Advanced Calculus

A Polynomial Approach to Linear Algebra

The Method of Equivalence and Its Applications

The Inexact and Separate Science of Economics

Schaum's Outline of Theory and Problems of Linear Algebra

Prentice Hall Mathematics, Algebra 1

Mathematics for Machine Learning

Introduction to Real Analysis

Algebra, Structure and Method

Euclid's Elements (the Thirteen Books)

Discrete Choice Methods with Simulation

Modern Algebra and Trigonometry

Algebra and Trigonometry - Structure and Method

Iterative Methods for Sparse Linear Systems

Algebra, Structure and Method

College Algebra

College Physics

Probability and Computing

Introduction to Probability

Introduction to Applied Linear Algebra

Python Machine Learning Cookbook

Hopf Algebras, Quantum Groups and Yang-Baxter Equations

Advanced Algebra

Factorization Algebras in Quantum Field Theory

Algebra and Trigonometry

Algebraic Topology

A First Course in the Finite Element Method, SI Version

Direct Instruction

A Book of Abstract Algebra

Commutative Algebra

Gödel, Escher, Bach

Algebra

Algebra: structure and method: book 1

Structure and Interpretation of Computer Programs

The Finite Element Method: Its Basis and Fundamentals

Logic for Physicists

Advanced Calculus

NOT AVAILABLE IN THE US AND CANADA. Customers in the US and Canada must order the Cloth edition of this title.

A Polynomial Approach to Linear Algebra

This book gives a rigorous yet 'physics-focused' introduction to mathematical logic that is geared towards natural science majors. We present the science major with a robust introduction to logic, focusing on the specific knowledge and skills that will unavoidably be needed in calculus topics and natural science topics in general (rather than taking a philosophical math fundamental oriented approach that is commonly found in mathematical logic textbooks).

The Method of Equivalence and Its Applications

The ideas of Elie Cartan are combined with the tools of Felix Klein and Sophus Lie to present in this book the only detailed treatment of the method of equivalence. An algorithmic description of this method, which finds invariants of geometric objects under infinite dimensional pseudo-groups, is presented for the first time. As part of the algorithm, Gardner introduces several major new techniques. In particular, the use of Cartan's idea of principal components that appears in his theory of Repere Mobile, and the use of Lie algebras instead of Lie groups, effectively a linear procedure, provide a tremendous simplification. One must, however, know how to convert from one to the other, and the author provides the Rosetta stone to accomplish this. In complex problems, it is essential to be able to identify natural blocks in group actions and not just individual elements, and prior to this publication, there was no reference to block matrix techniques. The Method of Equivalence and Its Applications details ten diverse applications
including Lagrangian field theory, control theory, ordinary differential equations, and Riemannian and conformal geometry. This volume contains a series of lectures, the purpose of which was to describe the equivalence algorithm and to show, in particular, how it is applied to several pedagogical examples and to a problem in control theory called state estimation of plants under feedback. The lectures, and hence the book, focus on problems in real geometry.

The Inexact and Separate Science of Economics

This book offers a comprehensive overview of the structure, strategy and methods of assessment of orthodox theoretical economics.

Schaum's Outline of Theory and Problems of Linear Algebra

Prentice Hall Mathematics, Algebra 1

Mathematics for Machine Learning

An introductory textbook suitable for use in a course or for self-study, featuring broad coverage of the subject and a readable exposition, with many examples and exercises.

Introduction to Real Analysis

A groundbreaking introduction to vectors, matrices, and least squares for engineering applications, offering a wealth of practical examples.

Algebra, Structure and Method, Book 1

This is a comprehensive review of commutative algebra, from localization and primary decomposition through dimension theory, homological methods, free resolutions and duality, emphasizing the origins of the ideas and their connections with other parts of mathematics. The book gives a concise treatment of Grobner basis theory and the constructive methods in commutative algebra and algebraic geometry that flow from it. Many exercises included.

Algebra

Algebra, Structure and Method

This practical guide provides nearly 200 self-contained recipes to help you solve machine learning challenges you may encounter in your daily work. If you're comfortable with Python and its libraries, including pandas and scikit-learn, you'll be able to address specific problems such as loading data, handling text or numerical data, model selection, and dimensionality reduction and many other topics. Each recipe includes code that you can copy and paste into a toy dataset to ensure that it actually works. From there, you can insert, combine, or adapt the code to help construct your
application. Recipes also include a discussion that explains the solution and provides meaningful context. This cookbook takes you beyond theory and concepts by providing the nuts and bolts you need to construct working machine learning applications. You'll find recipes for: Vectors, matrices, and arrays Handling numerical and categorical data, text, images, and dates and times Dimensionality reduction using feature extraction or feature selection Model evaluation and selection Linear and logical regression, trees and forests, and k-nearest neighbors Support vector machines (SVM), naïve Bayes, clustering, and neural networks Saving and loading trained models

Euclid's Elements (the Thirteen Books)

Discrete Choice Methods with Simulation

Modern Algebra and Trigonometry

The comprehensive content and varied real-life applications covered give students a strong mathematical foundation. Real-world applications and suggestions for appropriate use of technology are integrated throughout. Includes worked-out examples, carefully developed exercise sets, practice tests and practice worksheets.

