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Methode der finiten Elemente Olgierd C. Zienkiewicz 1983

Einführung in die Zahlentheorie Ivan Niven 1976

McGraw-Hill Concise Encyclopedia of Science and Technology, Sixth Edition McGraw-Hill Education 2009-06-10 Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. A major revision of this classic encyclopedia covering all areas of science and technology, the McGraw-Hill Concise Encyclopedia of Science and Technology, Sixth Edition, is prepared for students, professionals, and general readers seeking concise yet authoritative overviews of topics in all major fields in science and technology. The McGraw-Hill Concise Encyclopedia of Science and Technology, Sixth Edition, satisfies the needs of readers for an authoritative, comprehensive reference work in a relatively compact format that provides the breadth of coverage of the McGraw-Hill Encyclopedia of Science & Technology, 10th Edition. Written in clear, nonspecialist language understandable to students and general readers, yet with sufficient depth for scientists, educators, and researchers, this definitive resource provides: 7100 concise articles covering disciplines of science and technology from acoustics to zoology Extensively revised content with new and rewritten articles Current and critical advances in fast-developing fields such as biomedical science, chemistry, computing and information technology, cosmology, environmental science, nanotechnology, telecommunications, and physics More than 1600 two-color illustrations 75 full-color plates Hundreds of tables and charts 1300 biographical sketches of famous scientists Index containing 30,000 entries Cross references to related articles Appendices including bibliographies and useful data McGraw-Hill Professional science reference products are supported by MHEST.com, a website offering updates to articles, periodic special features on important scientific topics, multimedia content, and other features enriching the reader's experience. We encourage readers to visit the site often. Fields Covered Include: Acoustics Aeronautics Agriculture Anthropology Archeology Astronomy Biochemistry Biology Chemistry Computers Cosmology Earth Science Engineering Environmental Science Forensic Science Forestry Genetics Geography Immunology Information Science Materials Science Mathematics Medicine and Pathology Meteorology and Climate Science Microbiology Nanotechnology Navigation Neuroscience Oceanography Paleontology Physics Physiology Psychiatry Psychology Telecommunications Theoretical Physics Thermodynamics Veterinary Medicine Virology Zoology

Distributionen und Hilbertraumoperatoren Philippe Blanchard 1993-09-21 Das Buch bietet eine Einführung in die zum Studium der Theoretischen Physik notwendigen mathematischen Grundlagen. Der erste Teil des Buches beschäftigt sich mit der Theorie der Distributionen und vermittelt daneben einige Grundbegriffe der linearen Funktionalanalysis. Der zweite Teil baut darauf auf und gibt eine auf das Wesentliche beschränkte Einführung in die Theorie der linearen Operatoren in Hilbert-Räumen. Beide Teile werden von je einer Übersicht begleitet, die die zentralen Ideen und Begriffe knapp erläutert und den Inhalt kurz beschreibt. In den Anhängen werden einige grundlegende Konstruktionen und Konzepte der Funktionalanalysis dargestellt und wichtige Konsequenzen entwickelt.

Einführung in die kommutative Algebra und algebraische Geometrie Ernst Kunz 2013-03-09

Einführung in die Kristallographie Will Kleber 2020-11-09 Die 20., stark überarbeitete Aufl age dieses bewährten Standardwerks behandelt grundlegend und umfassend sämtliche Teilgebiete der Kristallographie, wobei u. a. aktuelle Beugungsmethoden mit Neutronen und Synchrotronstrahlung erstmalig beschrieben werden.

Fundamental Mechanics of Fluids, Third Edition Iain G. Currie 2002-12-12 Retaining the features that made previous editions perennial favorites, Fundamental Mechanics of Fluids, Third Edition illustrates basic equations and strategies used to analyze fluid dynamics, mechanisms, and behavior, and offers solutions to fluid flow dilemmas encountered in common engineering applications. The new edition contains completely reworked line drawings, revised problems, and extended end-of-chapter questions for clarification and expansion of key concepts. Includes appendices summarizing vectors, tensors, complex variables, and governing equations in common coordinate systems Comprehensive in scope and breadth, the Third Edition of Fundamental Mechanics of Fluids discusses: Continuity, mass, momentum, and energy One-, two-, and three-dimensional flows Low Reynolds number solutions Buoyancy-driven flows Boundary layer theory Flow measurement Surface waves Shock waves

