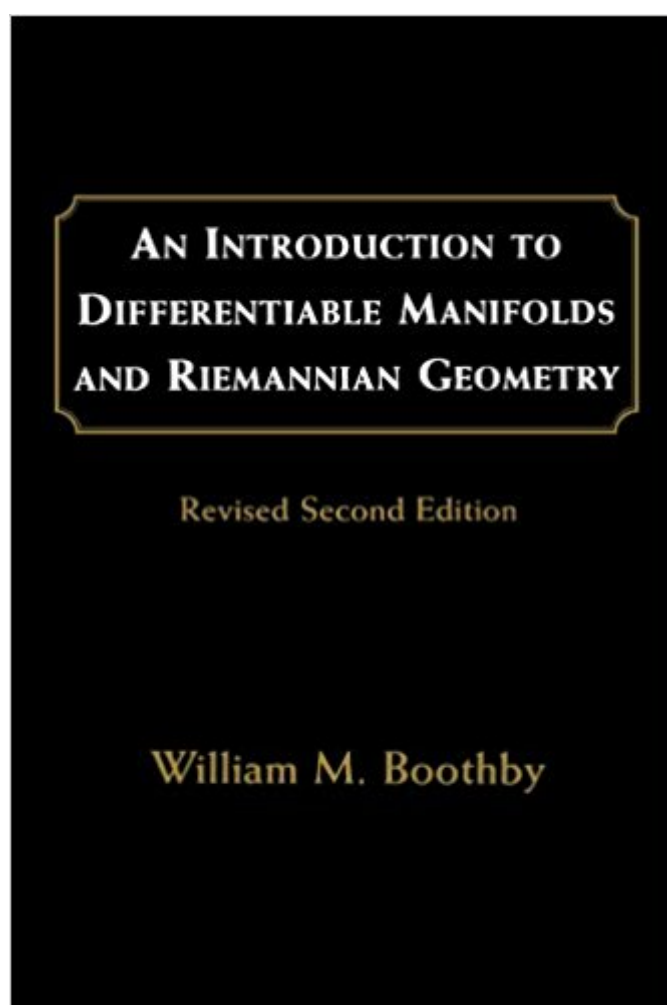


The book was found

An Introduction To Differentiable Manifolds And Riemannian Geometry, Revised, Volume 120, Second Edition (Pure And Applied Mathematics)



Synopsis

The second edition of this text has sold over 6,000 copies since publication in 1986 and this revision will make it even more useful. This is the only book available that is approachable by "beginners" in this subject. It has become an essential introduction to the subject for mathematics students, engineers, physicists, and economists who need to learn how to apply these vital methods. It is also the only book that thoroughly reviews certain areas of advanced calculus that are necessary to understand the subject. Line and surface integrals Divergence and curl of vector fields

Book Information

Series: Pure and Applied Mathematics (Book 120)

Paperback: 400 pages

Publisher: Academic Press; 2 edition (August 19, 2002)

Language: English

ISBN-10: 0121160513

ISBN-13: 978-0121160517

Product Dimensions: 6 x 1 x 9 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: 4.1 out of 5 stars See all reviews (8 customer reviews)

Best Sellers Rank: #427,982 in Books (See Top 100 in Books) #51 in Books > Science & Math > Mathematics > Geometry & Topology > Differential Geometry #54 in Books > Science & Math > Mathematics > Geometry & Topology > Analytic Geometry #159 in Books > Science & Math > Mathematics > Pure Mathematics > Discrete Mathematics

Customer Reviews

This book is masterfully written and excels for its clearness and elementary conception of every detail. It starts reviewing the necessary tools of analysis (inverse and implicit function theorems, constant rank theorem, existence and unicity of ordinary differential equations). Then, it dedicates much attention to motivate and construct the concept of a manifold M and the definition of the tangent space at a point of M (this is much harder to do for an abstract manifold than for a submanifold of the Euclidean space, and for the beginner, it demands a lot of training and time to master the different isomorphic disguises that the tangent space can adopt). Immediately, the book deals with submanifolds and submersions, vector fields and their one parameter flows, the Lie algebra of smooth vector fields and the Frobenius theorem. A very good introduction to Lie groups and Lie algebras follows, (including the correspondence between Lie subalgebras and Lie

subgroups in any Lie group), discrete subgroups, the exponential map, the adjoint representation and homogeneous spaces. Later we get into integration and Stokes theorem, invariant integration on compact Lie groups (i.e.: Haar measure) and the Weyl decomposition theorem for representations of compact Lie groups. Fine, fine, fine. Next, Boothby introduce us in the realm of Riemannian geometry: covariant derivatives, parallel transport, the Levi-Civita connection, the Riemannian curvature, geodesics, normal neighbourhoods and of course the marvelous theorem of Hopf and Rinow. Maybe, here the pace is a bit faster: at places one needs pencil and paper to draw and compute. But overall, this chapter (the seventh) provides a rigorous and quick acquaintance with this vast part of geometry. A valuable glimpse on symmetric spaces ends this chapter.

[Download to continue reading...](#)

An Introduction to Differentiable Manifolds and Riemannian Geometry, Revised, Volume 120, Second Edition (Pure and Applied Mathematics) Riemannian Manifolds: An Introduction to Curvature (Graduate Texts in Mathematics) Asymptotic Theory of Finite Dimensional Normed Spaces: Isoperimetric Inequalities in Riemannian Manifolds (Lecture Notes in Mathematics) An Introductory Course on Differentiable Manifolds (Aurora: Dover Modern Math Originals) Differential Geometry, Lie Groups, and Symmetric Spaces, Volume 80 (Pure and Applied Mathematics) Pure Pulp: FANTASTIC ADVENTURES VOL. 1: TWO COMPLETE ORIGINAL PULP MAGAZINE ISSUES FROM THE 1939 & 1940 - 250 PAGES OF PURE PULP SCIENCE FICTION (PURE PULP - COMPLETE ORIGINAL MAGAZINES) Biological Wastewater Treatment, Second Edition, Revised and Expanded (Lecture Notes in Pure and Applied Mathematics) The Geometry of Genocide: A Study in Pure Sociology (Studies in Pure Sociology) Differential Equations, Dynamical Systems, and an Introduction to Chaos, Second Edition (Pure and Applied Mathematics) Sobolev Spaces, Volume 140, Second Edition (Pure and Applied Mathematics) An introduction to nonharmonic Fourier series, Volume 93 (Pure and Applied Mathematics) Geometric Control Theory and Sub-Riemannian Geometry (Springer INdAM Series) Coding Theory and Cryptography: The Essentials, Second Edition (Chapman & Hall/CRC Pure and Applied Mathematics) Differential Geometry: Curves - Surfaces - Manifolds, Second Edition An Introduction to Multicomplex SPates and Functions (Chapman & Hall/CRC Pure and Applied Mathematics) Fibonacci and Lucas Numbers with Applications, Volume One (Pure and Applied Mathematics: A Wiley Series of Texts, Monographs and Tracts) Ideas for a Pure Phenomenology and Phenomenological Philosophy: First Book: General Introduction to Pure Phenomenology (Hackett Classics) A Concise Introduction to Pure Mathematics, Fourth Edition (Chapman Hall/CRC Mathematics) The Kurzweil-Henstock Integral and Its Differential: A Unified Theory of Integration on $\mathbb{R}$ and $\mathbb{R}^n$ (Chapman & Hall/CRC Pure and

Applied Mathematics) Binary Polynomial Transforms and Non-Linear Digital Filters (Chapman & Hall/CRC Pure and Applied Mathematics)

[Dmca](#)