Algebra and Trigonometry - Structure and Method

"The text is suitable for a typical introductory algebra course, and was developed to be used flexibly. While the breadth of topics may go beyond what an instructor would cover, the modular approach and the richness of content ensures that the book meets the needs of a variety of programs."--Page 1.

Iterative Methods for Sparse Linear Systems

Algebra, Structure and Method

College Algebra

A Polynomial Approach to Linear Algebra is a text which is heavily biased towards functional methods. In using the shift operator as a central object, it makes linear algebra a perfect introduction to other areas of mathematics, operator theory in particular. This technique is very powerful as becomes clear from the analysis of canonical forms (Frobenius, Jordan). It should be emphasized that these functional methods are not only of great theoretical interest, but lead to computational algorithms. Quadratic forms are treated from the same perspective, with emphasis on the important examples of Bezoutian and Hankel forms. These topics are of great importance in applied areas such as signal processing, numerical linear algebra, and control theory. Stability theory and system theoretic concepts, up to realization theory, are treated as an integral part of linear algebra.
Finally there is a chapter on Hankel norm approximation for the case of scalar rational functions which allows the reader to access ideas and results on the frontier of current research.

**College Physics**

Euclid was a mathematician from the Greek city of Alexandria who lived during the 4th and 3rd century B.C. and is often referred to as the "father of geometry." Within his foundational treatise "Elements," Euclid presents the results of earlier mathematicians and includes many of his own theories in a systematic, concise book that utilized a brief set of axioms and meticulous proofs to solidify his deductions. In addition to its easily referenced geometry, "Elements" also includes number theory and other mathematical considerations. For centuries, this work was a primary textbook of mathematics, containing the only framework for geometry known by mathematicians until the development of "non-Euclidian" geometry in the late 19th century. The extent to which Euclid's "Elements" is of his own original authorship or borrowed from previous scholars is unknown, however despite this fact it was his collation of these basic mathematical principles for which most of the world would come to the study of geometry. Today, Euclid's "Elements" is acknowledged as one of the most influential mathematical texts in history. This volume includes all thirteen books of Euclid's "Elements," is printed on premium acid-free paper, and follows the translation of Thomas Heath.

**Probability and Computing**

Accessible but rigorous, this outstanding text encompasses all of the topics covered by a typical course in elementary abstract algebra. Its easy-to-read treatment offers an intuitive approach, featuring informal discussions followed by thematically arranged exercises. This second edition features additional exercises to improve student familiarity with applications. 1990 edition.

**Introduction to Probability**

**Introduction to Applied Linear Algebra**

"The text is suitable for a typical introductory algebra course, and was developed to be used flexibly. While the breadth of topics may go beyond what an instructor would cover, the modular approach and the richness of content ensures that the book meets the needs of a variety of programs."--Page 1.

**Python Machine Learning Cookbook**

A FIRST COURSE IN THE FINITE ELEMENT METHOD provides a simple, basic approach to the course material that can be understood by both undergraduate and graduate students without the usual prerequisites (i.e. structural analysis). The book is written primarily as a basic learning tool for the undergraduate student in civil and mechanical engineering whose main interest is in stress analysis and heat transfer. The text is geared toward those who want to apply the finite element method as a tool to solve
practical physical problems. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Hopf Algebras, Quantum Groups and Yang-Baxter Equations

This book is a printed edition of the Special Issue "Hopf Algebras, Quantum Groups and Yang-Baxter Equations" that was published in Axioms

Advanced Algebra

An authorised reissue of the long out of print classic textbook, Advanced Calculus by the late Dr Lynn Loomis and Dr Shlomo Sternberg both of Harvard University has been a revered but hard to find textbook for the advanced calculus course for decades. This book is based on an honors course in advanced calculus that the authors gave in the 1960's. The foundational material, presented in the unstarred sections of Chapters 1 through 11, was normally covered, but different applications of this basic material were stressed from year to year, and the book therefore contains more material than was covered in any one year. It can accordingly be used (with omissions) as a text for a year's course in advanced calculus, or as a text for a three-semester introduction to analysis. The prerequisites are a good grounding in the calculus of one variable from a mathematically rigorous point of view, together with some acquaintance with linear algebra. The reader should be familiar with limit and continuity type arguments and have a certain amount of mathematical sophistication. As possible introductory texts, we mention Differential and Integral Calculus by R Courant, Calculus by T Apostol, Calculus by M Spivak, and Pure Mathematics by G Hardy. The reader should also have some experience with partial derivatives. In overall plan the book divides roughly into a first half which develops the calculus (principally the differential calculus) in the setting of normed vector spaces, and a second half which deals with the calculus of differentiable manifolds.

