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Health Informatics: Practical Guide for Healthcare and Information Technology Professionals (Sixth Edition) - Robert E. Hoyt 2014

Health Informatics (HI) focuses on the application of Information Technology (IT) to the field of medicine to improve individual and population healthcare delivery, education and research. This extensively updated fifth edition reflects the current knowledge in Health Informatics and provides learning objectives, key points, case studies and references.

Trace Ideals and Their Applications - Barry Simon 2005

From a review of the first edition: Beautifully written and well organized ... indispensable for those interested in certain areas of mathematical physics ... for the expert and beginner alike. The author deserves to be congratulated both for his work in unifying a subject and for showing workers in the field new directions for future development. --Zentralblatt MATH This is a second edition of a well-known book on the theory of trace ideals in the algebra of operators in a Hilbert space. Because of the theory's many different applications, the book was widely used and much in demand. For this second edition, the author has added four chapters on the closely related theory of rank one perturbations of self-adjoint operators. He has also included a comprehensive index and an addendum describing some developments since the original notes were published. This book continues to be a vital source of information for those interested in the theory of trace ideals and in its applications to various areas of mathematical physics.

Medical Device Design - Peter J Ogorodnik 2012-12-17

This book provides the bridge between engineering design and medical device development. There is no single text that addresses the plethora of design issues a medical devices designer meets when developing new products or improving older ones. It addresses medical devices' regulatory (FDA and EU) requirements--some of the most stringent engineering requirements globally. Engineers failing to meet these requirements can cause serious harm to users as well as their products' commercial prospects. This Handbook shows the essential methodologies medical designers must understand to ensure their products meet requirements. It brings together proven design protocols and puts them in an explicit medical context based on the author's years of academia (R&D phase) and industrial (commercialization phase) experience. This design methodology enables engineers and medical device manufacturers to bring new products to the marketplace rapidly. The medical device market is a multi-billion dollar industry. Every engineered product for this sector, from scalpels to stents to complex medical equipment, must be designed and developed to approved procedures and standards. This book shows how Covers US, and EU and ISO standards, enabling a truly international approach, providing a guide to the international standards that practicing engineers require to understand Written by an experienced medical device engineers and entrepreneurs with products in the from the US and UK and with real world experience of developing and commercializing medical products

An Evolutionary Theory of Economic Change - Richard R. Nelson 1985-10-15

This book contains the most sustained and serious attack on mainstream, neoclassical economics in more than forty years. Nelson and Winter focus their critique on the basic question of how firms and industries change overtime. They marshal significant objections to the fundamental neoclassical assumptions of profit maximization and market equilibrium, which they find ineffective in the analysis of technological innovation and the dynamics of competition among firms. To replace these assumptions, they borrow from biology the concept of natural selection to construct a precise and detailed evolutionary theory of business behavior. They grant that firms are motivated by profit and engage in search for ways of improving profits, but they do not consider them to be profit maximizing. Likewise, they emphasize the tendency for the more profitable firms to drive the less profitable ones out of business, but they do not focus their

analysis on hypothetical states of industry equilibrium. The results of their new paradigm and analytical framework are impressive. Not only have they been able to develop more coherent and powerful models of competitive firm dynamics under conditions of growth and technological change, but their approach is compatible with findings in psychology and other social sciences. Finally, their work has important implications for welfare economics and for government policy toward industry.

Finite Frames - Peter G. Casazza 2012-09-14

Hilbert space frames have long served as a valuable tool for signal and image processing due to their resilience to additive noise, quantization, and erasures, as well as their ability to capture valuable signal characteristics. More recently, finite frame theory has grown into an important research topic in its own right, with a myriad of applications to pure and applied mathematics, engineering, computer science, and other areas. The number of research publications, conferences, and workshops on this topic has increased dramatically over the past few years, but no survey paper or monograph has yet appeared on the subject. Edited by two of the leading experts in the field, Finite Frames aims to fill this void in the literature by providing a comprehensive, systematic study of finite frame theory and applications. With carefully selected contributions written by highly experienced researchers, it covers topics including: * Finite Frame Constructions; * Optimal Erasure Resilient Frames; * Quantization of Finite Frames; * Finite Frames and Compressed Sensing; * Group and Gabor Frames; * Fusion Frames. Despite the variety of its chapters' source and content, the book's notation and terminology are unified throughout and provide a definitive picture of the current state of frame theory. With a broad range of applications and a clear, full presentation, this book is a highly valuable resource for graduate students and researchers across disciplines such as applied harmonic analysis, electrical engineering, quantum computing, medicine, and more. It is designed to be used as a supplemental textbook, self-study guide, or reference book.

