the system and network preparation process geared towards running an enterprise mail server. Subsequent chapters are devoted to installing and configuring Sendmail, popular POP3/IMAP servers Qpopper and Dovecot, and a variety of mainstream open source software commonly used for managing not only desired but required features such as virus protection and spam filtering. In a nod to the global mail availability required by today's organizations, readers are also guided through the configuration of a Web-based mailing-list software.

Pro PHP Security
Chris Snyder and Michael Southwell

Pro PHP Security guides developers through many of the defensive and proactive security measures that can be taken to help prevent attackers from potentially disrupting site operation or destroying data. Moreover, this book covers a wide swath of security measures, showing readers how to create and deploy captchas, validate email, fend off SQL injection attacks, prevent cross-site scripting attempts, and more.
WiMax Operator's Manual
Building 802.16 Wireless Networks
Daniel Sweeney
The second edition includes most of the material from the first edition and new discussions of ultra high-speed mobile telephone standard (HSDPA), ultra wideband (UWB), changes to DSL technologies, mobile voice, mobile entertainment, and new backup systems.

A Tester’s Guide to .NET Programming
Mary Sweeney and Randal Root
If you’re a tester or work in a light-programming capacity, then this comprehensive book will get you up to speed on Microsoft’s .NET technologies. Unlike other books, this one focuses solely on applied programming techniques for testers. You will learn how to write simple automated tests, then test tools and utilities. You will also learn about the important concepts driving modern programming today, like multi-tier applications and Object Oriented Programming.

The Definitive Guide to ImageMagick
Michael Still
Supporting over 90 image formats, and capable of resizing, cropping, and converting between image types, the ImageMagick image manipulation suite is capable of serving an increasingly demanding role in an era where digital imaging and photography is more prevalent than ever. An open source project backed by six years of continued development, ImageMagick can perform an impressive array of operations, such as creating images from scratch, changing colors, stretching, rotating, overlaying images on one another, and overlaying text on images. The Definitive Guide to ImageMagick details all of these capabilities (and more) in a practical, learn by example fashion. After reading this book, you will be comfortable using ImageMagick for any image-processing task. Also, with its coverage of the ImageMagick interfaces for C, Perl, PHP, and Ruby, you will learn how to incorporate ImageMagick features into a variety of applications.

AutoCAD 2006 VBA
A Programmer’s Reference
Joe Sutphin
This book is for any programmer who wants to take full advantage of the VBA (Visual Basic for Applications) programming environment within AutoCAD 2006. Whether you want to automate routine tasks, create sophisticated applications — or designs that are generated programmatically — this book will give you all of the information necessary to start making AutoCAD work for you.

The Definitive Guide to GCC
Kurt Wall and William von Hagen
The GNU Compiler Collection (GCC) offers a variety of compilers for a variety of programming languages, including C, C++, Java, Fortran, and Ada. The Definitive Guide to GCC, Second Edition, has been revised to reflect the changes made in the most recent major GCC release, version 4. Providing in-depth instruction to GCC’s enormous array of features and options, and introducing crucial tools such as autoconf, gprof, and libtool, beginners and experts alike will appreciate using this book as both a guide and reference for years to come. However this book goes well beyond a general introduction, introducing key programming techniques, such as profiling and optimization that when used in conjunction with GCC’s advanced features can greatly improve application performance. Also, in order to account for the growing popularity of GCC’s other language compilers, the second edition has been expanded to provide coverage for C++, Java, Fortran and Ada.
Micro-ISV
From Vision to Reality
Bob Walsh

Micro-ISV: From Vision to Reality explains what works and why, in today’s emerging micro-ISV sector. Micro Independent Software Vendors (micro-ISVs) have become both a major source of applications, and a realistic career alternative for IT professionals. Today there are thousands of programmers building and delivering great solutions to problems worldwide, with success and revenues far larger than you might think. Written by, for, and with the considerable help of some of the leading micro-ISVs, this book is ideal if you want to do more than just dream of having your own business.

January 2006
ISBN 1-59059-601-3
$29.99
Approx. 300 p.
Softcover

Pro VB 2005 and the .NET 2.0 Platform
Andrew Troelsen

Pro Visual Basic .NET 2005 and the .NET 2.0 Platform provides an enjoyable, fast-paced, and comprehensive explanation of Microsoft’s new .NET 2.0 technologies. It is based on the author’s extremely successful and award winning C# and the .NET Platform and is thoroughly updated and revised for the VB.NET 2005 Market. The book shares all the traits of its elder sister—being a fully-rounded and well-paced overview of the new VB.NET 2005 language and the .NET 2.0 platform upon which it is based. Aimed at programmers with little previous coding experience (VB6, Java, or VB.NET 2003), this book is all that you need to get up to date with the latest in Microsoft .NET development.

April 2006
ISBN 1-59059-578-5
Approx. $59.99
Approx. 1000 p.
Softcover
Second Edition

friends of ED: Backlist

Flash Application Design Solutions
The Flash Usability Handbook
Craig Bryant and Ka Wai Cheung

Flash’s reputation has improved, due to a general increase in usability awareness, and improved software features. These days, the average Flash site can be just as usable and compact as its HTML counterparts—and better looking and more dynamic. But how do you design and develop a professional, usable, and visually appealing Flash site, that provides users with a memorable and enjoyable online experience? In Flash Design Solutions, Craig Bryant and Ka Wai Cheung show you how.

March 2006
ISBN 1-59059-594-7
Approx. $34.99
Approx. 350 p.
Softcover

AdvancED ActionScript Components
Mastering the Macromedia Component Architecture
Antonio De Donatis

Macromedia’s architecture is like a chest filled with precious jewels, and this book is quite simply the key to open it! One of the most important tools provided with Flash is the Macromedia Component Architecture: a framework of components written in ActionScript 2, based on established design patterns, and information architecture. They reveal techniques using gradients, layers, lighting and shadowing, 3D objects, animation, and photo editing. Techniques are illustrated and the book concludes with a discussion of usability and final tweaks. There is also a tutorial on testing your work, and exporting and publishing it.