Vom Calculus zum Chaos David J. Acheson 2010-10-01 Eine spannende Abhandlung zu ausgewählten Fragen der Mechanik quer durch die Jahrhunderte der Physik. Ohne großen mathematischen Ballast zeigt Acheson, wie hier die Infinitesimalrechnung - oder auch Calculus - den passenden Schlüssel zum Verständnis liefert. Das dynamische Verhalten der vorgestellten Systeme wird sowohl analytisch als auch mit Simulationen untersucht. Dazu werden QBasic-Programme verwendet, die so einfach sind, daß sie jeder leicht zum Laufen bringen und seinen Fragestellungen entsprechend anpassen kann. Der Inhalt wird durch historische Darstellungen der Mechanik und durch Bilder berühmter Physiker und Faksimiles ihrer Originaltexte bereichert. Das Buch für Studenten und Dozenten der Mathematik und Physik ist auch für interessierte Schüler der Oberstufe geeignet.

Elektrodynamik David J. Griffiths 2018-08-10

Analytische Dynamik der Punkte und Starren Körper E. T. Whittaker 2014-01-09 Dieser Buchtitel ist Teil des Digitalisierungsprojekts

Springer Book Archives mit Publikationen, die seit den Anfängen des Verlags von 1842 erschienen sind. Der Verlag stellt mit diesem Archiv Quellen für die historische wie auch die disziplingeschichtliche Forschung zur Verfügung, die jeweils im historischen Kontext betrachtet werden müssen. Dieser Titel erschien in der Zeit vor 1945 und wird daher in seiner zeittypischen politisch-ideologischen Ausrichtung vom Verlag nicht beworben.

Optimization Theory and Applications Jochen Werner 1984 This book is a slightly augmented version of a set of lec tures on optimization which I held at the University of Got tingen in the winter semester 1983/84. The lectures were in tended to give an introduction to the foundations and an im pression of the applications of optimization theory. Since in finite dimensional problems were also to be treated and one could only assume a minimal knowledge of functional analysis, the necessary tools from functional analysis were almost com pletely developed during the course of the semester. The most important aspects of the course are the duality theory for convex programming and necessary optimality conditions for nonlinear optimization problems; here we strive to make the geometric background particularly clear. For lack of time and space we were not able to go into several important problems in optimization - e. g. vector optimization, geometric program ming and stability theory. I am very grateful to various people for their help in pro ducing this text. R. Schaback encouraged me to publish my lec tures and put me in touch with the Vieweg-Verlag. W. BrUbach and O. Herbst proofread the manuscript; the latter also pro duced the drawings and assembled the index. I am indebted to W. LUck for valuable suggestions for improvement. I am also particularly grateful to R. Switzer, who translated the German text into English. Finally I wish to thank Frau P. Trapp for her Gare and patience in typing the final version.

Books in Print Supplement 1979

Leben in zwei Welten Else R. Behrend-Rosenfeld 2011

Flapping Wing Vehicles Lung-Jieh Yang 2021-09-30 Flapping wing vehicles (FWVs) have unique flight characteristics and the successful flight of such a vehicle depends upon efficient design of the flapping mechanisms while keeping the minimum weight of the structure. Flapping Wing Vehicles: Numerical and Experimental Approach discusses design and kinematic analysis of various flapping wing mechanisms, measurement of flap angle/flapping frequency, and computational fluid dynamic analysis of motion characteristics including manufacturing techniques. The book also includes wind tunnel experiments, high-speed photographic analysis of aerodynamic performance, soap film visualization of 3D down washing, studies on the effect of wing rotation, figure-of-eight motion characteristics, and more. Features Covers all aspects of FWVs needed to design one and understand how and why it flies Explains related engineering practices including flapping mechanism design, kinematic analysis, materials, manufacturing, and aerodynamic performance measures using wind tunnel experiments Includes CFD analysis of 3D wing profile, formation flight of FWVs, and soap film visualization of flapping wings Discusses dynamics and image-based control of a group of ornithopters Explores indigenous PCB design for achieving altitude and attitude control This book is aimed at researchers and graduate students in mechatronics, materials, aerodynamics, robotics, biomimetics, vehicle design and MAV/UAV.