Australian National Bibliography - 1994-06

Leadership and Nursing Care Management - E-Book - Diane Huber 2013-08-07

Comprehensive and easy to read, this authoritative resource features the most up-to-date, research-based blend of practice and theory related to the issues that impact nursing management and leadership today. Key topics include the nursing professional's role in law and ethics, staffing and scheduling, delegation, cultural considerations, care management, human resources, outcomes management, safe work environments, preventing employee injury, and time and stress management. Research Notes in each chapter summarize relevant nursing leadership and management studies and show how research findings can be applied in practice. Leadership and Management Behavior boxes in each chapter highlight the performance and conduct expected of nurse leaders, managers, and executives. Leading and Managing Defined boxes in each chapter list key terminology related to leadership and management, and their definitions. Case Studies at the end of each chapter present real-world leadership and management situations and illustrate how key chapter concepts can be applied to actual practice. Critical Thinking Questions at the end of each chapter present clinical situations followed by critical thinking questions that allow you to reflect on chapter content, critically analyze the information, and apply it to the situation. A new Patient Acuity chapter uses evidence-based tools to discuss how patient acuity measurement can be done in ways that are specific to nursing. A reader-friendly format breaks key content into easy-to-scan bulleted lists. Chapters are divided according to the AONE competencies for nurse leaders, managers, and executives. Practical Tips boxes highlight useful strategies for applying leadership and management skills to practice.

Ethics of Artificial Intelligence - S. Matthew Liao 2020

Should a self-driving car prioritize the lives of the passengers over the lives of pedestrians? Should we as a society develop autonomous weapon systems that are capable of identifying and attacking a target without human intervention? What happens when AIs become smarter and more capable than us? Could they have greater than human moral status? Can we prevent superintelligent AIs from harming us or causing our extinction? At a critical time in this fast-moving debate, thirty leading academics and researchers at the forefront of AI technology development come together to explore these existential questions, including Aaron James (UC Irvine), Allan Dafoe (Oxford), Andrea Loreggia (Padova), Andrew Critch (UC Berkeley), Azim Shariff (Univ. .

An Invitation to Applied Category Theory - Brendan Fong 2019-07-18
Category theory is unmatched in its ability to organize and layer abstractions and to find commonalities between structures of all sorts. No longer the exclusive preserve of pure mathematicians, it is now proving itself to be a powerful tool in science, informatics, and industry. By facilitating communication between communities and building rigorous bridges between disparate worlds, applied category theory has the potential to be a major organizing force. This book offers a self-contained tour of applied category theory. Each chapter follows a single thread motivated by a real-world application and discussed with category-theoretic tools. We see data migration as an adjoint functor, electrical circuits in terms of monoidal categories and operads, and collaborative design via enriched profunctors. All the relevant category theory, from simple to sophisticated, is introduced in an accessible way with many examples and exercises, making this an ideal guide even for those without experience of university-level mathematics.

The Australian Mathematics Teacher - 1995

Putting Auction Theory to Work - Paul Milgrom 2004-01-12

This book provides a comprehensive introduction to modern auction theory and its important new applications. It is written by a leading economic theorist whose suggestions guided the creation of the new spectrum auction designs. Aimed at graduate students and professionals in economics, the book gives the most up-to-date treatments of both traditional theories of 'optimal auctions' and newer theories of multi-unit auctions and package auctions, and shows by example how these theories are used. The analysis explores the limitations of prominent older designs, such as the Vickrey auction design, and evaluates the practical responses to those limitations. It explores the tension between the traditional theory of auctions with a fixed set of bidders, in which the seller seeks to squeeze as much revenue as possible from the fixed set, and the theory of auctions with endogenous entry, in which bidder profits must be respected to encourage participation.

