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Schaum's Outline of Theory and Problems of General Topology Seymour Lipschutz 1965
Fractal Music, Hypercards and More... Martin Gardner 2020-10-06 Martin Gardner's Mathematical Games columns in Scientific American inspired and entertained several generations of mathematicians and scientists. Gardner in his crystal-clear prose illuminated corners of mathematics, especially recreational mathematics, that most people had no idea existed. His playful spirit and inquisitive nature invite the reader into an exploration of beautiful mathematical ideas along with him. These columns were both a revelation and a gift when he wrote them; no one--before Gardner--had written about mathematics like this. They continue to be a marvel. This is the original 1992 edition and contains columns published from 1978-1979.
Books in Print Supplement 2002
General Topology Stephen Willard 2004-01-01 Among the best available reference introductions to general topology, this volume is appropriate for advanced undergraduate and beginning graduate students. Includes historical notes and over 340 detailed exercises. 1970 edition. Includes 27 figures.
Scientific and Technical Books in Print 1972
Paperbound Books in Print 1992
Introduction to Interval Analysis Ramon E. Moore 2009 An update on the author's previous books, this introduction to interval analysis provides an introduction to INTLAB, a high-quality, comprehensive MATLAB toolbox for interval computations, making this the first interval analysis book that does with INTLAB what general numerical analysis texts do with MATLAB.
Information—Consciousness—Reality James B. Glattfelder 2019-04-10 This open access book chronicles the rise of a new scientific paradigm offering novel insights into the age-old enigmas of existence. Over 300 years ago, the human mind discovered the machine code of reality: mathematics. By utilizing abstract thought systems, humans began to decode the workings of the cosmos. From this understanding, the current scientific paradigm emerged, ultimately discovering the gift of technology. Today, however, our island of knowledge is surrounded by ever longer shores of ignorance. Science appears to have hit a dead end when confronted with the nature of reality and consciousness. In this fascinating and accessible volume, James Glattfelder explores a radical paradigm shift uncovering the ontology of reality. It is found to be information-theoretic and participatory, yielding a computational and programmable universe.
Fusion of Neural Networks, Fuzzy Systems and Genetic Algorithms Lakhmi C. Jain 2020-01-29 Artificial neural networks can mimic the biological information-processing mechanism in - a very limited sense. Fuzzy logic provides a basis for representing uncertain and imprecise knowledge and forms a basis for human reasoning. Neural networks display genuine promise in solving problems, but a definitive theoretical basis does not yet exist for their design. Fusion of Neural Networks, Fuzzy Systems and Genetic Algorithms integrates neural net, fuzzy system, and evolutionary computing in system design that enables its readers to handle complexity - offsetting the demerits of one paradigm by the merits of another. This book presents specific projects where fusion techniques have been applied. The chapters start with the design of a new fuzzy-neural controller. Remaining chapters discuss the application of expert systems, neural networks, fuzzy control, and evolutionary computing techniques in modern engineering systems. These specific applications include: direct frequency converters electro-hydraulic systems motor control

