

## Applied Complex Variables John W Dettman Acfilterore

Graduate-level text offers full treatments of existence theorems, representation of solutions by series, theory of majorants, dominants and minorants, questions of growth, much more. Includes 675 exercises. Bibliography.

Graduate-level study for engineering students presents elements of modern probability theory, elements of information theory with emphasis on its basic roots in probability theory and elements of coding theory. Emphasis is on such basic concepts as sets, sample space, random variables, information measure, and capacity. Many reference tables and extensive bibliography. 1961 edition.

The basics of what every scientist and engineer should know, from complex numbers, limits in the complex plane, and complex functions to Cauchy's theory, power series, and applications of residues. 1974 edition.

One of the classic early monographs on game theory, this comprehensive overview of the mathematical theory of games illustrates applications to situations involving conflicts of interest, including economic, social, political, and military contexts. Appropriate for advanced undergraduate and graduate courses; advanced calculus a prerequisite. Includes 51 figures and 8 tables. 1952 edition.

Outstanding undergraduate text provides a thorough understanding of fundamentals and creates the basis for higher-level courses. Numerous examples and extensive exercise sections of varying difficulty, plus answers to selected exercises. 1990 edition.

Superb introduction to Euclidean algorithm and its consequences, congruences, continued fractions, powers of an integer modulo  $m$ , Gaussian integers, Diophantine equations, more. Problems, with answers. Bibliography.

Nobel Laureate discusses quantum theory, uncertainty, wave mechanics, work of Dirac, Schroedinger, Compton, Einstein, others. "An authoritative statement of Heisenberg's views on this aspect of the quantum theory." ? Nature.

This self-contained volume explains the general method of statistical linearization and its use in solving random vibration problems. Numerous examples show advanced undergraduate and graduate students many practical applications. 1990 edition.

Measure and integration, metric spaces, the elements of functional analysis in Banach spaces, and spectral theory in Hilbert spaces — all in a single study. Only book of its kind. Unusual topics, detailed analyses. Problems. Excellent for first-year graduate students, almost any course on modern analysis. Preface. Bibliography. Index.

Graduate-level text provides strong background in more abstract areas of dynamical theory. Hamilton's equations, d'Alembert's principle, Hamilton-Jacobi theory, other topics. Problems and references. 1977 edition.

Graduate-level text and reference in probability, with numerous scientific applications. Nonmeasure-theoretic introduction to theory of Markov processes and to mathematical models based on the theory. Appendixes. Bibliographies. 1960 edition.

An incisive text combining theory and practical example to introduce Fourier series, orthogonal functions and applications of the Fourier method to boundary-value problems. Includes 570 exercises. Answers and notes.

The second edition of this comprehensive and accessible text continues to offer students a challenging and enjoyable study of complex variables that is infused with perfect balanced coverage of mathematical theory and applied topics. The author explains fundamental concepts and techniques with precision and introduces the students to complex variable theory through conceptual development of analysis that enables them to develop a thorough understanding of the topics discussed. Geometric interpretation of the results, wherever necessary, has been inducted for making the analysis more accessible. The level of the text assumes that the reader is acquainted with elementary real analysis. Beginning with the revision of the algebra of complex variables, the book moves on to deal with analytic functions, elementary functions, complex integration, sequences, series and infinite products, series expansions, singularities and residues. The application-oriented chapters on sums and integrals, conformal mappings, Laplace transform, and some special topics, provide a practical-use perspective. Enriched with many numerical examples and exercises designed to test the student's comprehension of the topics covered, this book is written for a one-semester course in complex variables for students in the science and engineering disciplines.

This advanced and specialized introduction to the hydrodynamics of detonation offers a theoretical and observational overview. It explores the "simple theory" and experimental tests of the theory; flow in a reactive medium; steady detonation; the nonsteady solution; and the structure of the detonation front. Many simple cases are worked out for illustration. 1979 edition.

Concise, readable text ranges from definition of vectors and discussion of algebraic operations on vectors to the concept of tensor and algebraic operations on tensors. Worked-out problems and solutions. 1968 edition.

Presents 33 essays on such topics as statistics and the design of experiments, group theory, the mathematics of infinity, the mathematical way of thinking, the unreasonableness of mathematics, and mathematics as an art. A reprint of volume 3 of the four-volume edition originally published by Simon and Schuster in 1956. Annotation c. Book News, Inc., Portland, OR (booknews.com).

For students of mathematical biology, an introduction to taxonomic characters, measurement of similarity, analysis of principal components, multidimensional scaling, cluster analysis, identification and assignment techniques, and the construction of evolutionary trees.

Text discusses earth's gravitational field; matrices and orbital geometry; satellite orbit dynamics; geometry of satellite observations; statistical implications; and data analysis.

Illuminating, widely praised book on analytic geometry of circles, the Moebius transformation, and 2-dimensional non-Euclidean geometries. "This book should be in every library, and every expert in classical function theory should be familiar with this material. The author has performed a distinct service by making this material so conveniently accessible in a single book." — Mathematical Review.