Mathematical Reviews - 2004

Essential Discrete Mathematics for Computer Science - Harry Lewis 2019-03-19

Discrete mathematics is the basis of much of computer science, from algorithms and automata theory to combinatorics and graph theory. *Essential Discrete Mathematics for Computer Science* aims to teach mathematical reasoning as well as concepts and skills by stressing the art of proof. It is fully illustrated in color, and each chapter includes a concise summary as well as a set of exercises.

On Knots - Louis H. Kauffman 1987

On Knots is a journey through the theory of knots, starting from the simplest combinatorial ideas—ideas arising from the representation of weaving patterns. From this beginning, topological invariants are constructed directly: first linking numbers, then the Conway polynomial and skein theory. This paves the way for later discussion of the recently discovered Jones and generalized polynomials. The central chapter, Chapter Six, is a miscellany of topics and recreations. Here the reader will find the quaternions and the belt trick, a devilish rope trick, Alhambra mosaics, Fibonacci trees, the topology of DNA, and the author's geometric interpretation of the generalized Jones Polynomial. Then come branched covering spaces, the Alexander polynomial, signature theorems, the work of Casson and Gordon on slice knots, and a chapter on knots and algebraic singularities. The book concludes with an appendix about generalized polynomials.

The Econometrics of Financial Markets - John Y. Campbell 2012-06-28

The past twenty years have seen an extraordinary growth in the use of quantitative methods in financial markets. Finance professionals now routinely use sophisticated statistical techniques in portfolio management, proprietary trading, risk management, financial consulting, and securities regulation. This graduate-level textbook is intended for

PhD students, advanced MBA students, and industry professionals interested in the econometrics of financial modeling. The book covers the entire spectrum of empirical finance, including: the predictability of asset returns, tests of the Random Walk Hypothesis, the microstructure of securities markets, event analysis, the Capital Asset Pricing Model and the Arbitrage Pricing Theory, the term structure of interest rates, dynamic models of economic equilibrium, and nonlinear financial models such as ARCH, neural networks, statistical fractals, and chaos theory. Each chapter develops statistical techniques within the context of a particular financial application. This exciting new text contains a unique and accessible combination of theory and practice, bringing state-of-the-art statistical techniques to the forefront of financial applications. Each chapter also includes a discussion of recent empirical evidence, for example, the rejection of the Random Walk Hypothesis, as well as problems designed to help readers incorporate what they have read into their own applications.

The British National Bibliography - Arthur James Wells 2003

Contemporary Abstract Algebra - Joseph Gallian 2016-01-01

CONTEMPORARY ABSTRACT ALGEBRA, NINTH EDITION provides a solid introduction to the traditional topics in abstract algebra while conveying to students that it is a contemporary subject used daily by working mathematicians, computer scientists, physicists, and chemists. The text includes numerous figures, tables, photographs, charts, biographies, computer exercises, and suggested readings giving the subject a current feel which makes the content interesting and relevant for students. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Zero to One - Peter Thiel 2014-09-16

#1 NEW YORK TIMES BESTSELLER • “This book delivers completely new and refreshing ideas on how to create value in the world.”—Mark Zuckerberg, CEO of Meta “Peter Thiel has built multiple breakthrough companies, and *Zero to One* shows how.”—Elon Musk, CEO of SpaceX and Tesla The great secret of our time is that there are still uncharted frontiers to explore and new inventions to create. In *Zero to One*, legendary entrepreneur and investor Peter Thiel shows how we can find singular ways to create those new things. Thiel begins with the contrarian premise that we live in an age of technological stagnation, even if we’re too distracted by shiny mobile devices to notice. Information technology has improved rapidly, but there is no reason why progress should be limited to computers or Silicon Valley. Progress can be achieved in any industry or area of business. It comes from the most important skill that every leader must master: learning to think for yourself. Doing what someone else already knows how to do takes the world from 1 to n, adding more of something familiar. But when you do something new, you go from 0 to 1. The next Bill Gates will not build an operating system. The next Larry Page or Sergey Brin won’t make a search engine. Tomorrow’s champions will not win by competing ruthlessly in today’s marketplace. They will escape competition altogether, because their businesses will be unique. *Zero to One* presents at once an optimistic view of the future of progress in America and a new way of thinking about innovation: it starts by learning to ask the questions that lead you to find value in unexpected places.