Factorization Algebras in Quantum Field Theory

The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.

Algebra and Trigonometry
This first volume develops factorization algebras with a focus upon examples exhibiting their use in field theory, which will be useful for researchers and graduates.

Algebraic Topology

Developed from celebrated Harvard statistics lectures, Introduction to Probability provides essential language and tools for understanding statistics, randomness, and uncertainty. The book explores a wide variety of applications and examples, ranging from coincidences and paradoxes to Google PageRank and Markov chain Monte Carlo (MCMC). Additional

A First Course in the Finite Element Method, SI Version

Direct Instruction

A Book of Abstract Algebra

Commutative Algebra

This book describes the new generation of discrete choice methods, focusing on the many advances that are made possible by simulation. Researchers use these statistical methods to examine the choices that consumers, households, firms, and other agents make. Each of the major models is covered: logit, generalized extreme value, or GEV (including nested and cross-nested logits), probit, and mixed logit, plus a variety of specifications that build on these basics. Simulation-assisted estimation procedures are investigated and compared, including maximum stimulated likelihood, method of simulated moments, and method of simulated scores. Procedures for drawing from densities are described, including variance reduction techniques such as anithetics and Halton draws. Recent advances in Bayesian procedures are explored, including the use of the Metropolis-Hastings algorithm and its variant Gibbs sampling. The second edition adds chapters on endogeneity and expectation-maximization (EM) algorithms. No other book incorporates all these fields, which have arisen in the past 25 years. The procedures are applicable in many fields, including energy, transportation, environmental studies, health, labor, and marketing.

Gödel, Escher, Bach

This text blends traditional introductory physics topics with an emphasis on human applications and an expanded coverage of modern physics topics, such as the existence of atoms and the conversion of mass into energy. Topical coverage is combined with the author’s lively, conversational writing style, innovative features, the direct and clear manner of presentation, and the emphasis on problem solving and practical applications.

Algebra

• This third edition of the successful outline in linear algebra—which sold
more than 400,000 copies in its past two editions—has been thoroughly updated to increase its applicability to the fields in which linear algebra is now essential: computer science, engineering, mathematics, physics, and quantitative analysis. Revised coverage includes new problems relevant to computer science and a revised chapter on linear equations. More than 100,000 students enroll in beginning and advanced Linear Algebra courses each year. This outline is appropriate for both first- and second-level linear algebra courses.

Algebra

Mathematics of Computing -- General.

Algebra: structure and method: book 1

“This textbook is designed to accompany a one- or two-semester course for advanced undergraduates or beginning graduate students in computer science and applied mathematics. It gives an excellent introduction to the probabilistic techniques and paradigms used in the development of probabilistic algorithms and analyses. It assumes only an elementary background in discrete mathematics and gives a rigorous yet accessible treatment of the material, with numerous examples and applications.” -- Jacket.

Algebra

Using an extremely clear and informal approach, this book introduces readers to a rigorous understanding of mathematical analysis and presents challenging math concepts as clearly as possible. The real number system. Differential calculus of functions of one variable. Riemann integral functions of one variable. Integral calculus of real-valued functions. Metric Spaces. For those who want to gain an understanding of mathematical analysis and challenging mathematical concepts.

Structure and Interpretation of Computer Programs

The Sixth Edition of this influential best-selling book delivers the most up-to-date and comprehensive text and reference yet on the basis of the finite element method (FEM) for all engineers and mathematicians. Since the appearance of the first edition 38 years ago, The Finite Element Method provides arguably the most authoritative introductory text to the method, covering the latest developments and approaches in this dynamic subject, and is amply supplemented by exercises, worked solutions and computer algorithms. • The classic FEM text, written by the subject's leading authors • Enhancements include more worked examples and exercises • With a new chapter on automatic mesh generation and added materials on shape function development and the use of higher order elements in solving elasticity and field problems Active research has shaped The Finite Element Method into the pre-eminent tool for the modelling of physical systems. It maintains the comprehensive style of earlier editions, while presenting the systematic development for the solution of problems modelled by linear differential equations. Together with the second and third self-contained volumes (0750663219 and 0750663227), The Finite Element Method Set (0750664312) provides a formidable resource covering the theory and the application of
FEM, including the basis of the method, its application to advanced solid and structural mechanics and to computational fluid dynamics. The classic introduction to the finite element method, by two of the subject's leading authors Any professional or student of engineering involved in understanding the computational modelling of physical systems will inevitably use the techniques in this key text

**The Finite Element Method: Its Basis and Fundamentals**

**Logic for Physicists**

'What is a self and how can a self come out of inanimate matter?' This is the riddle that drove Douglas Hofstadter to write this extraordinary book. In order to impart his original and personal view on the core mystery of human existence - our intangible sensation of 'I'-ness - Hofstadter defines the playful yet seemingly paradoxical notion of 'strange loop', and explicates this idea using analogies from many disciplines.

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