February 2006
ISBN 1-59059-593-9
$49.99
Approx. 600 p.
Softcover

Advanced Flash Interface Design
Chris Dick and Guido Rosso

In this book, two of the most talented Flash designers in the world will show you how to use them effectively to create breathtaking visuals for your Flash web sites. You’ll also learn how to take advantage of Flash’s powerful built-in vector-based drawing tools. The authors discuss general background theory, such as site planning, color theory, and information architecture. They reveal techniques using gradients, layers, lighting and shadowing, 3D objects, animation, and photo editing. Techniques are illustrated and the book concludes with a discussion of usability and final tweaks. There is also a tutorial on testing your work, and exporting and publishing it.

May 2006
ISBN 1-59059-555-6
Approx. $44.99
Approx. 400 p.
Softcover
Flash 8 Essentials
Stephens Downs, Glen Rhodes, Craig Swann, Guy Watson, Matt Voerman, Todd Yard
As a Flash Developer, you’re no doubt excited by the great new features available in the next version of Flash 8, to be released later in the year. It promises to include several impressive new design and scripting features. However, a lot of the features will be the same, so you will want a book that gets you right up to speed asap with the exciting new features of the new version. In this book, some of Flash’s most prominent community figures do just that, starting you off with an overview of Flash 8 and what’s new. They then address all of the new features. The book concludes with a gallery of examples to further demonstrate some of the exciting new features of Flash 8.

Foundation ASP for Dreamweaver 8
Omar Elbaga and Rob Turnbull
Omar Elbaga and Rob Turnbull first take you through the new version of Dreamweaver, and how ASP fits into it, then look in-depth at setting up your work environment—installing ASP, Access (and SQL Server), and the IIS web server, making sure they are all working together, and setting up a new web site via Dreamweaver. They then get to work, using several tutorials and real world examples, covering topics such as ASP Essentials (knowing what ASP code looks like), working with forms, designing and implementing effective databases using Access and SQL Server, debugging and troubleshooting, and creating dynamic navigation, login, and search functionality. Examples built throughout the book include a content management system, and an online image gallery. All examples are designed to meet modern usability requirements and be web standards compliant. No previous experience of ASP or databases is required to use this book.

Podcast Solutions
The Complete Guide to Podcasting
Michael Geoghegan and Dan Klass
Podcast Solutions is a shrewd and comprehensive guide to podcasting. From downloading podcasts to producing your own for fun or profit, Podcast Solutions covers the entire world of podcasting with insight, humor, and the unmatched wisdom of experience. In its 200 pages, you’ll learn everything you need to know to find, subscribe to, and receive quality shows on your iPod, computer or any other mp3 player. However, more importantly, you’ll find out how to plan and design your own top quality podcast including expert advice on designing a show built for success, how to include music, phone calls, and audio feedback into your podcast inexpensively and legally, and how to set up your “podcast studio,” whether you’re a casual hobbyist or a committed professional.

Foundation Web Design with Dreamweaver 8
Craig Grannell
Dreamweaver is Macromedia’s best-selling web design/development environment, and the updated version of Dreamweaver will be available later this year. Dreamweaver has the capability to generate dynamic website code using server-side languages like ASP, PHP, and ASP.NET. But this book focuses on the latest version of Dreamweaver in order to create usable, standards-compliant websites using XHTML and CSS. One of the highlights in the upcoming version is much closer, tighter CSS/XHTML.

Foundation Flash Applications for Mobile Devices
Richard Leggett
This book is for anyone wishing to learn how to implement Flash applications on mobile devices, including Flash and J2ME. It discusses the pluses and minuses of this platform. But its focus is to show how Flash surpasses J2ME for a superior rich user experience.
### Foundation ASP.NET for Flash

**Ryan Moore**  
Written to be usable by Flash designers or ASP.NET developers, this highly readable Foundation book presents a thorough grounding to integrating Flash, ActionScript 2.0, ASP.NET, and databases. Along the way you’ll study features such as email integration, saving visitor information, dynamic updating, and much more. **Foundation ASP.NET for Flash** will take you through the essentials of ASP.NET/C#, setting up your development environment, sending data to and from Flash, database integration, and then on to advanced topics such as web services, Flash Remoting, XML data, and securing your applications.

December 2005  
ISBN 1-59059-517-3  
$39.99  
424 p.  
Softcover

### Foundation PHP for Dreamweaver 8

**David Powers**  
David Powers first takes you through the new version of Dreamweaver, and how PHP and MySQL fit into it, then looks in-depth at setting up your work environment—installing PHP, MySQL, and the Apache web server, making sure they are all working together, and setting up a new web site via Dreamweaver. He then goes to work, using several tutorials and real world examples including topics such as PHP essentials (knowing what PHP code looks like,) working with forms, designing and implementing effective MySQL databases, debugging and troubleshooting, creating dynamic navigation, login, and search functionality. Examples built throughout the book include a content management system, and an online image gallery. All examples are designed to meet modern usability requirements and be web standards compliant. No previous experience of PHP or MySQL is necessary to use this book.

December 2005  
ISBN 1-59059-569-6  
$39.99  
528 p.  
Softcover

### Blog Design Solutions

**Phil Sherry, Andy Budd, Simon Collinson, Michael Heilemann, Drew McLellan, Richard Rutter**  
In this book, a team of renowned web designers take you through the ins and outs of putting together great blogs. They waste no time harking on about the philosophy of blogs, and the community behind them. Instead, they get straight to the practical details, showing how to set up a basic blog in some of the world’s most popular blogging engines—Moveable Type, Expression Engine, WordPress, and Textpattern. With your blog set up, they then show you how to build great looking, usable layouts for your blog. The last chapter even shows you how to build your very own PHP/MySQL-based blog engine! With this book in hand, you’ll have found your way to blog heaven in no time!