Intended for the undergraduate student majoring in mathematics, physics or engineering, the Sixth Edition of Complex Analysis for Mathematics and Engineering continues to provide a comprehensive, student-friendly presentation of this interesting area of mathematics. The authors strike a balance between the pure and applied aspects of the subject, and present concepts in a clear writing style that is appropriate for students at the junior/senior level. Through its thorough, accessible presentation and numerous applications, the sixth edition of this classic text allows students to work through even the most difficult proofs with ease. New exercise sets help students test their understanding of the material at hand and assess their progress through the course. Additional Mathematica and Maple exercises, as well as a student study guide are also available online.

Complex Analysis for Mathematics and Engineering strikes a balance between the pure and applied aspects of complex analysis, and presents concepts using a clear writing style. Believing that mathematics stimulates the mind, the authors have provided a stimulating collection of over 300 unusual problems involving equations and inequalities, Diophantine equations, number theory, quadratic equations, logarithms and more. Problems range from easy to difficult. Detailed solutions, as well as brief answers, for all problems are provided.

Useful introductory course and reference covers origins of quantum theory, Schrödinger wave equation, quantum mechanics of simple systems, electron spin, quantum states of atoms, Hartree-Fock self-consistent field method, more. 1990 edition.

Important text offers lucid explanation of how to regulate variables and maintain control over statistics in order to achieve quality control over manufactured products, crops and data. Topics include statistical control, establishing limits of variability, measurements of physical properties and constants, and specification of accuracy and precision. First inexpensive paperback edition.

An analysis of the problems, theory, and design of sampling techniques; assumes only college-level algebra. "The 'bible' of sampling statisticians." ? American Statistical Association Journal. 1950 edition.

The Russian mathematician views the theoretical and practical aspects of special functions and illustrates their significance in problem solving in physics and engineering

Excellent intro to basics of algebraic number theory. Gaussian primes; polynomials over a field; algebraic number fields; algebraic integers and integral bases; uses of arithmetic in algebraic number fields; the fundamental theorem of ideal theory and its consequences; ideal classes and class numbers; Fermat conjecture. 1975 edition.

Suitable for advanced undergraduate and graduate students, this text presents the general properties of partial differential equations, including the elementary theory of complex variables. Solutions. 1965 edition.

Chess as art and recreation; checkmating combinations, endgame play, strategic principles, more. Full details and analysis of author's famous game with Emanuel Lasker. 94 diagrams; other illustrations. "Very enjoyable." — Cleveland Chess Bulletin.

Classic work presents Conrady's complete system of optical design. Part One covers all ordinary ray-tracing methods, together with the complete theory of primary aberration and as much of higher aberration as is needed for the design of telescopes, low-power microscopes, and simple optical systems.

Four members of a London club relate their former careers in crime

Exceptionally clear coverage of mechanisms for catalysis, forces in aqueous solution, carbonyl- and acyl-group reactions, practical kinetics, more.

Famous classic has introduced countless readers to symbolic logic with its thorough and precise exposition. Starts with simple symbols and conventions and concludes with the Boole-Schroeder and Russell-Whitehead systems. No special knowledge of mathematics necessary. "One of the clearest and simplest introductions to a subject which is very much alive." — Mathematics Gazette.

This text analyzes a class of discrete mathematical models of engineering systems, identifying key issues and reviewing relevant theoretical concepts, with particular attention to a spectral approach. 1991 edition.

Important text examines most significant algorithms for optimizing large systems and clarifying relations between optimization procedures. Much data appear as charts and graphs and will be highly valuable to readers in selecting a method and estimating computer time and cost in problem-solving. Initial chapter on linear and nonlinear programming presents all necessary background for subjects covered in rest of book. Second chapter illustrates how large-scale mathematical programs arise from real-world problems. Appendixes. List of Symbols.

Acclaimed text on essential engineering mathematics covers theory of complex variables, Cauchy-Riemann equations, conformal mapping, and multivalued functions, plus Fourier and Laplace transform theory, with applications to engineering, including integrals, linear integrodifferential equations, Z-transform, more. Ideal for home study as well as graduate engineering courses, this volume includes many problems.

This rich record of the major interests of Paracelsus and other 16th-century chemical philosophers covers chemistry and nature in the Renaissance, Paracelsian debates, theories of Fludd, Helmontian restatement of chemical philosophy, and other fascinating aspects of the era. Well researched, compellingly related study. 36 black-and-white illustrations.

Brief introductory text presents basics of calculus from the engineering viewpoint. Topics include differential, integral, and time calculus; equations of motion and their solution; complex variables, algebra, and functions; complex and operational calculus; and simple and inverse transformations. Includes 70 diagrams and 8 tables. 1962 edition.

Fundamentals of analytic function theory — plus lucid exposition of 5 important applications: potential theory, ordinary differential equations, Fourier transforms, Laplace transforms, and asymptotic expansions. Includes 66 figures.

Excellent undergraduate-level text offers coverage of real numbers, sets, metric spaces, limits, continuous functions, much more. Each chapter contains a problem set with hints and answers. 1973 edition.

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