toaster control speech recognition vehicle routing fault diagnosis Asynchronous Transfer Mode (ATM) communications networks telephones for hard-of-hearing people control of gas turbine aero-engines telecommunications systems design Fusion of Neural Networks, Fuzzy Systems and Genetic Algorithms covers the spectrum of applications - comprehensively demonstrating the advantages of fusion techniques in industrial applications.
Books in Print 1991
Topology of Metric Spaces S. Kumaresan 2005 "Topology of Metric Spaces gives a very streamlined development of a course in metric space topology emphasizing only the most useful concepts, concrete spaces and geometric ideas to encourage geometric thinking, to treat this as a preparatory ground for a general topology course, to use this course as a surrogate for real analysis and to help the students gain some perspective of modern analysis." "Eminently suitable for self-study, this book may also be used as a supplementary text for courses in general (or point-set) topology so that students will acquire a lot of concrete examples of spaces and maps."--BOOK JACKET.
A General Topology Workbook Iain T. Adamson 2012-12-06 This book has been called a Workbook to make it clear from the start that it is not a conventional textbook. Conventional textbooks proceed by giving in each section or chapter first the definitions of the terms to be used, the concepts they are to work with, then some theorems involving these terms (complete with proofs) and finally some examples and exercises to test the readers' understanding of the definitions and the theorems. Readers of this book will indeed find all the conventional constituents--definitions, theorems, proofs, examples and exercises but not in the conventional arrangement. In the first part of the book will be found a quick review of the basic definitions of general topology interspersed with a large num ber of exercises, some of which are also described as theorems. (The use of the word Theorem is not intended as an indication of difficulty but of importance and usefulness.) The exercises are deliberately not "graded"-after all the problems we meet in mathematical "real life" do not come in order of difficulty; some of them are very simple illustrative examples; others are in the nature of tutorial problems for a conven tional course, while others are quite difficult results. No solutions of the exercises, no proofs of the theorems are included in the first part of the book-this is a Workbook and readers are invited to try their hand at solving the problems and proving the theorems for themselves.
FUNDAMENTALS OF COMBUSTION D. P. Mishra 2007-12-19 Designed for both undergraduate and postgraduate students of mechanical, aerospace, chemical and metallurgical engineering, this compact and well-knitted textbook provides a sound conceptual basis in fundamentals of combustion processes, highlighting the basic principles of natural laws. In the initial part of the book, chemical thermodynamics, kinetics, and conservation equations are reviewed extensively with a view to preparing students to assimilate quickly intricate aspects of combustion covered in later chapters. Subsequently, the book provides extensive treatments of 'pre-mixed laminar flame', and 'gaseous diffusion flame', emphasizing the practical aspects of these flames. Besides, liquid droplet combustion under quiescent and convective environment is covered in the book. Simplified analysis of spray combustion is carried out which can be used as a design tool. An extensive treatment on the solid fuel combustion is also included. Emission combustion systems, and how to control emission from them using the latest techniques, constitute the subject matter of the final chapter. Appropriate examples are provided throughout to foster better

understanding of the concepts discussed. Chapter-end review questions and problems are included to reinforce the learning process of students.

Introduction to Topology Theodore W. Gamelin 2013-04-22 This text explains nontrivial applications of metric space topology to analysis. Covers metric space, point-set topology, and algebraic topology. Includes exercises, selected answers, and 51 illustrations. 1983 edition.

The Publishers' Trade List Annual 1969

The Fingerprint U.s. Department of Justice 2014-08-02 The idea of The Fingerprint Sourcebook originated during a meeting in April 2002. Individuals representing the fingerprint, academic, and scientific communities met in Chicago, Illinois, for a day and a half to discuss the state of fingerprint identification with a view toward the challenges raised by Daubert issues. The meeting was a joint project between the International Association for Identification (IAI) and West Virginia University (WVU). One recommendation that came out of that meeting was a suggestion to create a sourcebook for friction ridge examiners, that is, a single source of researched information regarding the subject. This sourcebook would provide educational, training, and research information for the international scientific community.

Partial Differential Equations: An Introduction With Mathematica And Maple (2nd Edition) Stavroulakis Ioannis P 2004-04-27 This textbook is a self-contained introduction to partial differential equations.It has been designed for undergraduates and first year graduate students majoring in mathematics, physics, engineering, or science.The text provides an introduction to the basic equations of mathematical physics and the properties of their solutions, based on classical calculus and ordinary differential equations. Advanced concepts such as weak solutions and discontinuous solutions of nonlinear conservation laws are also considered.

Computer Graphics James D. Foley 1996 A guide to the concepts and applications of computer graphics covers such topics as interaction techniques, dialogue design, and user interface software.

Introduction to Topology Bert Mendelson 2012-04-26 Concise undergraduate introduction to fundamentals of topology — clearly and engagingly written, and filled with stimulating, imaginative exercises. Topics include set theory, metric and topological spaces, connectedness, and compactness. 1975 edition.

Introductory Topology Mohammed Hichem Mortad The book offers a good introduction to topology through solved exercises. It is mainly intended for undergraduate students. Most exercises are given with detailed solutions. In the second edition, some significant changes have been made, other than the additional exercises. There are also additional proofs (as exercises) of many results in the old section "What You Need To Know", which has been improved and renamed in the new edition as "Essential Background". Indeed, it has been considerably beefed up as it now includes more remarks and results for readers' convenience. The interesting sections "True or False" and "Tests" have remained as they were, apart from a very few changes.