February 2006  
$39.99  
Approx. 300 p.  
Softcover

### Foundation 3Ds Max 8 Architectural Visualization

**Brian L. Smith**  
3Ds Max 8, released in October 2005, is the latest version of one of the world’s most powerful 3D design software packages. With this book, you will learn all that you need to know to produce stunning, photo-realistic work, from architectural renderings to animation. 3Ds Max is an essential tool for 3D designers working in architecture, civil engineering, construction, real estate, and land development, 3D video games, and movie effects. Author Brian Smith covers in detail modeling, materials, lighting, cameras and animation, particles and effects, rendering, and creating architecture. Brian also includes several quick start tutorials to help you get up and running asap. This book is part of the Discreet Certified Learning Material program.

April 2006  
Approx. $59.99  
Approx. 550 p.  
Hardcover
Copernicus Books: Backlist

Curve Ball
Baseball, Statistics, and the Role of Chance in the Game
Jim Albert and Jay Bennett
"Smart and energetic...hardcore fans will find its mission refreshing. Curve Ball doesn’t pay the usual misty-eyed homage to baseball’s traditions and conventional wisdom. Rather it tests whether baseball’s accepted measurements stand up to scrutiny... This is great stuff... Curve Ball makes clear how measurable [stats] can be, and arguably how important, to view the great American game with real precision." - The Wall Street Journal

Secrets of the Old One
Einstein, 1905
Jeremy Bernstein
Noted science writer Jeremy Bernstein tells the remarkable story of Einstein’s papers and their impact one century ago. Beginning on the 18th of March, 1905, at approximately eight week intervals, the noted German physics journal Annalen der Physik received three hand-written manuscripts from a relatively unknown patent examiner in Bern. The patent examiner was the twenty-six year old Albert Einstein and the three papers would set the agenda for twentieth century physics. A fourth short paper was received by the journal on the 27th of September. It contained Einstein’s derivation of the formula E=mc^2. These papers with their many technological ramifications changed our lives in the twentieth century and beyond. While to a professional physicist the mathematics in these papers is quite straightforward, the ideas behind the mathematics are not. In fact, none of Einstein’s contemporaries fully understood what he had done. This book makes these ideas accessible to a general reader with no more mathematics than one learns in high school.

Distant Worlds
Milestones in Planetary Exploration
Peter Bond
Peter Bond provides an overview of key, unmanned missions, chapter by chapter, to planets in the twentieth century. He tells the story of the mission planners and engineers who, working mostly in the background, made these unprecedented achievements in scientific exploration possible. Bond’s perspective provides a much-needed overview, but it also details the very human feelings that animated the intense rivalries between the Soviet Union and the United States, and most recently the difficulties that arose in collaborations between NASA and ESA on the Rosetta and Halley’s Comet missions.

Columbia: Final Voyage
The Last Flight of NASA’s First Space Shuttle
Philip Chien, Merritt Island, FL, USA
Aerospace writer Philip Chien, who has over 20 years’ experience covering the US space program, provides a unique insight into the crew members who lost their lives in the Columbia disaster. He reviews in detail their scientific work and other activities during their successful 16-day flight, the background of the accident itself and a detailed first-hand account of what happened that fateful day in February 2003. The author provides a comprehensive and personal look at both the Columbia astronauts and the STS-107 mission, together with a behind-the-scenes account of other people involved in the mission and their personal reactions to the accident. Chien interviewed all seven crew members several times and got to know them as individuals. Includes up-to-the-minute coverage of the fuel tank foam investigation by NASA.

Chemical and Biological Warfare
A Comprehensive Survey for the Concerned Citizen
Eric Croddy
"Croddy’s robust study helps CBW experts hone their opinions after the events of September 11, 2001. From armchair generals to scholars everyone should feel informed after reading Croddy’s concise and illuminating tour de force on CBW." - Theodore Karasik, Political Scientist, Rand Corporation

"The portion devoted to biological warfare, which I am qualified to comment on, is most informative without getting into the ‘how to’ business. The book is very readable and addresses all aspects of biological warfare that an informed citizen should know." - William C. (Bill) Patrick III, President of Biothreats Assessment, and the “Father” of the U.S. Biowarfare Program
**Brute Force**  
*Cracking the Data Encryption Standard*  
Matt Curtin  
In 1997, in a remarkable demonstration of collective computing, a loosely organized team of university students, programmers, and scientists linked together thousands of computers over the Internet to crack DES and thus dramatize its vulnerabilities. Networking literally thousands of CPUs (most of them in desktop PCs) and testing as many as 7 billion keys per second, these participants in DESCHALL (the DES Challenge) sent shockwaves through government and financial networks worldwide. In this captivating book, Matt Curtin traces DES's rise and fall, providing an insider's view into the group of strangers who banded together to overturn public encryption policy nearly overnight. He tells us not just how this motley crew made strong cryptography available to all of us, but why this "opening up" of a powerful computer technology was a critically important step forward—economically and politically, as well as technologically.

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**The Square Root of Two**  
*A Mathematical Dialog and Excursion*  
David A. Flannery  
Often overshadowed by its more famous cousins (like pi and zero), the square root of 2 is nonetheless a very important number. While pi is the circumference of a unit circle, the square root of 2 is the diagonal of a unit square. What's more, the square root of 2 was the first known, and mathematically proven, irrational number. This book, through an imaginary dialog between a teacher and student, shows readers why this number is so important, and how, in puzzling out its special qualities, mathematicians came to their insights about the nature of irrational numbers. Using no more than the most basic algebra and geometry, Flannery manages to convey not just why irrational numbers are fascinating and significant, but how the whole enterprise of mathematical thinking can be played out in a dialog that is imaginative, intriguing, and engaging. Original and informative, this book is a one-of-a-kind introduction to the pleasure and beauty of mathematical thinking.