Fluid Mechanics Bijay Sultanian 2015-07-28 Fluid Mechanics: An Intermediate Approach addresses the problems facing engineers today by taking on practical, rather than theoretical problems. Instead of following an approach that focuses on mathematics first, this book allows you to develop an intuitive physical understanding of various fluid flows, including internal compressible flows with simultaneous area change, friction, heat transfer, and rotation. Drawing on over 40 years of industry and teaching experience, the author emphasizes physics-based analyses and quantitative predictions needed in the state-of-the-art thermofluids research and industrial design applications. Numerous worked-out examples and illustrations are used in the book to demonstrate various problem-solving techniques. The book covers compressible flow with rotation, Fanno flows, Rayleigh flows, isothermal flows, normal shocks, and oblique shocks; Bernoulli, Euler, and Navier-Stokes equations; boundary layers; and flow separation. Includes two value-added chapters on special topics that reflect the state of the art in design applications of fluid mechanics Contains a value-added chapter on incompressible and compressible flow network modeling and robust solution methods not found in any leading book in fluid mechanics Gives an overview of CFD technology and turbulence modeling without its comprehensive mathematical details Provides an exceptional review and reinforcement of the physics-based understanding of incompressible and compressible flows with many worked-out examples and problems from real-world fluids engineering applications Fluid Mechanics: An Intermediate Approach uniquely aids in the intuitive understanding of various fluid flows for their physics-based analyses and quantitative predictions needed in the state-of-the-art thermofluids research and industrial design applications.

Fundamental Mechanics of Fluids I.G. Currie 2016-04-19 Fundamental Mechanics of Fluids, Fourth Edition addresses the need for an introductory text that focuses on the basics of fluid mechanics-before concentrating on specialized areas such as ideal-fluid flow and boundary-layer theory. Filling that void for both students and professionals working in different branches of engineering, this versatile ins

Lineare Algebra Howard Anton 1998 In Ihrer Hand liegt ein Lehrbuch - in sieben englischsprachigen Ausgaben praktisch erprobt - das Sie mit groem didaktischen Geschick, zudem angereichert mit zahlreichen Ubungsaufgaben, in die Grundlagen der linearen Algebra einfuhrt. Kenntnisse der Analysis werden fur das Verstandnis nicht generell vorausgesetzt, sind jedoch fur einige besonders gekennzeichnete Beispiele notig. Padagogisch erfahren, behandelt der Autor grundlegende Beweise im laufenden Text; fur den interessierten Leser jedoch unverzichtbare Beweise finden sich am Ende der entsprechenden Kapitel. Ein weiterer Vorzug des Buches: Die Darstellung der Zusammenhange zwischen den einzelnen Stoffgebieten - linearen Gleichungssystemen, Matrizen, Determinanten, Vektoren, linearen Transformationen und Eigenwerten.

Vegan leben für Dummies Alexandra Jamieson 2015-03-18

Scherben der Erinnerung Shannon McKenna 2015-01-15 Lara Kirk wurde entführt und von ihren Kidnappern unter Drogen gesetzt, die ihre mentalen Fähigkeiten verstärken sollen. Im Geiste nimmt sie Kontakt zu einem Mann auf, von dem sie zunächst glaubt, dass er nur in ihren Träumen existiert. Doch als der attraktive Miles schließlich kommt, um Lara zu retten, stellt sie fest, dass er ebenso real ist wie ihre Leidenschaft für ihn.

Ophthalmoskopischer Hand-Atlas Eduard Jaeger (Ritter von Jaxtthal) 1869

Grenzschicht-Theorie H. Schlichting 2013-08-13 Die Überarbeitung für die 10. deutschsprachige Auflage von Hermann Schlichtings Standardwerk wurde wiederum von Klaus Gersten geleitet, der schon die umfassende Neuformulierung der 9. Auflage vorgenommen hatte. Es wurden durchgängig Aktualisierungen vorgenommen, aber auch das Kapitel 15 von Herbert Oertel jr. neu bearbeitet. Das Buch gibt einen umfassenden Überblick über den Einsatz der Grenzschicht-Theorie in allen Bereichen der Strömungsmechanik. Dabei liegt der Schwerpunkt bei den Umströmungen von Körpern (z.B. Flugzeugaerodynamik). Das Buch wird wieder den Studenten der Strömungsmechanik wie auch Industrie-Ingenieuren ein unverzichtbarer Partner unerschöpflicher Informationen sein.

