

De Bourne And Pc Kendall Vector Analysis Cartesian Tensors 3rd Edition

Polymer Optical Fibres: Fibre Types, Materials, Fabrication, Characterization, and Applications explores polymer optical fibers, specifically their materials, fabrication, characterization, measurement techniques, and applications. Optical effects, including light propagation, degrading effects of attenuation, scattering, and dispersion, are explained. Other important parameters like mechanical strength, operating temperatures, and processability are also described. Polymer optical fibers (POF) have a number of advantages over glass fibers, such as low cost, flexibility, low weight, electromagnetic immunity, good bandwidth, simple installation, and mechanical stability. Provides systematic and comprehensive coverage of materials, fabrication, properties, measurement techniques, and applications of POF Focuses on industry needs in communication, illumination and sensors, the automotive industry, and medical and biotechnology Features input from leading experts in POF technology, with experience spanning optoelectronics, polymer, and textiles Explains optical effects, including light propagation, degrading effects of attenuation, scattering, and dispersion

Includes entries for maps and atlases.

Visualization of Tensor Fields

A Cartesian Tensor Approach

Paperbacks in Print

Vector analysis, by d.e. bourne and p.c. kendall

Tensors in Image Processing and Computer Vision

Basic Research on Computer Vision Systems

The record of each copyright registration listed in the Catalog includes a description of the work copyrighted and data relating to the copyright claim (the name of the copyright claimant as given in the application for registration, the copyright date, the copyright registration number, etc.). This text is a careful introduction to geometry. While developing geometry, the book also emphasizes the links between geometry and other branches of pure and applied mathematics.

The Mathematical Gazette

Vector Analysis and Cartesian Tensors, Third Edition

Modern Electrodynamics

British Book News

Books: subjects

Books and Pamphlets, Including Serials and Contributions to Periodicals

Given the widespread interest in macroscopic phenomena in liquid crystals, stemming from their applications in displays and devices. The need has arisen for a rigorous yet accessible text suitable for graduate students, whatever their scientific background. This book satisfies that need. The approach taken in this text, is to introduce the basic continuum theory for nematic liquid crystals in equilibria, then it proceeds to simple application of this theory- in particular, there is a discussion of electrical and magnetic field effects which give rise to Freedericksz transitions, which are important in devices. This is followed by an account of dynamic theory and elementary viscometry of nematics Discussions of backflow and flow-induced instabilities are also included. Smetic theory is also briefly introduced and summarised with some examples of equilibrium solutions as well as those with dynamic effects. A number of mathematical techniques, such as Cartesian tensors and some variational calculus, are presented in the appendices.

A cumulative list of works represented by Library of Congress printed cards.

Third Edition

Scientific & Technical Series

1968: July-December

Polymer Optical Fibres

Combined Membership List of the American Mathematical Society and the Mathematical Association of America

A Cumulative Author List Representing Library of Congress Printed Cards and Titles Reported by Other American Libraries

This is a comprehensive self-contained text suitable for use by undergraduate mathematics, science and engineering students following courses in vector analysis. The earlier editions have been used extensively in the design and teaching of may undergraduate courses. Vectors are introduced in terms of Cartesian components, an approach which is found to appeal to many students because of the basic algebraic rules of composition of vectors and the definitions of gradient divergence and curl are thus made particularly simple. The theory is complete, and intended to be as rigorous as possible at the level at which it is aimed.

Vector Analysis and Cartesian Tensors, Third editionCRC Press

Handbook of Mathematics

A Mathematical Introduction

Introduction to Modern Navigation Systems

Library of Congress Catalog

Elementary Geometry

An engaging writing style and a strong focus on the physics make this graduate-level textbook a must-have for electromagnetism students.

Vector Analysis and Cartesian Tensors, Second Edition focuses on the processes, methodologies, and approaches involved in vector analysis and Cartesian tensors, including volume integrals, coordinates, curves, and vector functions. The publication covers the theory of vector fields on rectangular Cartesian coordinates and rotation of axes, scalar and vector algebra, and differential geometry of curves. Discussions focus on differentiation rules, vector functions and their geometrical representation, scalar and vector products, and the curl of a vector field. The text also discusses the gradient of a scalar field and the divergence of a vector by a scalar, and angles between lines through the origin. The text then elaborates on scalar and vector fields and line, surface, and volume integrals, including surface, volume, and repeated integrals, general orthogonal curvilinear coordinates, and the divergence theorem. The text also discusses the components in orthogonal curvilinear coordinates. The manuscript ponders on representation theorems for isotropic tensor functions, Cartesian tensors, applications in potential theory, and integral theorems. Topics include geometrical and physical applications of the divergence and curl, Poisson's equation in vector form, isotropic scalar functions of symmetrical second order tensors, and diagonalization of second-order symmetrical tensors. The publication is a valuable reference for mathematicians and physicists.