Organic chemistry 2018-04-19 easy equilibrium equation

Introduction to Topology Tej Bahadur Singh 2019-05-17 Topology is a large subject with several branches, broadly categorized as algebraic topology, point-set topology, and geometric topology. Point-set topology is the main language for a broad range of mathematical disciplines, while algebraic topology offers as a powerful tool for studying problems in geometry and numerous other areas of mathematics. This book presents the basic concepts of topology, including virtually all of the traditional topics in point-set topology, as well as elementary topics in algebraic topology such as fundamental groups and covering spaces. It also discusses topological groups and transformation groups. When combined with a working knowledge of analysis and algebra, this book offers a valuable resource for advanced undergraduate and beginning graduate students of mathematics specializing in algebraic topology and harmonic analysis.

Artificial Intelligence Stuart Russell 2016-09-10 Artificial Intelligence: A Modern Approach offers the most comprehensive, up-to-date introduction to the theory and practice of artificial intelligence. Number one in its field, this textbook is ideal for one or two-semester, undergraduate or graduate-level courses in Artificial Intelligence.

Differential Equations Paul Blanchard 2012-07-25 Incorporating an innovative modeling approach, this book for a one-semester differential equations course emphasizes conceptual understanding to help users relate information taught in the classroom to real-world experiences. Certain models reappear throughout the book as running themes to synthesize different concepts from multiple angles, and a dynamical systems focus emphasizes predicting the long-term behavior of these recurring models. Users will discover how to identify and harness the mathematics they will use in their careers, and apply it effectively outside the classroom. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The Information James Gleick 2011-03-01 From the bestselling author of the acclaimed Chaos and Genius comes a thoughtful and provocative exploration of the big ideas of the modern era: Information, communication, and information theory. Acclaimed science writer James Gleick presents an eye-opening vision of how our relationship to information has transformed the very nature of human consciousness. A fascinating intellectual journey through the history of communication and information, from the language of Africa's talking drums to the invention of written alphabets; from the electronic transmission of code to the origins of information theory, into the new information age and the current deluge of news, tweets, images, and blogs. Along the way, Gleick profiles key innovators, including Charles Babbage, Ada Lovelace, Samuel Morse, and Claude Shannon, and reveals how our understanding of information is transforming not only how we look at the world, but how we live. A New York Times Notable Book A Los Angeles Times and Cleveland Plain Dealer Best Book of the Year Winner of the PEN/E. O. Wilson Literary Science Writing Award

Introduction to Set Theory and Topology Kazimierz Kuratowski 2014-07-10 Introduction to Set Theory and Topology describes the fundamental concepts of set theory and topology as well as its applicability to analysis, geometry, and other branches of mathematics, including algebra and probability theory. Concepts such as inverse limit, lattice, ideal, filter, commutative diagram, quotient-spaces, completely regular spaces, quasicomponents, and cartesian products of topological spaces are considered. This volume consists of 21 chapters organized into two sections and begins with an introduction to set theory, with emphasis on the propositional calculus and its application to propositions each having one of two logical values, 0 and 1. Operations on sets which are analogous to arithmetic operations are also discussed. The chapters that follow focus on the mapping concept, the power of a set, operations on cardinal numbers, order relations, and well ordering. The section on topology explores metric and topological spaces, continuous mappings, cartesian products, and other spaces such as spaces with a countable base, complete spaces, compact spaces, and connected spaces. The concept of dimension, simplexes and their properties, and cuttings of the plane are also analyzed. This book is intended for students and teachers of mathematics.