Syntactic Structures - Noam Chomsky 2020-05-29

Operator Theory in Function Spaces - Kehe Zhu 2007

This book covers Toeplitz operators, Hankel operators, and composition operators on both the Bergman space and the Hardy space. The setting is the unit disk and the main emphasis is on size estimates of these operators: boundedness, compactness, and membership in the Schatten classes. Most results concern the relationship between operator-theoretic properties of these operators and function-theoretic properties of the inducing symbols. Thus a good portion of the book is devoted to the study of analytic function spaces such as the Bloch space, Besov spaces, and BMOA, whose elements are to be used as symbols to induce the operators we study. The book is intended for both research mathematicians and graduate students in complex analysis and operator theory. The prerequisites are minimal; a graduate course in each of real analysis, complex analysis, and functional analysis should sufficiently prepare the reader for the book. Exercises and bibliographical notes are provided at the end of each chapter. These notes will point the reader to additional results and problems. Kehe Zhu is a professor of mathematics at the State University of New York at Albany. His previous books include *Theory of Bergman Spaces* (Springer, 2000, with H. Hedenmalm

and B. Korenblum) and Spaces of Holomorphic Functions in the Unit Ball (Springer, 2005). His current research interests are holomorphic function spaces and operators acting on them.

Applied Cryptography - Bruce Schneier 2017-05-25

From the world's most renowned security technologist, Bruce Schneier, this 20th Anniversary Edition is the most definitive reference on cryptography ever published and is the seminal work on cryptography. Cryptographic techniques have applications far beyond the obvious uses of encoding and decoding information. For developers who need to know about capabilities, such as digital signatures, that depend on cryptographic techniques, there's no better overview than Applied Cryptography, the definitive book on the subject. Bruce Schneier covers general classes of cryptographic protocols and then specific techniques, detailing the inner workings of real-world cryptographic algorithms including the Data Encryption Standard and RSA public-key cryptosystems. The book includes source-code listings and extensive advice on the practical aspects of cryptography implementation, such as the importance of generating truly random numbers and of keeping keys secure. ". . . the best introduction to cryptography I've ever seen. . . . The book the National Security Agency wanted never to be published. . . ." - Wired Magazine ". . . monumental . . . fascinating . . . comprehensive . . . the definitive work on cryptography for computer programmers . . ." - Dr. Dobb's Journal ". . . easily ranks as one of the most authoritative in its field." - PC Magazine The book details how programmers and electronic communications professionals can use cryptography-the technique of enciphering and deciphering messages-to maintain the privacy of computer data. It describes dozens of cryptography algorithms, gives practical advice on how to implement them into cryptographic software, and shows how they can be used to solve security problems. The book shows programmers who design computer applications, networks, and storage systems how they can build security into their software and systems. With a new Introduction by the author, this premium edition will be a keepsake for all those committed to computer and cyber security.

The Art of Multiprocessor Programming, Revised Reprint - Maurice Herlihy 2012-06-25

Revised and updated with improvements conceived in parallel programming courses, The Art of Multiprocessor Programming is an authoritative guide to multicore programming. It introduces a higher level set of software development skills than that needed for efficient single-core programming. This book provides comprehensive coverage of the new principles, algorithms, and tools necessary for effective multiprocessor programming. Students and professionals alike will benefit from thorough coverage of key multiprocessor programming issues. This revised edition incorporates much-demanded updates throughout the book, based on feedback and corrections reported from classrooms since 2008 Learn the fundamentals of programming multiple threads accessing shared memory Explore mainstream concurrent data structures and the key elements of their design, as well as synchronization techniques from simple locks to transactional memory systems Visit the companion site and download source code, example Java programs, and materials to support and enhance the learning experience

The Shape of Inner Space - Shing-Tung Yau 2010-09-07

String theory says we live in a ten-dimensional universe, but that only four are accessible to our everyday senses. According to theorists, the missing six are curled up in bizarre structures known as Calabi-Yau manifolds. In The Shape of Inner Space, Shing-Tung Yau, the man who mathematically proved that these manifolds exist, argues that not only is geometry fundamental to string theory, it is also fundamental to the very nature of our universe. Time and again, where Yau has gone, physics has followed. Now for the first time, readers will follow Yau's penetrating thinking on where we've been, and where mathematics will take us next. A fascinating exploration of a world we are only just beginning to grasp, The Shape of Inner Space will change the way we consider the universe on both its grandest and smallest scales.