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**Alice in Quantumland**  
*An Allegory of Quantum Physics*  
Robert Gilmore  
In this cleverly conceived book, physicist Robert Gilmore makes accessible some complex concepts in quantum mechanics by sending Alice to Quantumland—a whole new Wonderland, smaller than an atom, where each attraction demonstrates a different aspect of quantum theory. Alice's unusual encounters, enhanced by illustrations by Gilmore himself, make the Uncertainty Principle, wave functions, the Pauli Principle, and other elusive concepts easier and fun to grasp.

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**Centauri Dreams**  
*Imagining and Planning Interstellar Travel*  
Paul Gilster  
An audacious plan to send an unmanned craft to Centauri, the star system nearest to our Sun, is already underway at a number of NASA sites around the U.S. Why, today, would anyone undertake to think and plan seriously for such a hypothetical spacecraft? Can scientists and engineers seriously contemplate such a vehicle, when its existence is at least 30 years in the future, and its first one-way journey would take at least 40 years to complete? Gilster investigates the science, and just as importantly the spirit, of the researchers who are actually at work on just such a project. The challenges in terms of materials science, propulsion systems, and communications, to say nothing of distances measured in light-years and missions lasting decades, pushes thinking about such a project to the brink of science fiction. Yet the work on the Centauri project is unambiguously thoughtful and serious and profound in its implications for the future of human exploration.
The Hundred Greatest Stars

James B. Kaler

In this arresting and lavishly illustrated volume, noted astronomy writer and teacher Jim Kaler has chosen 100 stars to illustrate the mind-boggling variety of stars' shapes and sizes, their immense ages, and their vast range of configurations. From AG Draconis to Z Andromedae, this alphabetically arranged volume first lists each star's resident constellation, its apparent brightness as viewed from Earth, its distance from our Sun, and its visual luminosity. Then the real story begins. In choosing his "top 100," Kaler has aimed not just at providing a representative sample of the Universe's extraordinarily diverse population, but at capturing their complexity, their dynamism, and the amazing view they provide into the extraordinary physical forces at play.

The Forgotten Cure

The Past and Future of Phage Therapies

Anna Kuchment

As Anna Kuchment dramatically recounts in The Forgotten Cure, phages have a long history. First developed by Russian scientists almost a century ago, they were used during World War II by both the German and Russian armies. And until the widespread availability of antibiotics became a reality (in the mid to late 1940s), bacteriophages, however exotic they seemed, appeared to have a very bright future. From current developments in human medical therapies, to applications for livestock and in food processing, and to the current entrepreneurial rush to create the first viable bacteriophage businesses, The Forgotten Cure brilliantly portrays the story of this exciting once and future medical technology.

Space Tourism

Adventures in Earth Orbit and Beyond

Michel van Pelt

There is a significant community of scientists, researchers, and even investors who are seriously investigating the idea of privately funded space travel that's safer, cheaper, and more available than anything we've ever imagined.

In Space Tourism, Michel van Pelt gives us an up-to-date report on just what these scientists, engineers, researchers, and entrepreneurs are up to. Besides describing the technological developments that will make space tourism feasible, he tells us: What will it take for an individual to get into space? What will space feel like, and why are so many people (apparently) determined to sign up for the trip? How is our definition of space changing, and how will launch and liftoff technologies (including reusable airplane-like space vehicles) change our expectations? The space aficionado with a taste for adventure will find Space Tourism an informative, entertaining, and irresistible guide to where we're going.

Return to the Moon

Exploration, Enterprise, and Energy in the Human Settlement of Space

Harrison J. Schmitt

The key question behind Harrison Schmitt's Return to the Moon is: What unifying constant is going to animate and sustain the next great push into space by the United States?

In a word, Schmitt's answer is that the need for new sources of energy is what will drive the U.S., and the rest of the industrialized nations on earth, back into space, and more specifically back to the moon. What Schmitt envisions is a scenario in which private industry will turn the moon into the richest energy source humans have ever mined. As he sees it, twenty-five years from now there should be a permanent human settlement on the Moon, supported by commercial operations producing helium-3 for terrestrial fusion electrical power. Other resources would be sold for use in space. The Space Station would also, as Schmitt imagines it, be a tourist destination of significant interest with a National Parks Service Space Module staffed by Park Rangers of the Department of Interior.
Out of This World
Colliding Universes, Branes, Strings, and Other Wild Ideas of Modern Physics
Stephen Webb
During the past few years cosmologists have just begun to develop a new theory—a so-called "Theory of Everything". In Out of This World, Webb examines these amazing recent theories. After introducing general relativity and quantum mechanics—the twin foundations of twentieth century physics—he explains how these two theories simply cannot both be true. Then, in a series of increasingly astonishing chapters, he introduces us to the seemingly outlandish and bizarre ideas that astronomers and physicists have come up with to account for this apparent theoretical inconsistency, ultimately leading us to the wholly new realms of understanding that many scientists and mathematicians are now proposing. In a model of lucid and compelling popular science writing, Webb makes these strange and wonderful goings-on accessible, engaging, and enjoyable.

2004
$27.50
320 pages, 100 illus.
Hardcover
6 1/8 x 9 1/4
A Copernicus/Praxis Co-publication

If the Universe is teeming with aliens…
Where is Everybody?
Fifty Solutions to Fermi’s Paradox and the Problem of Extraterrestrial Life
Stephen Webb
"a delightful mental romp…This book is a must read for anyone who has ever pondered the question, 'Are we alone?'” —Astronomy

“Everyone who has ever considered the possibility that other intelligent civilizations exist elsewhere within our galaxy will enjoy Where Is Everybody?” —Science

“I have read a number of good astronomy books this past year, but this is the one I regard as indispensable.” —Mercury Magazine

2002
ISBN 0-387-95501-1
$27.50
304 pages, 72 illus., Hardcover
6 1/8 x 9 1/4

The Pathological Protein
Mad Cow, Chronic Wasting, and Other Deadly Prion Diseases
Philip Yam
In The Pathological Protein, Philip Yam describes how scientists discovered that the agent of disease in Creutzfeldt-Jakob Disease and a host of other devastating neurological disorders is a bizarre, misshapen version of a protein called a prion. Unlike the better-known pathogens that afflict humans, prions have so far proved resistant to drug therapies and even standard sterilization. In a medical detective story with an undercurrent of urgency, Yam describes how the mysterious prion was discovered, how it has been linked to a number of exotic and poorly understood illnesses, and how likely it is that scientists will soon find effective tools for controlling its spread, diagnosing its presence, and treating the devastating disorders it causes.