Artificial Intelligence in the 21st Century Stephen Lucci 2015-12-10 This new edition provides a comprehensive, colorful, up-to-date, and accessible presentation of AI without sacrificing theoretical foundations. It includes numerous examples, applications, full color images, and human interest boxes to enhance student interest. New chapters on robotics and machine learning are now included. Advanced topics cover neural nets, genetic algorithms, natural language processing, planning, and complex board games. A companion DVD is provided with resources, applications, and figures from the book. Numerous instructors' resources are available upon adoption. eBook Customers: Companion files are available for downloading with order number/proof of purchase by writing to the publisher at info@merclearning.com. FEATURES: • Includes new chapters on robotics and machine learning and new sections on speech understanding and metaphor in NLP • Provides a comprehensive, colorful, up to date, and accessible presentation of AI without sacrificing theoretical foundations • Uses numerous examples, applications, full color images, and human interest boxes to enhance student interest • Introduces important AI concepts e.g., robotics, use in video games, neural nets, machine learning, and more thorough practical applications • Features over 300 figures and color images with worked problems detailing AI methods and solutions to selected exercises • Includes DVD with resources, simulations, and figures from the book • Provides numerous instructors' resources, including: solutions to exercises, Microsoft PP slides, etc.

Knowledge Graphs Aidan Hogan 2021-11-08 This book provides a comprehensive and accessible introduction to knowledge graphs, which have recently garnered notable attention from both industry and academia. Knowledge graphs are founded on the principle of applying a graph-based abstraction to data, and are now broadly deployed in scenarios that require integrating and extracting value from multiple,

diverse sources of data at large scale. The book defines knowledge graphs and provides a high-level overview of how they are used. It presents and contrasts popular graph models that are commonly used to represent data as graphs, and the languages by which they can be queried before describing how the resulting data graph can be enhanced with notions of schema, identity, and context. The book discusses how ontologies and rules can be used to encode knowledge as well as how inductive techniques—based on statistics, graph analytics, machine learning, etc.—can be used to encode and extract knowledge. It covers techniques for the creation, enrichment, assessment, and refinement of knowledge graphs and surveys recent open and enterprise knowledge graphs and the industries or applications within which they have been most widely adopted. The book closes by discussing the current limitations and future directions along which knowledge graphs are likely to evolve. This book is aimed at students, researchers, and practitioners who wish to learn more about knowledge graphs and how they facilitate extracting value from diverse data at large scale. To make the book accessible for newcomers, running examples and graphical notation are used throughout. Formal definitions and extensive references are also provided for those who opt to delve more deeply into specific topics.

Applied Linear Algebra Peter J. Olver 2018-05-30 This textbook develops the essential tools of linear algebra, with the goal of imparting technique alongside contextual understanding. Applications go hand-in-hand with theory, each reinforcing and explaining the other. This approach encourages students to develop not only the technical proficiency needed to go on to further study, but an appreciation for when, why, and how the tools of linear algebra can be used across modern applied mathematics. Providing an extensive treatment of essential topics such as Gaussian elimination, inner products and norms, and eigenvalues and singular values, this text can be used for an in-depth first course, or an application-driven second course in linear algebra. In this second edition, applications have been updated and expanded to include numerical methods, dynamical systems, data analysis, and signal processing, while the pedagogical flow of the core material has been improved. Throughout, the text emphasizes the conceptual connections between each application and the underlying linear algebraic techniques, thereby enabling students not only to learn how to apply the mathematical tools in routine contexts, but also to understand what is required to adapt to unusual or emerging problems. No previous knowledge of linear algebra is needed to approach this text, with single-variable calculus as the only formal prerequisite. However, the reader will need to draw upon some mathematical maturity to engage in the increasing abstraction inherent to the subject. Once equipped with the main tools and concepts from this book, students will be prepared for further study in differential equations, numerical analysis, data science and statistics, and a broad range of applications. The first author's text, Introduction to Partial Differential Equations, is an ideal companion volume, forming a natural extension of the linear mathematical methods developed here.

Introduction to General Topology K. D. Joshi 1983

Elementary Topology O. Ya. Viro, O. A. Ivanov, N. Yu. Netsvetaev, V. M. Kharlamov This text contains a detailed introduction to general topology and an introduction to algebraic topology via its most classical and elementary segment. Proofs of theorems are separated from their formulations and are gathered at the end of each chapter, making this book appear like a problem book and also giving it appeal to the expert as a handbook. The book includes about 1,000 exercises.