Continuous System Modeling François E. Cellier 2013-03-14 Modeling and Simulation have become endeavors central to all disciplines of science and engineering. They are used in the analysis of physical systems where they help us gain a better understanding of the functioning of our physical world. They are also important to the design of new engineering systems where they enable us to predict the behavior of a system before it is ever actually built. Modeling and simulation are the only techniques available that allow us to analyze arbitrarily non-linear systems accurately and under varying experimental conditions. Continuous System Modeling introduces the student to an important subclass of these techniques. They deal with the analysis of systems described through a set of ordinary or partial differential equations or through a set of difference equations. This volume introduces concepts of modeling physical systems through a set of differential and/or difference equations. The purpose is twofold: it enhances the scientific understanding of our physical world by codifying (organizing) knowledge about this world, and it supports engineering design by allowing us to assess the consequences of a particular design alternative before it is actually built. This text has a flavor of the mathematical discipline of dynamical systems, and is strongly oriented towards Newtonian physical science.

Environmental Data Management Nilgun B. Harmanciogammalu 2013-06-29 The diverse nature of environmental problems mankind has encountered within the last decade has developed a new understanding of the nature of environmental processes. Currently, the environment is considered as a continuum of air, soil and water as the vital components for sustaining life on earth. The interactive nature of these components requires that the environment is managed and protected as a cohesive whole. This can only be accomplished through an integrated approach to environmental management. Besides the concept of environmental continuum, prospects for sustainable development of natural resources and the recent recognition of global climate change impacts have also necessitated such an integrated approach to environmental management. Two basic tools for integrated management of the environment are modeling and environmental data. Both tools were available and valid in the past; however, the recent requirements for integrated environmental management have also led to a significant evolution of both modeling procedures and data management systems.

Entdeckungen über die Theorie des Klanges Ernst Florens Friedrich Chladni 1787

Six Lectures on Modern Natural Philosophy Clifford Ambrose Truesdell 2013-07-29 These lectures were first given during my tenure of a Walker Ames Visiting Professorship in the Department of Astronautics and Aeronautics at the University of Washington, November 2-12, 1964. I am grateful for the interest shown there and for the tranquil hospitality of Dr. JOHN BOLLARD and Dr. ELLIS DILL, which allowed me the leisure sufficient to write the first manuscript. I thank Dean ROBERT Roy and Dr. GEORGE BENTON for the unusual honor of an invitation to deliver a series of public lectures at my own university. Apart from the footnotes on pp. 49, 50, and 85, which have been added so as to answer questions allowed by the slower pace of silence, and the obviously necessary note on p. 106, the lectures of this second series are here printed as read, February 9-25, 1965. Thus I may call these, in imitation of a famous example, " Bal timore Lectures". Acknowledgment The first lecture is based largely upon my Bingham Medal Address of 1963, part of which it reproduces verbatim. The filth lecture may be regarded as a partial summary of my course on ergodic theory at the International School of Physics, Varenna, 1960. Much of the last lecture runs parallel to my article "The Modern Spirit in Applied Mathematics", ICSU Review of World Science, Volume 6, pp. 195-205 (1964), and some paragraphs are taken from my address to the Fourth U.S. National Congress of Applied Mechanics (1961).

Grundlagen der Kommunikationstechnik John G. Proakis 2004

Statistische Physik und Theorie der Wärme Frederick Reif 1987-01-01

Fluid Mechanics and Turbomachinery Bijay K Sultanian 2021-07-21 Reflecting the author's years of industry and teaching experience, Fluid Mechanics and Turbomachinery features many innovative problems and their systematically worked solutions. To understand fundamental concepts and various conservation laws of fluid mechanics is one thing, but applying them to solve practical problems is another challenge. The book covers various topics in fluid mechanics, turbomachinery flowpath design, and internal cooling and sealing flows around rotors and stators of gas turbines. As an ideal source of numerous practice problems with detailed solutions, the book will be helpful to senior-undergraduate and graduate students, teaching faculty, and researchers engaged in many branches of fluid mechanics. It will also help practicing thermal and fluid design engineers maintain and reinforce their problem-solving skills, including primary validation of their physics-based design tools.