2003
$27.50
284 pages, 15 illus.
Hardcover
6 1/8 x 9 1/4

Astronomy and Space: Backlist

Published by Springer-Praxis

Russian Spacesuits
The Soviet/Russian Spacesuit History
Isaac Abramov and Ingemar Skoog (eds.)

Russian Spacesuits is a unique contribution to space science. The authors, part of the original Zveda team that manufactured spacesuits for the first Russian space flights, still play an integral role in spacesuit research and development. Thus there is no one better to describe the technical innovations of the past 40 years, which enabled Gagarin’s first flight in 1961, the first space walk in 1965 and the Mir missions of the 1990s, and which have culminated in today’s International Space Station. Many documents are published for the first time that, together with photographs, detailed descriptions of the events of the time and the authors’ personal memories, provide a fascinating review of a previously unknown aspect of space science.

2003
1-85233-732-X
$39.95
300 pages, 100 illus.
Softcover
**Observing and Measuring Visual Double Stars**

Robert W. Argyle (ed.)

Double stars are the rule, rather than the exception: our solar system, having a single sun, is in the minority. Orbiting satellites, ground based observatories and interferometers have all helped discover many hundreds of new pairs—but this has left enormous numbers of wide, faint pairs under-observed or not observed at all. This is where amateur astronomers can help. Bob Argyle shows where enthusiastic amateur observers can best direct their efforts. The book caters to the use of every level of equipment.

**Navigating the Night Sky**

Guilherme de Almeida (ed.)

This book will interest anyone who marvels at the night sky and would like to learn to recognize constellations and identify the brightest stars by name. Renowned amateur astronomer, Guilherme de Almeida, dispels the myth that specialist knowledge and elaborate instruments are a prerequisite for all astronomical observation. His book emphasizes the point that getting to know the night sky with the naked eye is an essential platform from which to start any astronomical observation. Step-by-step, the reader is guided through the knowledge needed to recognize key constellations, identify stars and planets, and interpret changes in the overall appearance of the sky throughout the year.

**Saturn and How to Observe It**

Julius Benton, ALPO Saturn Section, Savannah, GA, USA

This is a book in a new series designed for practical amateur astronomers who not only want to observe, but want to know the details of exactly what they are looking at. Saturn is the second largest planet in the solar system, and the only one with a spectacular ring system that is easily visible from Earth. It is a gas-giant, a huge world dominated by its rings and a retinue of moons and is probably the most commonly observed and imaged planet for amateur astronomers, because it is always changing—the moons move visibly in the course of an hour, the weather systems on the planet change, and the orientation of the ring alters this way and that. The concept of the book—and of the series—is to present an up-to-date detailed description (part one); and then (part two) to consider how best to observe and record the planet, its moons and its ring system successfully.

**How to Photograph the Moon and Planets with your Digital Camera**

Tony Buick

Tony Buick has written this illustrated step-by-step manual for anyone who has a telescope (of any size) and a digital camera. The color images he has produced—there are over 300 of them in the book—are of breathtaking quality. More than a manual of techniques (including details of how to make a low-cost DIY camera mount) and examples, it also provides a concise photographic atlas of the whole of the nearside of the Moon—with every image made using a standard digital camera—and describes the various lunar features, including the sites of manned and robotic landings.

**Visual Astronomy Under Dark Skies**

Antony Cooke

Modern astronomical telescopes, along with other advances in technology, have brought the deep sky–star clusters, nebulae and the galaxies—within reach of amateur astronomers. Given a site with clear, dark night skies everything else follows. This book provides the reader with everything he needs to know about what to observe, and using some of today’s state-of-the-art technique and commercial equipment, how to get superb views of faint and distant astronomical objects. But, rather than the plethora of books emphasizing imaging for later viewing, this book explores what can be done in real time at the location and during the viewing session.
In Search of Dark Matter
Ken Freeman, Geoff McNamara

Astronomy was first a quest for light. Our ancestors never suspected that the stars they saw with only their eyes were other suns, the planets other worlds. Such revelations had to wait for the invention of the telescope, which revealed the moons of Jupiter, the craters of our Moon, and the myriad stars in the Milky Way. Modern telescopes bring images of objects so distant they are not only near the edge of the Universe, but at the edge of physical detectability. Now, with telescopes that observe the highest and lowest frequencies, we search for Dark Matter–one of the most profound questions ever put to science.

The Story of the Space Shuttle
David Harland

The Space Shuttle remains the most successful spacecraft ever developed. Conceived and designed as a reusable spacecraft to provide cheap access to low Earth orbit, and to supersede expendable launch vehicles, it now coexists with a new range of commercial rockets. Harland's definitive work on the Space Shuttle explains the scientific contribution the Space Shuttle has made to the international space program, detailing missions to Mir, Hubble and more recently its role in the assembly of the International Space Station (ISS). It concludes with a chapter beyond the Shuttle, looking at possible future concepts for a partly or totally reusable space vehicle that is being considered as a replacement for the Shuttle.

Published by Springer-Praxis

NASA's Voyager Missions
Exploring the Outer Solar System and Beyond
Ben Evans and David M. Harland

This book tells the story of Voyagers 1 and 2, undoubtedly the most far-reaching missions of exploration ever undertaken. Evans and Harland tell the human story that is interwoven in the Voyager odyssey. In 1977, the two Voyager space probes set out to explore the giant planets Jupiter and Saturn. However, for both crafts their journeys have involved far more than this and for one of them it would feature close encounters with Uranus and Neptune. There can be little doubt that the Voyager mission rates as one of the greatest stories of exploration. The book is illustrated with stunning color images, which chronicle the missions' major achievements.