Discrete Mathematics for Computing - Rod Haggarty 2002

A concise introduction to key mathematical ideas for computing students which develops their understanding of discrete mathematics and its application in computing. The topics are presented in a logical order that build upon each other and are constantly reinforced by worked examples. Reliance on students' previous mathematical experience is kept to a minimum, though some basic algebraic manipulation is required.

Books in Print Supplement - 1994

The Black Book of Communism - Stéphane Courtois 1999

This international bestseller plumbs recently opened archives in the former Soviet bloc to reveal the accomplishments of communism around the world. The book is the first attempt to catalogue and analyse the crimes of communism over 70 years.

Mathematical Modeling in Economics, Ecology and the Environment - N.V. Hritonenko 2013-04-17

The problems of interrelation between human economics and natural environment include scientific, technical, economic, demographic, social, political and other aspects that are studied by scientists of many specialities. One of the important aspects in scientific study of environmental and ecological problems is the development of mathematical and computer tools for rational management of economics and environment. This book introduces a wide range of mathematical models in economics, ecology and environmental sciences to a general mathematical audience with no in-depth experience in this specific area. Areas covered are: controlled economic growth and technological development, world dynamics, environmental impact, resource extraction, air and water pollution propagation, ecological population dynamics and exploitation. A variety of known models are considered, from classical ones (Cobb-Douglas production function, Leontief input-output analysis, Solow models of economic dynamics, Verhulst-Pearl and Lotka-Volterra models of population dynamics, and others) to the models of world dynamics and the models of water contamination propagation used after Chernobyl nuclear catastrophe. Special attention is given to modelling of hierarchical regional economic-ecological interaction and technological change in the context of environmental impact. XIII XIV Construction of Mathematical Models ...

Scientific Writing - Jennifer Peat 2013-07-01

This comprehensive and practical book covers the basics of grammar as well as the broad brush issues such as writing a grant application and selling to your potential audience. The clear explanations are expanded and lightened with helpful examples and telling quotes from the giants of good writing. These experienced writers and teachers make scientific writing enjoyable.

Chemical Engineering Design - Gavin Towler 2012-01-25

Chemical Engineering Design, Second Edition, deals with the application of chemical engineering principles to the design of chemical processes and equipment. Revised throughout, this edition has been specifically developed for the U.S. market. It provides the latest US codes and standards, including API, ASME and ISA design codes and ANSI standards. It contains new discussions of conceptual plant design, flowsheet development, and revamp design; extended coverage of capital cost estimation, process costing, and economics; and new chapters on equipment selection, reactor design, and solids handling processes. A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data, and Excel spreadsheet calculations, plus over 150 Patent References for downloading from the companion website. Extensive instructor resources, including 1170 lecture slides and a fully worked solutions manual are available to adopting instructors. This text is designed for chemical and biochemical engineering students (senior undergraduate year, plus appropriate for capstone design courses where taken, plus graduates) and lecturers/tutors, and professionals in industry (chemical process, biochemical, pharmaceutical, petrochemical sectors). New to this edition: Revised organization into Part I: Process Design, and Part II: Plant Design. The broad themes of Part I are flowsheet development, economic analysis, safety and environmental impact and optimization. Part II contains chapters on equipment design and selection that can be used as supplements to a lecture course or as essential references for students or practicing engineers working on design projects. New discussion of conceptual plant design, flowsheet development and revamp design Significantly increased coverage of capital cost estimation, process costing and economics New chapters on equipment selection, reactor design and solids handling processes New sections on fermentation, adsorption, membrane separations, ion exchange and chromatography Increased coverage of batch processing, food, pharmaceutical and biological processes All equipment chapters in Part II revised and updated with current information Updated throughout for latest US codes and standards, including API, ASME and ISA design codes and ANSI standards Additional worked examples and homework problems The most complete and up to date coverage of equipment selection 108 realistic commercial design projects from diverse industries A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data and Excel

spreadsheet calculations plus over 150 Patent References, for downloading from the companion website Extensive instructor resources: 1170 lecture slides plus fully worked solutions manual available to adopting instructors