Bayesian Essentials with R Jean-Michel Marin 2013-10-28 This Bayesian modeling book provides a self-contained entry to computational Bayesian statistics. Focusing on the most standard statistical models and backed up by real datasets and an all-inclusive R (CRAN) package called bayess, the book provides an operational methodology for conducting Bayesian inference, rather than focusing on its theoretical and philosophical justifications. Readers are empowered to participate in the real-life data analysis situations depicted here from the beginning. Special attention is paid to the derivation of prior distributions in each case and specific reference solutions are given for each of the models. Similarly, computational details are worked out to lead the reader towards an effective programming of the methods given in the book. In particular, all R codes are discussed with enough detail to make them readily understandable and expandable. Bayesian Essentials with R can be used as a textbook at both undergraduate and graduate levels. It is particularly useful with students in professional degree programs and scientists to analyze data

the Bayesian way. The text will also enhance introductory courses on Bayesian statistics. Prerequisites for the book are an undergraduate background in probability and statistics, if not in Bayesian statistics.

A First Course in Differential Equations with Modeling Applications Dennis G. Zill 2012-03-15 A FIRST COURSE IN DIFFERENTIAL EQUATIONS WITH MODELING APPLICATIONS, 10th Edition strikes a balance between the analytical, qualitative, and quantitative approaches to the study of differential equations. This proven and accessible text speaks to beginning engineering and math students through a wealth of pedagogical aids, including an abundance of examples, explanations, Remarks boxes, definitions, and group projects. Written in a straightforward, readable, and helpful style, this book provides a thorough treatment of boundary-value problems and partial differential equations. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

American Book Publishing Record Cumulative, 1950-1977 R.R. Bowker Company. Department of Bibliography 1978

Counterexamples in Topology Lynn Arthur Steen 2013-04-22 Over 140 examples, preceded by a succinct exposition of general topology and basic terminology. Each example treated as a whole. Numerous problems and exercises correlated with examples. 1978 edition. Bibliography.

The Virtual Community, revised edition Howard Rheingold 2000-10-23 Howard Rheingold tours the "virtual community" of online networking. Howard Rheingold has been called the First Citizen of the Internet. In this book he tours the "virtual community" of online networking. He describes a community that is as real and as much a mixed bag as any physical community—one where people talk, argue, seek information, organize politically, fall in love, and dupe others. At the same time that he tells moving stories about people who have received online emotional support during devastating illnesses, he acknowledges a darker side to people's behavior in cyberspace. Indeed, contends Rheingold, people relate to each other online much the same as they do in physical communities. Originally published in 1993, The Virtual Community is more timely than ever. This edition contains a new chapter, in which the author revisits his ideas about online social communication now that so much more of the world's population is wired. It also contains an extended bibliography.

A First Course in Topology John McCleary 2006 How many dimensions does our universe require for a comprehensive physical description? In 1905, Poincare argued philosophically about the necessity of the three familiar dimensions, while recent research is based on 11 dimensions or even 23 dimensions. The notion of dimension itself presented a basic problem to the pioneers of topology. Cantor asked if dimension was a topological feature of Euclidean space. To answer this question, some important topological ideas were introduced by Brouwer, giving shape to a subject whose development dominated the twentieth century. The basic notions in topology are varied and a comprehensive grounding in point-set topology, the definition and use of the fundamental group, and the beginnings of homology theory requires considerable time. The goal of this book is a focused introduction through these classical topics, aiming throughout at the classical result of the Invariance of Dimension. This text is based on the author's course given at Vassar College and is intended for advanced undergraduate students. It is suitable for a semester-long course on topology for students who have studied real analysis and linear algebra. It is also a good choice for a capstone course, senior seminar, or independent study.

Real Variables with Basic Metric Space Topology Robert B. Ash 2009-05-21 Designed for a first course in real variables, this text encourages intuitive thinking and features detailed solutions to problems. Topics include complex variables, measure theory, differential equations, functional analysis, probability. 1993 edition.

Real Analysis N. L. Carothers 2000-08-15 A text for a first graduate course in real analysis for students in pure and applied mathematics, statistics, education, engineering, and economics.

Concepts in Thermal Physics Stephen Blundell 2010 This text provides a modern introduction to the main principles of thermal physics, thermodynamics and statistical mechanics. The key concepts are presented and new ideas are illustrated with worked examples as well as description of the historical background to their discovery.