Published by Springer-Praxis

Space Shuttle Columbia
Her Missions and Crews
Ben Evans

On February 1st 2003, one most public disaster in the human space program unfolded in the skies above north central Texas. The Space Shuttle Columbia– the world's first truly reusable manned spacecraft– disintegrated during its return to Earth, with a crew of seven. This book chronicles each of Columbia's 28 missions, as described by scientists and researchers who developed and supported its many payloads, by the engineers who worked on it and by the astronauts who flew Columbia. This record is intended to provide a fitting tribute to this remarkable flying machine and those who perished on its last mission.

Published by Springer-Praxis

Cassini at Saturn–Huygens Results
David M. Harland

Cassini at Saturn–Huygens Results brings the story of the Cassini–Huygens mission and their joint exploration of the Saturnian system right up to date. Here the author reports 8 months of scientific data available for review, including the most spectacular images of Saturn, its rings and satellites ever obtained by a space mission. The book contains a 16-page colour section, with a selection of the most stunning early images. There is great interest in the first results and images of the surface of Titan, Saturn's largest moon, and this book will be the first to appear with an incisive summary of this ground-breaking material.
Astronomy and Space

The Big Bang
A View from the 21st Century
David M. Harland
David M. Harland describes how particle physics has influenced the structure of the Universe from the very beginning of time. He discusses how our understanding of the Universe has developed, to the idea that all matter originated in a hot, Big Bang, then explains the many subtle improvements to the basic theory that have been necessary to understand how the very smallest particles and earliest structures (the ‘microscale’) in the Universe evolved to produce the Universe as it is now (the ‘macroscale’). Harland also describes how scientists are attempting to develop a ‘Theory of Everything’ that would explain how an instant after the Big Bang a single primordial force was transformed into the four forces of nature that we observe today.

Water and the Search for Life on Mars
David Harland, Glasgow, UK
Mars was thought to have been cold, dead and dry for eons, but striking new evidence suggests the planet was relatively warm and wet in geologically recent times, and that even today there are reserves of water frozen beneath the planet’s surface. This highly absorbing book relates how NASA and ESA have sought evidence of life on Mars. The author provides a comprehensive account of the recent Spirit and Opportunity Mars Exploration Rover missions, and describes the planning for the tests carried out by the Viking missions in 1976, with an account of the debate over their results.

China’s Space Program—From Conception to Manned Spaceflight
Brian Harvey
This book is designed for publication straight after the launch of China’s first manned spacecraft. China’s Space Program builds upon the previous edition to take into account China’s first manned space flight. This new edition also brings readers up-to-date with other developments in the Chinese space program from 1998 to the manned flight and looks forward to China’s future plans and ambitions in space exploration.

Mars: A Warmer, Wetter Planet
Jeffrey S. Kargel
Long believed to have been cold, dead and dry for eons, there is now striking new proof that not only was Mars a relatively warm and wet place in geologically recent times, but that even today there are vast reserves of water frozen beneath the planet’s surface. As well as casting fascinating new insights into Mars’ past, this discovery is also forcing a complete rethink about the mechanisms of global planetary change. In this absorbing, beautifully illustrated book, Jeffrey Kargel describes the still unfolding revolution in our knowledge about the Red Planet.

The Sky at Einstein’s Feet
W. Keel
The impact of Einstein’s relativity are perhaps most dramatic in astronomy, radically altering our interpretation of the observations of the stars and galaxies. Astronomers now encounter challenging phenomena that Einstein never lived to see, in which the bizarre effects of relativity played out on a cosmic scale. This accessible overview explains to general readers the many applications of relativity that have not been shown in earlier popular-level books. Using no mathematics beyond $e=mc^2$, it explains how deeply relativistic ways of viewing the Universe have informed our interpretations of it, and how many of the amazing discoveries of these decades have made sense only as part of Einstein’s universe.
The New Amateur Astronomer
Martin Mobberley
In recent years technology has advanced so much that amateur astronomers are now able to achieve what only professionals were doing at the end of the 1960s. Observers are able to make use of sophisticated equipment such as CCDs and robotic telescopes in the comfort of their own homes. Mobberley has written The New Amateur Astronomer to inspire determined beginners and experienced observers alike. All the aspects of the new hi-tech astronomy are covered. The book is divided into two parts, the first dealing with the basics and equipment, and the second discussing the observers and their techniques. Throughout the book there are numerous planetary, cometary, and Deep Sky images and also pictures of the observers and the equipment discussed—all designed to spur the astronomer into this exciting field!

Choosing and Using a Schmidt-Cassegrain Telescope
Rod Mollise
Amateur astronomy is becoming more and more popular, mostly because of the availability of relatively low-cost astronomical telescopes of superb quality—commercially made Schmidt-Cassegrain and Maksutovs. Featuring (but not exclusively) the ubiquitous Meade and Celestron ranges, Mollise describes what these instruments will do, how to use them, and which are the best to choose. There are sections on accessories, observing techniques, and hints and tips gleaned from the author’s 25 years experience with this type of telescope: cleaning, collimating, maintaining the telescope and mounting; using the telescope in various conditions; computer control; and imaging.
Astronomy with a Home Computer

Neale Monks, Lincoln, NE (ed.)

Here is a one-volume guide to just about everything computer-related for amateur astronomers! Today’s amateur astronomy is inextricably linked to personal computers. Computer-controlled “go-to” telescopes are inexpensive. CCD and webcam imaging make intensive use of the technology for capturing and processing images. The Internet offers links to other astronomers, information, and software. The list goes on and on. Find out here how to choose the best planetarium program. Learn how to optimize a go-to telescope, or connect it to a laptop. Discover how to choose the best webcam and use it with your telescope. Create a mosaic of the Moon, or high-resolution images of the planets. Astronomy with a Home Computer is designed for every amateur astronomer who owns a home computer.