Handbook of Discrete and Combinatorial Mathematics - Kenneth H. Rosen 2017-10-19

Handbook of Discrete and Combinatorial Mathematics provides a comprehensive reference volume for mathematicians, computer scientists, engineers, as well as students and reference librarians. The material is presented so that key information can be located and used quickly and easily. Each chapter includes a glossary. Individual topics are covered in sections and subsections within chapters, each of which is organized into clearly identifiable parts: definitions, facts, and examples. Examples are provided to illustrate some of the key definitions, facts, and algorithms. Some curious and entertaining facts and puzzles are also included. Readers will also find an extensive collection of biographies. This second edition is a major revision. It includes extensive additions and updates. Since the first edition appeared in 1999, many new discoveries have been made and new areas have grown in importance, which are covered in this edition.

Computer Organisation and Architecture - B.S. Chalk 2017-03-14

This book describes how a computer works and explains how the various hardware components are organized and interconnected to provide a platform upon which programs can be executed. It takes a simple, step-by-step approach suitable for first year undergraduates coming to the subject for the first time. The second edition of this book has been thoroughly updated to cover new developments in the field and includes new diagrams and end-of-chapter exercises. It will also be accompanied by a lecturer and student web site which will contain solutions to exercises, further exercises, PowerPoint slides and all the source code used in the book.

Discrete Mathematics for Computing - Peter Grossman 2017-09-16

Discrete Mathematics for Computing presents the essential mathematics needed for the study of computing and information systems. The subject is covered in a gentle and informal style, but without compromising the need for correct methodology. It is perfect for students with a limited background in mathematics. This new edition includes: - An expanded section on encryption - Additional examples of the ways in which theory can be applied to problems in computing - Many more exercises covering a range of levels, from the basic to the more advanced This book is ideal for students taking a one-semester introductory course in discrete mathematics - particularly for first year undergraduates studying Computing and Information Systems. PETER GROSSMAN has worked in both academic and industrial roles as a mathematician and computing professional. As a lecturer in mathematics, he was responsible for coordinating and developing mathematics courses for Computing students. He has also applied his skills in areas as diverse as calculator design, irrigation systems and underground mine layouts. He lives and works in Melbourne, Australia.

Health Economics - Jay Bhattacharya 2018-10-19

Comprehensive in coverage this textbook, written by academics from leading institutions, discusses current developments and debates in modern health economics from an international perspective. Economic models are presented in detail, complemented by real-life explanations and analysis, and discussions of the influence of such theories on policymaking. Offering sound pedagogy and economic rigor, Health Economics focuses on building intuition alongside appropriate mathematical formality, translating technical language into accessible economic narrative. Rather than shying away from intellectual building blocks, students are introduced to technical and theoretical foundations and encouraged to apply these to inform empirical studies and wider policymaking. Health Economics provides: - A broad scope, featuring comparative health policy and empirical examples from around the world to help students relate the principles of health economics to everyday life - Coverage of topical issues such as the obesity epidemic, economic epidemiology, socioeconomic health disparities, and behavioural economics - A rich learning resource, complete with hundreds of exercises to help solidify and extend understanding. This book is designed for advanced undergraduate courses in health economics and policy but may also interest postgraduate students in economics, medicine and health policy. Accompanying online resources for this title can be found at bloomsburyonlineresources.com/health-economics. These resources are designed to support teaching and learning when using this textbook and are available at no extra cost.

Nine Algorithms That Changed the Future - John MacCormick

2020-09-15

Nine revolutionary algorithms that power our computers and smartphones Every day, we use our computers to perform remarkable feats. A simple web search picks out a handful of relevant needles from the world's biggest haystack. Uploading a photo to Facebook transmits millions of pieces of information over numerous error-prone network links, yet somehow a perfect copy of the photo arrives intact. Without even knowing it, we use public-key cryptography to transmit secret information like credit card numbers, and we use digital signatures to verify the identity of the websites we visit. How do our computers perform these tasks with such ease? John MacCormick answers this question in language anyone can understand, using vivid examples to explain the fundamental tricks behind nine computer algorithms that power our PCs, tablets, and smartphones.