Maps and atlases

Dynamic Analysis of Robot Manipulators

Cartesian Tensors

Theory and Application

Advanced Engineering Mathematics

Vector Analysis

Tensor signal processing is an emerging field with important applications to computer vision and image processing. This book presents the state of the art in this new branch of signal processing, offering a great deal of research and discussions by leading experts in the area. The wide-ranging volume offers an overview into cutting-edge research into the newest tensor processing techniques and their application to different domains related to computer vision and image processing. This comprehensive text will prove to be an invaluable reference and resource for researchers, practitioners and advanced students working in the area of computer vision and image processing.

Lists for 19 include the Mathematical Association of America, and 1955- also the Society for Industrial and Applied Mathematics.

Vision as Process

Scientific Research in British Universities and Colleges

The National Union Catalogs, 1963-

Fibre Types, Materials, Fabrication, Characterisation and Applications

Library of Congress Catalogs

Vector Analysis and Cartesian Tensors, Third edition

Modern day high-performance computers are making available to 21st-century scientists solutions to rheological flow problems of ever-increasing complexity. Computational rheology is a fast-moving subject — problems which only 10 years ago were intractable, such as 3D transient flows of polymeric liquids, non-isothermal non-Newtonian flows or flows of highly elastic liquids through complex geometries, are now being tackled owing to the availability of parallel computers, adaptive methods and advances in constitutive modelling.Computational Rheology traces the development of numerical methods for non-Newtonian flows from the late 1960's to the present day. It begins with broad coverage of non-Newtonian fluids, including their mathematical modelling and analysis, before specific computational techniques are discussed. The application of these techniques to some important rheological flow problems of academic and industrial interest is then treated in a detailed and up-to-date exposition. Finally, the reader is kept abreast of topics at the cutting edge of research in computational applied mathematics, such as adaptivity and stochastic partial differential equations.All the topics in this book are dealt with from an elementary level and this makes the text suitable for advanced undergraduate and graduate students, as well as experienced researchers from both the academic and industrial communities.

The purpose of this monograph is to present computationally efficient algorithms for solving basic problems in robot manipulator dynamics. In particular, the following problems of rigid-link open-chain manipulator dynamics are considered : i) computation of inverse dynamics, ii) computation of forward dynamics, and iii) generation of linearized dynamic models. Computationally efficient solutions of these problems are prerequisites for real time robot applications and simulations. Cartesian tensor analysis is the mathematical foundation on which the above mentioned computational algorithms are based. In particular, it is shown in this monograph that by exploiting the relationships between second order Cartesian tensors and their vector invariants, a number of new tensor vector identities can be obtained. These identities enrich the theory of Cartesian tensors and allow us to manipulate complex Cartesian tensor equations effectively. Moreover, based on these identities the classical vector description for the Newton-Euler equations of rigid body motion are rewritten in an equivalent tensor formulation which is shown to have computational advantages over the classical vector formulation. Thus, based on Cartesian tensor analysis, a conceptually simple, easy to implement and computationally efficient tensor methodology is presented in this monograph for studying classical rigid body dynamics. XII Application of this tensor methodology to the dynamic analysis of rigid-link open-chain robot manipulators is simple and leads to an efficient formulation of the dynamic equations of motion.

The Publishers' Trade List Annual

Catalog of Copyright Entries, Third Series

Combined Membership List

The Static and Dynamic Continuum Theory of Liquid Crystals

Computational Rheology

Elastic Plates

This is a comprehensive and self-contained text suitable for use by undergraduate mathematics, science and engineering students. Vectors are introduced in terms of cartesian components, making the concepts of gradient, divergent and curl particularly simple. The text is supported by copious examples and progress can be checked by completing the many problems at the end of each section. Answers are provided at the back of the book.

Advanced Engineering Mathematics provides comprehensive and contemporary coverage of key mathematical ideas, techniques, and their widespread applications, for students majoring in engineering, computer science, mathematics and physics. Using a wide range of examples throughout the book, Jeffrey illustrates how to construct simple mathematical models, how to apply mathematical reasoning to select a particular solution from a range of possible alternatives, and how to determine which solution has physical significance. Jeffrey includes material that is not found in works of a similar nature, such as the use of the matrix exponential when solving systems of ordinary differential equations. The text provides many detailed, worked examples following the introduction of each new idea, and large problem sets provide both routine practice, and, in many cases, greater challenge and insight for students. Most chapters end with a set of computer projects that require the use of any CAS (such as Maple or Mathematica) that reinforce ideas and provide insight into more advanced problems. Comprehensive coverage of frequently used integrals, functions and fundamental mathematical results Contents selected and organized to suit the needs of students, scientists, and engineers Contains tables of Laplace and Fourier transform pairs New section on numerical approximation New section on the z-transform

Easy reference system

National Union Catalog

A Select Bibliography

With Applications to Mechanics, Fluid Mechanics and Elasticity

Machine Vision Applications, Architectures, and Systems Integration

IEEE International Conference on Electronics, Circuits and Systems

Subject Catalog

Very Good,No Highlights or Markup,all pages are intact.

Notices of the American Mathematical Society

Vector Analysis and Cartesian Tensors

Catalog of Copyright Entries. Third Series

Subject catalog