Astronomy with a Budget Telescope

Patrick Moore and John Watson

Having surveyed some of the best and worst of today’s inexpensive mail-order-catalog and main-street astronomical telescopes, the authors have admitted to being astonished by how good some of them are. Astronomy with a Budget Telescope is in two parts. The first provides reports on some available models along with detailed and essential hints and tips about what to look for when buying. The second part describes how best to use the telescope, which celestial objects to observe (with full-page star charts to help find them), what you can expect to see, and how to take and even computer-enhance astronomical photographs.

More Small Astronomical Observatories

Patrick Moore (ed.)

This book is a sequel to the successful Small Astronomical Observatories, also edited by Patrick Moore. It contains detailed descriptions of even more innovative and interesting observatories built, for the most part, by amateur astronomers. Almost every serious amateur astronomer wants a fixed observatory of some sort—it saves a vast amount of time and effort—and this book provides the necessary help. As a bonus, the enclosed CD-ROM contains the entire first book, Small Astronomical Observatories in PDF format.

Care of Astronomical Telescopes and Accessories

A Manual for the Astronomical Observer and Amateur Telescope Maker

M. Barlow Pepin (ed.)

Barlow has written this complete manual for all owners—and prospective owners—of astronomical instruments. This is a unique and essential book for today’s amateur astronomer, dealing in depth with the practicalities of the purchase, care, and upkeep of astronomical telescopes and accessories.

Published by Springer-Praxis

NASA’s Scientist-Astronauts

David J. Shayler and Colin Burgess

Mounting pressure in the early 1960s from the National Academy of Sciences (NAS) led to NASA’s conclusion that flying scientifically trained crewmembers would generate greater returns. In October 1964 the Soviets launched Voskhod 1 whose 3-man crew were identified as the first ‘scientific passengers’ in space. A few days later NASA and the NAS completed joint studies into the possibility of using scientists in the manned space program, and invited scientists to apply for astronaut training.

Published by Springer-Praxis

Women In Space: Following Valentina

David J. Shayler and Ian A. Moule

Space exploration has developed from early, unmanned space probes, through the pioneering years of the ‘Manned’ Mercury, Gemini and Apollo missions, to missions that now include women in the crew. Shayler tells the story from the first woman balloonist in 1784 to their breakthrough as astronauts and cosmonauts detailing the contribution women have made to space exploration. These and other events are presented in a highly readable account that recalls the difficult path to space exploration by women.
Marswalk One
First Steps on a New Planet
David J. Shayler, Andy Salmon, and Michael Shayler
Marswalk One addresses the question of why we should embark on a journey to Mars, documenting what the first human crew will do when they place their feet in the red dust of the planet. The book also addresses why we need to carry out these tasks and, more importantly, what a human crew could achieve that an automated mission could not. The main objective is to look at what science will be done on the surface—supported by orbital operations—and what hardware and technology will be employed to achieve the mission objectives.

August 2005
ISBN 1-85233-792-3
$29.95
c. 400 pages, 150 illus.
(16 color pages)
Softcover

CCD Astrophotography
High-quality Imaging from the Suburbs
Adam Stuart, Physician Offices of South Florida, Florida City, FL, USA
Adam Stuart has written this reference book for all amateur astronomers who are interested in CCD imaging, especially those who have to work under suburban conditions. The book outlines the materials and (commercially-available) equipment used for high-quality imaging. The many wonderful images Dr Stuart has produced allow the reader to see the product of—initially—a fellow beginner’s efforts. The glorious images found in numerous books, and especially those seen in Sky & Telescope magazine—might seem out of reach. But this is not the case. Respectable images are attainable with modest equipment. This book outlines a complete and thoroughly tested working program for every beginner to high-quality digital imaging.

April 2006
$39.95
Approx. 210 p.
60 illus., 20 in color.
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The NexStar User Guide
Michael W. Swanson
Celestron's NexStar telescopes, along with Meade's ETX and LX ranges, together dominate the international market for affordable computer-controlled "go to" telescopes. Michael Swanson has written this complete, detailed guide to buying, using, and maintaining NexStar telescopes, which will appeal to all buyers and potential buyers of these telescopes. The NexStar User Guide contains just about everything, from basic descriptions of models to technical details of alignment and even programming. The book is highly comprehensive, including a chapter on Astronomy Basics, and is suitable for beginners and experts alike. Every NexStar owner will want this book!

2004
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US Spacesuits
Kenneth S. Thomas, Harold J. McMann
This highly focused reference reviews the technical evolution of U.S. spacesuits from their roots in high altitude aviation and vacuum tube development to the present day, with a stimulating look into the future. The text explains how the routine use of clothing provides a link to the function of spacesuits and why spacesuits are far more than garments. They are a last refuge for survival in disaster and a personalized spacecraft that allows direct contact and interaction with everything beyond our world.

December 2005
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415 p.
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Expedition Mars
Martin J. L. Turner
For those interested in the human conquest of space and exploration of the planets, Martin Turner describes the challenges that will be presented by the next “giant leap” in the human exploration of our Solar System—a return journey to the Red Planet. The author begins by describing how the very latest rocket propulsion and spacecraft technology, and planned developments in nuclear and electric propulsion technologies, are the key factors that will enable a human expedition to Mars. Of particular importance are the challenges of transporting cargo to Mars and in providing necessary life support for the crew, including supply of consumables, such as food, water, air and fuel, for the return journey.