Discrete Mathematics (eighth Edition) - Richard Johnsonbaugh 2018

The American Mathematical Monthly - 1980

Introduction to Graph Theory - Douglas West 2017-01-03

Originally published in 2001, reissued as part of Pearson's modern classic series.

The Man who Loved Only Numbers - Paul Hoffman 1999

The biography of a mathematical genius. Paul Erdos was the most prolific pure mathematician in history and, arguably, the strangest too. 'A mathematical genius of the first order, Paul Erdos was totally obsessed with his subject -- he thought and wrote mathematics for nineteen hours a day until he died. He travelled constantly, living out of a plastic bag and had no interest in food, sex, companionship, art -- all that is usually indispensable to a human life. Paul Hoffman, in this marvellous biography, gives us a vivid and strangely moving portrait of this singular creature, one that brings out not only Erdos's genius and his oddness, but his warmth and sense of fun, the joyfulness of his strange life.' Oliver Sacks For six decades Erdos had no job, no hobbies, no wife, no home; he never learnt to cook, do laundry, drive a car and died a virgin. Instead he travelled the world with his mother in tow, arriving at the doorstep of esteemed mathematicians declaring 'My brain is open'. He travelled until his death at 83, racing across four continents to prove as many theorems as possible, fuelled by a diet of espresso and amphetamines. With more than 1,500 papers written or co-written,

Principal Component Analysis - I.T. Jolliffe 2013-03-09

Principal component analysis is probably the oldest and best known of the It was first introduced by Pearson (1901), techniques of multivariate analysis. and developed independently by Hotelling (1933). Like many multivariate methods, it was not widely used until the advent of electronic computers, but it is now well entrenched in virtually every statistical computer package. The central idea of principal component analysis is to reduce the dimensionality of a data set in which there are a large number of interrelated variables, while retaining as much as possible of the variation present in the data set. This reduction is achieved by transforming to a new set of variables, the principal components, which are uncorrelated, and which are ordered so that the first few retain most of the variation present in all of the original variables. Computation of the principal components reduces to the solution of an eigenvalue-eigenvector problem for a positive-semidefinite symmetric matrix. Thus, the definition and computation of principal components are straightforward but, as will be seen, this apparently simple technique has a wide variety of different applications, as well as a number of different derivations. Any feelings that principal component analysis is a narrow subject should soon be dispelled by the present book; indeed some quite broad topics which are related to principal component analysis receive no more than a brief mention in the final two chapters.

Fundamentals of Geomorphology - Richard John Huggett 2011-03-15

This extensively revised, restructured, and updated edition continues to present an engaging and comprehensive introduction to the subject, exploring the world's landforms from a broad systems perspective. It covers the basics of Earth surface forms and processes, while reflecting on the latest developments in the field. Fundamentals of Geomorphology begins with a consideration of the nature of geomorphology, process and form, history, and geomorphic systems, and moves on to discuss: structure: structural landforms associated with plate tectonics and those associated with volcanoes, impact craters, and folds, faults, and joints process and form: landforms resulting from, or influenced by, the exogenic agencies of weathering, running water, flowing ice and meltwater, ground ice and frost, the wind, and the sea; landforms

developed on limestone; and landscape evolution, a discussion of ancient landforms, including palaeosurfaces, stagnant landscape features, and evolutionary aspects of landscape change. This third edition has been fully updated to include a clearer initial explanation of the nature of geomorphology, of land surface process and form, and of land-surface change over different timescales. The text has been restructured to incorporate information on geomorphic materials and processes at more suitable points in the book. Finally, historical geomorphology has been

integrated throughout the text to reflect the importance of history in all aspects of geomorphology. *Fundamentals of Geomorphology* provides a stimulating and innovative perspective on the key topics and debates within the field of geomorphology. Written in an accessible and lively manner, it includes guides to further reading, chapter summaries, and an extensive glossary of key terms. The book is also illustrated throughout with over 200 informative diagrams and attractive photographs, all in colour.