Grenzschichten in Flüssigkeiten mit kleiner Reibung Heinrich Blasius 1907

Funktionentheorie I Reinhold Remmert 2013-03-08 Aus den Besprechungen: "Aufgelockert durch viele Beispiele und Übungsaufgaben, wird die Theorie der Funktionen einer komplexen Veränderlichen bis zum Residuenkalkül entwickelt. Im Zentrum stehen die Integralsätze von Cauchy. Dabei begnügt sich der Autor oft nicht mit einem einzigen Beweis für einen Satz. Weitere Beweismöglichkeiten werden zumindest skizziert, oder man erhält genaue Angaben über die Orginalarbeiten. Ebenso wird auf die ursprüngliche Formulierung von Sätzen hingewiesen. Jeder Paragraph schließt mit historischen Hinweisen, die auch die persönliche Beziehungen der Beteiligten nicht ausklammert. So erfährt man natürlich die unterschiedlichen Standpunkte von Cauchy und Weierstrass. Neben den Themen, die in keinem Text zur Funktionentheorie fehlen dürfen, findet man auch "Raritäten", etwa: Eisensteins Zugang zu den trigonometrischen Funktionen mittels Reihen oder Ritts Satz über asymptotische Reihenentwicklung, welcher einen berühmten Satz von E. Borel enthält. Das Buch kann als Lehrbuch für Anfänger dienen, aber es ist mehr: Ein Werk, das allen Mathematikern die Funktionentheorie näherbringen kann." Elemente der Mathematik #1

Die Theorie Des Schalles. 2 John William Strutt Rayleigh 2018-07-26 This work has been selected by scholars as being culturally

important, and is part of the knowledge base of civilization as we know it. This work was reproduced from the original artifact, and remains as true to the original work as possible. Therefore, you will see the original copyright references, library stamps (as most of these works have been housed in our most important libraries around the world), and other notations in the work. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. As a reproduction of a historical artifact, this work may contain missing or blurred pages, poor pictures, errant marks, etc. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

Fluid Mechanics Carl Schaschke 2005 This is a collection of problems and solutions in fluid mechanics for students of all engineering disciplines. The text is intended to support undergraduate courses and be useful to academic tutors in supervising design projects.

Der Spannungszustand in rechteckigen Platten Heinrich Hencky 1913

Quantentheorie der Festkörper Charles Kittel 1988

Mathematische Methoden der klassischen Mechanik ARNOLD 2013-11-11

Historische Holztragwerke Rainer Görlacher 1999

Partielle Differentialgleichungen Walter A. Strauss 2013-08-13 Dieses Buch ist eine umfassende Einführung in die klassischen Lösungsmethoden partieller Differentialgleichungen. Es wendet sich an Leser mit Kenntnissen aus einem viersemestrigen Grundstudium der Mathematik (und Physik) und legt seinen Schwerpunkt auf die explizite Darstellung der Lösungen. Es ist deshalb besonders auch für Anwender (Physiker, Ingenieure) sowie für Nichtspezialisten, die die Methoden der mathematischen Physik kennenlernen wollen, interessant. Durch die große Anzahl von Beispielen und Übungsaufgaben eignet es sich gut zum Gebrauch neben Vorlesungen sowie zum Selbststudium.

Fundamental Mechanics of Fluids I.G. Currie 2016-04-19 Fundamental Mechanics of Fluids, Fourth Edition addresses the need for an introductory text that focuses on the basics of fluid mechanics-before concentrating on specialized areas such as ideal-fluid flow and boundary-layer theory. Filling that void for both students and professionals working in different branches of engineering, this versatile ins

Ballistics Donald E. Carlucci 2018-03-15 With new chapters, homework problems, case studies, figures, and examples, Ballistics: Theory and Design of Guns and Ammunition, Third Edition encourages superior design and innovative applications in the field of ballistics. It examines the analytical and computational tools for predicting a weapon's behavior in terms of pressure, stress, and velocity, demonstrating their applications in ammunition and weapons design. New coverage in the Third Edition includes gas-powered guns, and naval ordinance. With its thorough coverage of interior, exterior and terminal ballistics, this new edition continues to be the standard resource for those studying the technology of guns and ammunition.

Boundary Element Technology VII C.A. Brebbia 2012-12-06 Seventh International Conference on Boundary Element Technology 'Betech 92', held at the University of New Mexico in Albuquerque, June 1992