2004
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342 pages, 130 illus.
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Decrypted Secrets
Methods and Maxims of Cryptology
Friedrich L. Bauer
In today’s increasingly wired world, cryptology plays a vital role in protecting communications channels, databases, and systems from unwanted intruders. This third edition of a classic reference work on cryptology now contains many new technical and biographical details. The first part discusses secret codes and their uses—cryptography. The second part deals with the process of covertly decrypting a secret code—cryptanalysis, where particular advice on assessing methods is given. The book presupposes only elementary mathematical knowledge. Spiced with a wealth of exciting, amusing, and sometimes personal stories from the history of cryptology, it will also interest general readers.

Accessible Access 2003
Mark Whitehorn and Bill Marklyn
Written by the team which brought you Inside Relational Databases and based on their best-selling book for Access 2000, Accessible Access has been totally re-written for Access 2003.

From the authors:
We wrote Accessible Access 2000 for people who were new to the world of building databases. In that book we tried to act as intelligent filters, presenting only the essential information that you need to get started. We were delighted with the reception that the book received and have tried to keep the same philosophy. Rather than simply reprinting the book with 2003 in the title, we have gone through it with a fine toothcomb. Every screen shot has been retaken and every section has been re-checked to ensure that it still works and also that it is still relevant. We have re-written parts where the product has changed and also added some. For example, there is a new section on Object Dependencies and a whole new chapter about Data Access Pages—helping you to put your Access database onto an intranet.

Inside Relational Databases
Mark Whitehorn and Bill Marklyn
This second edition of the best-selling Inside Relational Databases offers a reader-friendly explanation of the relational model and its importance to database designers, as well as the necessary techniques to build robust databases. This book has been updated to include recent developments in the world of databases.

Grade Inflation
A Crisis in College Education
Valen E. Johnson
Grade inflation runs rampant at most colleges and universities, but faculty and administrators are seemingly unwilling to face the problem. This book explains why, exposing many of the misconceptions surrounding college grading. Based on historical research and the results of a year-long online course evaluation experiment conducted at Duke University, the effects of student grading on various educational processes, and their subsequent impact on student and faculty behavior, is examined. Material contained in this book is essential reading for anyone involved in efforts to reform the postsecondary educational system, or for those who simply wish to survive and prosper in it.
The Craft of Scientific Presentations
Critical Steps to Succeed and Critical Errors to Avoid
Michael Alley
The Craft of Scientific Presentations provides a score of examples from contemporary and historical scientific presentations to show clearly what makes an oral presentation effective. It considers presentations made to persuade an audience to adopt some course of action as well as presentations made to communicate information, and it considers these from four perspectives: speech, structure, visual aids, and delivery. It discusses ways of organizing graphics and text in projected images and of using layout and design to present information effectively. Unlike other books that discuss technical presentations, this book anchors its advice in the experiences of scientists and engineers, including examples from such successful presenters as Robert Oppenheimer, Richard Feynman, Niels Bohr, and Rita Levi-Montalcini, as well as currently active laboratory directors, scientists, and engineers.

Also by Michael Alley—
The Craft of Editing
1999
ISBN 0-387-98964-1
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Also by Michael Alley—
The Craft of Scientific Writing
1997
$29.95
304 pages
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Third Edition

Key Curriculum Press/Key College Publishing: Backlist

Published by Key College Publishing
Why Knot?
An Introduction to Mathematical Theory of Knots
Colin Adams
Colin Adams, well-known for his advanced research in topology and knot theory, is the author of this exciting new book that brings his findings and his passion for the subject to a more general audience. He has been awarded the MAA Distinguished Teaching Award, has served as MAA Polya Lecturer, and was most recently awarded the prestigious Robert Foster Cherry Great Teaching Award by Baylor University. This beautifully illustrated comic book is appropriate for undergraduates, high school students in math clubs or honors math courses and is perfect for the lay math enthusiast. Each copy of Why Knot? includes a plastic manipulative called the Tangle (www.tangletoys.com). The Tangle is the ultimate tool for knot theory because knots are defined in mathematics as being “closed on a loop.” Readers use the Tangle to complete the experiments throughout the brief volume. First entry in Key College Publishing’s Math is Fun series.

Also by Colin Adams—
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Physics: Backlist

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From the reviews of the First Edition:
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The Physics of Golf
Theodore P. Jorgensen
From the reviews:
“The heart of golfer Ted Jorgensen's delightful book lies in his analysis of the swing of the golf club and how, armed with insights from that analysis, you, he, and I might all swing the club better and play better golf. The exposition is designed to be accessible to the casual reader while satisfying the critical student... first word or last, for anyone who has swung a golf club, the book is fun to read.” ▶ Physics Today

Landing Your First Job
A Guide for Physics Students
John S. Rigden
If you've recently received your degree and are looking for the most complete and up-to-date information on career and employment opportunities, get Landing Your First Job: A Guide for Physics Students. This book contains information on the job search, including cover letters, resume writing, interview preparation, and salary negotiation. It also includes the latest employment statistics and glimpses of physicists in the workplace.

Medicine: Backlist

Caring for the Country
Family Doctors in Small Rural Towns
Howard K. Rabinowitz
Medical students lack role models in rural primary care, contributing to the shortage in rural areas. This text profiles graduates from the Physician Shortage Area Program of Jefferson Medical College, Thomas Jefferson University, who now practice rural family medicine. It challenges pre-med undergraduates, medical students, and family physicians to consider rural family practice and is an excellent resource for medical school advisors. In-depth profiles cover social and professional issues important to rural family physicians, such as health care policy, rural obstetrics, and telemedicine. The concluding chapter summarizes lessons learned and outlines the future of rural family practice.
Clinician's Guide to Medical Writing
Robert B. Taylor
This book teaches what clinicians need to know about medical writing and publishing. This title will appeal to the physician, physicians assistant, or nurse practitioner who sees patients and also wants to contribute to the medical literature. It is for the assistant professor aspiring to promotion and the clinician in private practice seeking personal enrichment. Written by a renowned family medicine physician and loaded with practical advice and real-world examples, this text benefits readers who are new to medical writing and those who have authored a few articles or chapters and want to improve their abilities.
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